~~2015-16~~2016-17 Courses

ACTG 1010 - Practical Accounting & Taxes

Credits: (3)
Typically taught:
Not currently being offered

A pragmatic look at financial accounting and federal taxes as they relate to the individual's personal life. Designed for non-accounting majors.

ACTG 2010 - Survey of Accounting I

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem, 1st Blk, Full Sem Online]

Introduction to accounting information, the basic accounting cycle, and consideration of selected financial statement topics. The course emphasizes the uses and limitations of accounting information in economic decision-making, as well as problem-solving, oral and written communication skills, and computer skills.

ACTG 2020 - Survey of Accounting II

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem, 2nd Blk, Full Sem Online]

Further consideration of selected financial statement topics. Analysis of cost behavior and the uses and limitations of accounting information in planning, controlling, and decision-making processes. Emphasizes skills in problem-solving, oral and written communication, and computer skills. Prerequisite: ACTG 2010.

ACTG 2891 - Coop Work Experience

Credits: (1, 2, 3)
Open to students meeting criteria established from time to time by the department and on file either in the department or the cooperative education office. Provides academic credit for selected on-the job experience. Grade and amount of credit will be determined by the department. Prerequisite: Instructor Approval.

ACTG 2892 - Coop Work Experience

Credits: (1, 2, 3)
Open to students meeting criteria established from time to time by the department and on file either in the department or the cooperative education office. Provides academic credit for selected on-the job experience. Grade and amount of credit will be determined by the department. Prerequisite: Instructor Approval.

ACTG 2893 - Coop Work Experience

Credits: (1, 2, 3)
Open to students meeting criteria established from time to time by the department and on file either in the department or the cooperative education office. Provides academic credit for selected on-the job experience. Grade and amount of credit will be determined by the department. Prerequisite: Instructor Approval.

ACTG 2921 - Short Courses, Workshops, Institutes, & Special Programs

Credits: (1, 2, 3)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript.

ACTG 2922 - Short Courses, Workshops, Institutes, & Special Programs

Credits: (1, 2, 3)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript.

ACTG 2923 - Short Courses, Workshops, Institutes, & Special Programs

Credits: (1, 2, 3)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript.

ACTG 3110 - Intermediate Financial Accounting I

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [~~1st Blk~~Full Sem]

Introduction to the accounting profession, standard-setting process, and financial accounting concepts. Thorough study of the balance sheet, income statement, and statement of retained earnings. Theory and application of the time value of money. Financial accounting and reporting considerations for selected balance sheet topics. Prerequisite: ACTG 2020.

ACTG 3120 - Intermediate Financial Accounting II

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
~~**Summer [2nd Blk]**~~

Thorough study of the statement of cash flows. Financial accounting and reporting considerations for selected balance sheet topics not considered in Intermediate Financial Accounting I. Prerequisite: BSAD 2899, ACTG 3110~~, Business Foundations~~.

ACTG 3300 - Cost Accounting

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Cost determination for budgeting, product costing, process costing, cost assignment and allocation, standard costing, and decision making in manufacturing and service organizations. Prerequisite: BSAD 2899, ACTG 2020~~, Business Foundations~~.

ACTG 3400 - Taxation of Individuals

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [1st Blk]

Basic concepts of gross income, deductions, credits, special computations, and property transactions for individual taxpayers. Prerequisite: ACTG 2020.

ACTG 3500 - International Accounting

Credits: (3)
Typically taught:
Not currently being offered

This course reviews major issues in international accounting, including historical, cultural, and environmental influences that impact various national accounting systems. Harmonization of standards is also examined. Prerequisite: ACTG 2020.

ACTG 3750 - Accounting & Information Systems

Credits: (3)
Typically taught:
Fall [Full Sem~~,~~ Online]
Spring [Full Sem~~,~~ Online]
Summer [Full Sem Online]

Analysis, design, and implementation of accounting information systems with special emphasis on an understanding of accounting cycles, internal control concepts, and data flows associated with basic economic entities of the organization. Prerequisite: BSAD 2899, ACTG 3110~~, Business Foundations~~.

ACTG 4510 - Auditing

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Generally-accepted auditing standards, professional responsibilities, evidence, internal control, sampling, audit tests, and audit reports. Prerequisite: BSAD 2899, ACTG 3120 or concurrent enrollment in ACTG 3120~~; Business Foundations~~.

ACTG 4801 - Individual Study

Credits: (1, 2, 3)
Individual work or work in small groups by arrangement on special topics. Prerequisite: Instructor Approval.

ACTG 4802 - Individual Study

Credits: (1, 2, 3)
Individual work or work in small groups by arrangement on special topics. Prerequisite: Instructor Approval.

ACTG 4803 - Individual Study

Credits: (1, 2, 3)
Individual work or work in small groups by arrangement on special topics. Prerequisite: Instructor Approval.

ACTG 4810 - Experimental Courses

Credits: (1-3)
Experimental or one-time courses designed to fill a need in the community or investigate interesting and unusual topics.

ACTG 4850 - Accounting Study Abroad

Credits: (1-3)
This course is designed for students who wish to explore accounting theory and practice in countries other than the U.S. Students will study international accounting as offered through a partner university (or other university with department chair approval). Prerequisite: BSAD 2899. Can be repeated once up to 6 credits.

ACTG 4891 - Coop Work Experience

Credits: (1, 2, 3)
Open to students meeting criteria established from time to time by the department and on file either in the department or the cooperative education office. Provides academic credit for selected on-the job experience. Grade and amount of credit will be determined by the department. Prerequisite: Instructor Approval.

ACTG 4892 - Coop Work Experience

Credits: (1, 2, 3)
Open to students meeting criteria established from time to time by the department and on file either in the department or the cooperative education office. Provides academic credit for selected on-the job experience. Grade and amount of credit will be determined by the department. Prerequisite: Instructor Approval.

ACTG 4893 - Coop Work Experience

Credits: (1, 2, 3)
Open to students meeting criteria established from time to time by the department and on file either in the department or the cooperative education office. Provides academic credit for selected on-the job experience. Grade and amount of credit will be determined by the department. Prerequisite: Instructor Approval.

ACTG 4921 - Short Courses, Workshops, Institutes, & Special Programs

Credits: (1, 2, 3)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript.

ACTG 4922 - Short Courses, Workshops, Institutes, & Special Programs

Credits: (1, 2, 3)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript.

ACTG 4923 - Short Courses, Workshops, Institutes, & Special Programs

Credits: (1, 2, 3)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript.

ACTG 5130 - Advanced Accounting

Credits: (3)
Typically taught:
Not currently being offered

A study of business combination accounting. The course will also include an introduction to government and fund accounting. Prerequisite: BSAD 2899, ACTG 3120~~, Business Foundations~~.

ACTG 5140 - Accounting for Global and Complex Entities

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Issues in international accounting not covered in Intermediate Accounting are covered in this course. The course also covers concepts related to accounting for complex entities, including governmental and not-for-profit entities, consolidated entities and partnerships. Prerequisite: ACTG 3120 and BSAD 2899.

ACTG 5440 - Taxation of Business Entities

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [2nd Blk]

A study of the income taxation of corporations (including S corporations), limited liability companies, and partnerships. Prerequisite: BSAD 2899, ACTG 3400~~, Business Foundations~~.

AERO 1010 - Foundations of USAF I

Credits: (1)
Typically taught:
Fall [Full Sem]

Development, organization, and doctrine of the United States Air Force, emphasizing Strategic Force Requirements.

AERO 1010L - General Military Leadership Lab I

Credits: (0)
Typically taught:
Fall [Full Sem]

Studies and experience in Air Force standards, customs and courtesies. Introduction to drill and ceremonies. Studies typical organizations and missions of Air Force Bases through field trips.

AERO 1011 - Foundations of USAF II

Credits: (1)
Typically taught:
Spring [Full Sem]

Development and organization of United States Air Force Defensive Forces, General Purpose Forces and Tactical Air Forces.

AERO 1011L - General Military Leadership Lab II

Credits: (0)
Typically taught:
Spring [Full Sem]

Studies and experience in Air Force standards, customs and courtesies. Introduction to drill and ceremonies. Studies typical organizations and missions of Air Force Bases through field trips.

AERO 1110 - General Military Leadership Lab I

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Studies and experience in Air Force standards, customs and courtesies. Introduction to drill and ceremonies. Studies typical organizations and missions of Air Force Bases through field trips.

AERO 1111 - General Military Leadership Lab II

Credits: (1)
Typically taught:
Spring [Full Sem]

Studies and experience in Air Force standards, customs and courtesies. Introduction to drill and ceremonies. Studies typical organizations and missions of Air Force Bases through field trips.

AERO 2010 - Airpower History I

Credits: (1)
Typically taught:
Fall [Full Sem]

Development of various concepts of air power employment, emphasizing factors that have prompted research and technological change.

AERO 2010L - General Military Leadership Lab III

Credits: (0)
Typically taught:
Spring [Full Sem]

Application of Air Force standards, customs and courtesies. Drill and ceremonies leadership, introduction to reviews and honors. First-hand exposure to various career opportunities within the Air Force and their application on a typical Air Force base.

AERO 2011 - Airpower History II

Credits: (1)
Typically taught:
Spring [Full Sem]

Development of various concepts of air power employment, emphasizing factors that have prompted research and technological change.

AERO 2011L - General Military Leadership Lab IV

Credits: (0)
Typically taught:
Spring [Full Sem]

Application of Air Force standards, customs and courtesies. Drill and ceremonies leadership, introduction to reviews and honors. First-hand exposure to various career opportunities within the Air Force and their application on a typical Air Force base. Professional Officer Courses

AERO 2110 - General Military Leadership Lab III

Credits: (1)
Typically taught:
Fall [Full Sem]

Application of Air Force standards, customs and courtesies. Drill and ceremonies leadership, introduction to reviews and honors. First-hand exposure to various career opportunities within the Air Force and their application on a typical Air Force base.

AERO 2111 - General Military Leadership Lab IV

Credits: (1)
Typically taught:
Spring [Full Sem]

Application of Air Force standards, customs and courtesies. Drill and ceremonies leadership, introduction to reviews and honors. First-hand exposure to various career opportunities within the Air Force and their application on a typical Air Force base.

AERO 2830 - Directed Studies

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Individual study with a professor from Aerospace Studies (Air Force ROTC). Allows increased responsibility for GMC in an academic setting providing leadership/management skill development opportunities. May be repeated twice with a maximum of 3 credit hours.

AERO 3000 - Field Training

Credits: (1-4)
Typically taught:
Fall [Full Sem]

Four to five weeks of field training conducted at United States Air Force bases as arranged by the Professor of Aerospace Studies. Course prepares AFROTC students for entry into upper division AFROTC classes, the Professional Officer Corps, and for later commissioning into the US Air Force. The course offers a minimum of 269 hours of education and training in the areas of Officership, Air Force Orientation, Leadership, and Physical/Survival Training. May be repeated 3 times with a maximum of 4 credit hours.

AERO 3010 - Leadership Studies I

Credits: (3)
Typically taught:
Fall [Full Sem]

Writing, speaking, and listening as communication skills; management concepts; responsibilities and ethics for an Air Force junior officer.

AERO 3010L - POC Leadership Lab I

Credits: (0)
Typically taught:
Fall [Full Sem]

Application of leadership and management skills in leadership positions in a student-run organization. Study of general structure and progression patterns common to selected Air Force officer career fields. Application of personnel performance evaluation techniques.

AERO 3011 - Leadership Studies II

Credits: (3)
Typically taught:
Spring [Full Sem]

Principles of leadership, problem solving, decision, discipline, and human relations. Emphasis on career planning as an Air Force junior officer.

AERO 3011L - POC Leadership Lab II

Credits: (0)
Typically taught:
Spring [Full Sem]

Application of leadership and management skills in leadership positions in a student-run organization. Study of general structure and progression patterns common to selected Air Force officer career fields. Application of personnel performance evaluation techniques.

AERO 3110 - POC Leadership Lab I

Credits: (1)
Typically taught:
Spring [Full Sem]

Application of leadership and management skills in leadership positions in a student-run organization. Study of general structure and progression patterns common to selected Air Force officer career fields. Application of personnel performance evaluation techniques.

AERO 3111 - POC Leadership Lab II

Credits: (1)
Typically taught:
Spring [Full Sem]

Application of leadership and management skills in leadership positions in a student-run organization. Study of general structure and progression patterns common to selected Air Force officer career fields. Application of personnel performance evaluation techniques.

AERO 4010 - National Security Affairs I

Credits: (3)
Typically taught:
Fall [Full Sem]

Examines the need for national security, analyzes the evolution and formulation of American defensive policy, strategy and joint doctrine. Investigates methods of managing conflict and touches on arms control and terrorism.

AERO 4010L - POC Leadership Lab III

Credits: (0)
Typically taught:
Spring [Full Sem]

Application of leadership and management techniques with individuals and groups. Introduction to operations and communications security. Introduction to advanced educational opportunities available to Air Force officers.

AERO 4011 - National Security Affairs II

Credits: (3)
Typically taught:
Spring [Full Sem]

Examines conflict management, arms control, military law and Air Force issues and policies.

AERO 4011L - POC Leadership Lab III

Credits: (0)
Typically taught:
Spring [Full Sem]

Application of leadership and management techniques with individuals and groups. Introduction to operations and communications security. Introduction to advanced educational opportunities available to Air Force officers.

AERO 4110 - POC Leadership Lab III

Credits: (1)
Typically taught:
Spring [Full Sem]

Application of leadership and management techniques with individuals and groups. Introduction to operations and communications security. Introduction to advanced educational opportunities available to Air Force officers.

AERO 4111 - POC Leadership Lab III

Credits: (1)
Typically taught:
Spring [Full Sem]

Application of leadership and management techniques with individuals and groups. Introduction to operations and communications security. Introduction to advanced educational opportunities available to Air Force officers.

AERO 4830 - Directed Studies

Credits: (1-5)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Individual study with a professor from Aerospace Studies. Provides added leadership/management skill development opportunities to develop more competitive officer candidates. May be repeated 4 times with a maximum of 5 credit hours.

ANTH 1000 SS/DV - Introduction to Anthropology

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [1st Blk, 2nd Blk, Full Sem Online]

Anthropology is the study of humankind, past and present: our origins and the development of cultural behavior and biological attributes. This course examines what it means to be human, describing and explaining human differences and similarities throughout time and across the world.

ANTH 1020 LS/DV - Biological Anthropology

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
~~**Summer [2nd Blk]**~~

Explores human origins, evolution, and contemporary biological diversity by examining genetics, the human fossil record, primatology, and human ecology from a biocultural perspective.

ANTH 1040 HU/DV - Language and Culture

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Explores the nature of human language and its role in sociocultural settings. Surveys a world sample of languages from the perspective of anthropological linguistics including language structure, social functions, geographical and historical variation, and cultural values.

ANTH 2010 SS/DV - Peoples and Cultures of the World

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [1st Blk, 2nd Blk]

A survey of cultures around the world, exploring their similarities and differences as observed by anthropologists.

ANTH 2030 SS - Principles of Archaeology

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Archaeology attempts to reconstruct prehistoric and early historic human life ways as well as long term cultural and biological evolutionary processes through the scientific study of material remains. This course focuses upon the history of archaeology, the ways in which archaeologists recover and analyze data, and the major theoretical perspectives used to interpret the past.

ANTH 2810 - Experimental Courses

Credits: (1-6)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated 5 times with a maximum of 6 credit hours.

ANTH 2920 - Short Courses, Workshops, Institutes, and Special Programs

Credits: (1-6)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated for a maximum of 6 credit hours.

ANTH 2950 - Elementary Anthropological Field Trip

Credits: (1-3)
Typically taught:
Summer [1st Blk]

Students will visit areas and events of anthropological interest. The course will include relevant lectures, readings, and exercises designed to maximize and evaluate the learning experience. Pre- and post-trip meetings for student preparation, feedback, and course evaluation will occur. When the course number is used, it will be accompanied by a specific title and authorized credit which will appear on the student's transcript. Prerequisite: Consent of instructor. A maximum of three credit hours of Anthropology 2950 can be applied toward graduation.

ANTH 2990 - Special Topics in Anthropology

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A course allowing examination of selected topics and current issues in Anthropology. When the course number is used, it will be accompanied by a specific title and authorized credit which will appear on the student's transcript. Offerings of same title may not be repeated for credit toward graduation. May be repeated 6 times with a maximum of 18 credit hours.

ANTH 3100 - Prehistory of North America

Credits: (3)
Typically taught:
Spring [Full Sem] ~~**every other spring semester**~~

A general survey course concerning the archaeology of North America and an interpretation of its prehistory. The course material spans the time of initial human occupation of the continent through the early historic period, and emphasizes the three major cultural stages (Paleo Indian, Archaic, and Formative) which characterize the archaeological record of North America.

ANTH 3200 - Archaeology of Early Civilizations

Credits: (3)
Typically taught:
~~Spring~~Fall [Full Sem]

This course is designed to survey the broad range of early civilizations worldwide as they are known archaeologically, including the variety of ways and places in which they have arisen and the great diversity of peoples who created them. It examines highly complex societies in sub-Saharan and North Africa, native North and South America, East and South Asia, the Middle East, the Aegean and Celtic Europe, discussing in detail the diverse ways of life in these civilizations and how they shaped cultural forms, practices and ideas in the modern life of these regions today.

ANTH 3300 - Archaeological Field Techniques

Credits: (3-6)
Typically taught:
Summer [2nd Blk]

Intensive field school involving archaeological excavation and/or survey, emphasizing modern field techniques, data recordation and recovery, map interpretation and production, and the proper conduct of problem-oriented archaeology. Prerequisite: ANTH 2030 and consent of instructor. May be repeated up to 12 credit hours. Archaeology Track, Archaelogical Technician Associate's Degree, and Archaeological Technician Certificate students must complete 6 credit hours.

ANTH 3400 - Archaeological Laboratory Techniques

Credits: (3)
Typically taught:
Fall [Full Sem]

Emphasizes student analysis and write-up of an artifact assemblage from an archaeological site. Weekly lectures familiarize students with analyses of prehistoric and historic archaeological materials, as well as the production of text, figures, tables, maps, and bibliographies for technical reports. Prerequisite: ANTH 2030, or consent of instructor.

ANTH 3500 - Advanced Cultural Anthropology

Credits: (3)
The nature of culture, its structure and function in the variety of human activities. Prerequisite: ANTH 1000 or ANTH 2010, or consent of instructor.

ANTH 3600 - Culture Area Studies

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Surveys selected societies in ethnographically different cultural areas of the world, such as Africa, Asia, North American Indians, Latin America, the Middle East, the Pacific, or the modern United States. When the number is used, it will be accompanied by a descriptive title and the credit authorized, which will appear on the student

transcript. Offerings of same title may not be repeated for credit toward graduation. Prerequisite: ANTH 1000 or ANTH 2010, or consent of instructor. May be repeated 6 times with a maximum of 18 credit hours.

ANTH 3700 - Sex Roles: Past, Present and Future

Credits: (3)
An overview of the differences and similarities in human sex roles, cross-culturally and over time, with special emphasis on the influences of biology, socialization, and ecology in their origin, perpetuation, and change.

ANTH 3900 - Magic, Shamanism and Religion

Credits: (3)
Typically taught:
Fall [Full Sem]
~~**Spring [Full Sem]**~~

A comparative study of the origins, development, and social functions of magic, shamanism, and religion within cultural systems around the world.

ANTH 4100 - Archaeological Method, Theory, and Cultural Resource Management

Credits: (3)
Typically taught:
Spring [Full Sem] ~~**every other spring semester**~~

Explores means by which archaeological inferences are made to decipher the material record of past human behavior. Includes the history of recent archaeological thought from the beginnings of scientific archaeology (ca. 1960's) through the ~~new~~ profession of cultural resource management. Prerequisite: ANTH 2030.

ANTH 4200 - Anthropological Theory

Credits: (3)
Typically taught:
Fall [Full Sem]

Historical and theoretical development of the major anthropological schools of thought including 19th century evolutionism, historical particularism, social anthropology, symbolic analysis, neoevolutionism, and cultural ecology. Prerequisite: ANTH 1000 or consent of instructor.

ANTH 4300 - Anthropological Research Methods

Credits: (3)
Typically taught:
Spring [Full Sem]

Students will learn and apply the scientific methods of inquiry used in anthropological research. Required for majors and recommended for minors. Prerequisite: ANTH 1000 or a 2000-level course; ANTH 4200 and SOC 3600, or consent of instructor.

ANTH 4810 - Experimental Courses

Credits: (1-3)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated twice with a maximum of 6 credit hours.

ANTH 4830 - Readings and/or Projects

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Individual readings and/or projects for anthropology students. (Maximum of 6 hours may be applied toward graduation.) Prerequisite: ANTH 1000, permission of instructor and approval of program coordinator.

ANTH 4890 - Internship in Anthropology

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Anthropology majors may apply for internship opportunities that provide the student with both practical and research experiences. A student may complete a total up to 6 hours of internships for credit, with a maximum of 3 hours to be applied towards the Anthropology major. Prerequisite: 6 hours of upper-division anthropology courses, Anthropology major status, approval of Program Coordinator.

ANTH 4920 - Short Courses, Workshops, Institutes, and Special Programs

Credits: (1-3)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript.

ANTH 4950 - Advanced Anthropological Field Trip

Credits: (1-3)
Typically taught:
Summer [1st Blk]

Students will visit areas and events of anthropological interest. The course will include relevant lectures, readings, and exercises designed to maximize and evaluate the learning experience. Pre- and post-trip meetings for student preparation, feedback, and course evaluation will occur. When the course number is used, it will be accompanied by a specific title and authorized credit which will appear on the student's transcript. A maximum of three credit hours of

Anthropology 4950 can be applied toward graduation. Prerequisite: ANTH 1000 or ANTH 2030 and consent of instructor.

ANTH 4990 - Seminar in Anthropology

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An advanced course allowing in-depth study of selected topics and current issues in Anthropology. When the course number is used, it will be accompanied by a specific title with the credit authorized, which will appear on the student's transcript. Offerings of same title may not be repeated for credit toward graduation. Prerequisite: ANTH 1000 or consent of instructor. May be repeated 6 times with a maximum of 18 credit hours.

ART 1010 CA - Introduction to the Visual Arts

Credits: (3)
Typically taught:
Fall [Full Sem, 1st Blk, 2nd Blk, Online]
Spring [Full Sem, 1st Blk, 2nd Blk, Online]
Summer [Online]

Introduction to all forms of visual art covering processes (such as demonstration of the lost-wax process of metal casting), language, responses (oral and written assignments that utilize art-related terminology), issues (such as patronage, feminism or orientalism), and ways of seeing and understanding works of art. A general education course for the non-art major.

ART 1030 CA - Studio Art for the Non-Art Major

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Online]

A general education course for non-art majors that primarily includes a series of hands-on art experiences (such as drawing and sculpture). Class discussion draws from the disciplines of art history, art criticism, and aesthetics as guides through visual presentations. For students desiring to broaden their academic background in the area of visual literacy and problem solving.

ART 1040 - Orientation to Visual Studies

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [1st Blk]

Orientation to the visual world including how we perceive and interpret visual messages, the impact of the visual on human relations, political exploitation of the visual, and aesthetic issues in the visual arts. Topics are explored through studio projects designed to establish a context for expanded study in the visual arts. Includes curriculum planning for art majors, introduction to programs and faculty, and professional opportunities.

ART 1110 - Drawing I

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [1st Blk]

This is the foundation drawing class for art majors and minors (not a general education class). Perceptual and conceptual development stressed. Variety of materials and procedures investigated.

ART 1120 - Design: 2D

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Introduction to visual language using two-dimensional media. This course examines the structure of images and helps the student develop strategies for interpreting and constructing ones which communicate effectively. Theory and application of color is included.

ART 1130 - Design: 3D

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The study of fundamental design principles and techniques including working knowledge of various design methods and their relationship to the conceptualization, development, and completion of three-dimensional design projects.

ART 1140 - Color Theory

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This is an incorporated lecture and studio course that provides a basis for understanding the history, concepts, and practice of color theory as a pivotal area of Visual Arts. Studio projects will investigate both additive and subtractive color theory, and include instruction in digital media-based color, using Photoshop.

ART 2015 - Drawing on the Land

Credits: (3)
Variable Title
Typically taught:
Summer [Full Sem]

Introduction to visual arts media as a productive way to investigate and interpret the natural environment. Appropriate for the art major as well as the non-art major. Participants will build a practice of observation, inquiry, and discovery via drawing and/or other media as designated by faculty. A significant portion of each course will be conducted in the field. Media focus and field location will be announced in advance. Some travel is required. Camping may be required. This course may be repeated twice with a maximum of 9 credit hours with different titles.

ART 2050 - Photographing Artwork

Credits: (1)
Typically taught:
TBA

Photographing artwork for portfolios: photographing of two- and three-dimensional artwork. Emphasis on reproduction of quality slides, including masking and labeling of slides for juried activities, career and graduate school application. Credit/No Credit. Prerequisite: ART 2250 or consent of instructor.

ART 2200 - Introduction to Printmaking

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An introduction to all printmaking classes covering the processes of intaglio, screenprinting, relief, lithography, and monotype. Students are provided with the fundamentals of each process and experience with each one. This class is a prerequisite for all printmaking classes.

ART 2250 - Foundations of Photography: Black & White/Analog

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [1st Blk]

A highly disciplined craft and concept course to help develop technical and aesthetic skills in black and white photography. Students learn the use of the camera, zone system of exposure, film, and print processing, and gain an aesthetic sense of the medium.

ART 2310 - Introduction to Ceramic Art

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The first course of a two-part introduction to ~~clay and glaze,~~ ceramic ~~design, handbuilt~~art. Projects in hand-building and wheel-thrown objects are emphasized. Multiple surfacing and ~~wheelthrown forming~~ firing techniques~~, and traditional and contemporary firing processes.~~ will be explored.

ART 2350 - Small Metals/Jewelry I

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Introduction to tools, materials, and basic techniques of fabrication and casting, with an emphasis on design.

ART 2420A - Bitmap Imaging

Credits: (1)
Emphasis on the principle of bitmap imaging using industry-standard software. This course builds on studies in basic two-dimensional design and provides the conceptual and technical foundation for more advanced work in color photography, graphic design, illustration, web-based and other digital medial. Primary software: Adobe Photoshop. Prerequisite: ART 1120 or consent of instructor.

ART 2420B - Vector Drawing

Credits: (1)
Typically taught:
Fall [1st Blk, 2nd Blk]
Spring [1st Blk, 2nd Blk]

Emphasis on vector drawing as applied to problems in art and design. This course builds on studies in basic two-dimensional design and provides the conceptual and technical foundation for more advanced work in graphic design, animation, 3D modeling, and web design. Primary software: Adobe Illustrator. Prerequisite: ART 1120 or consent of instructor.

ART 2420C - Digital Page Composition

Credits: (1)
Typically taught:
SuFall [1st Blk, 2nd Blk]
Spring [1st Blk, 2nd Blk]

Emphasis on the principles of layout using industry-standard software tools. This course builds on studies in basic two-dimensional design and provides the conceptual and technical foundation for more advanced work in typography and graphic design. Primary software: Quark Express. Prerequisite: ART 1120 or consent of instructor.

ART 2420D - Design for the Internet

Credits: (1)
Typically taught:
Fall [1st Blk, 2nd Blk]
Spring [1st Blk, 2nd Blk]

Emphasis on the principles of web design using industry-standard software. This course builds in studies in basic two-dimensional design and provides the conceptual and technical foundation for more advanced work in digital media and web design. Primary software: Macromedia Dreamweaver. Prerequisite: ART 1120 or consent of instructor.

ART 2430 - Introduction to Graphic Design

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Introduction to the forms, concepts, and methods of graphic design, including the fundamentals of typography, visual metaphor, word/picture communication, visual organization, and design process. Software instruction necessary for success in the discipline is integral to studio projects. Co-Requisite: ART 1120.

ART 2450 - Foundations of Photography: Color/Digital

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [2nd Blk]

A highly disciplined craft and concept course to help develop technical and aesthetic skills in color photography. Students will learn and explore the theory, practice, and aesthetics of shooting and printing color photographic materials. Using digital media and new technology as a means for creative expression and investigation in color photography will also be a main concern in this course.

ART 2600 - Painting I

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Introduction to painting including the construction and design of paintings, investigations into the character and actions of various paints and techniques (traditional and contemporary) on a variety of surfaces.

ART 2700 - Sculpture I

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An introduction to the essential methods and materials of sculpture including modeling, carving, casting, and construction with emphasis on contemporary activity in sculpture and with projects designed to practice concept development.

ART 2750 - Foundations of Video Art

Credits: (3)
Typically taught:
Fall ~~[Full Sem]~~
~~Spring~~ [Full Sem]

This course will provide students with an introductory-level investigation of the skills and concepts used in experimental digital video making. Students will learn video recording and editing in an art context and to incorporate video into their own creative practice. Students will also be introduced to historical and contemporary aesthetic and conceptual issues surrounding video as a form of creative expression. Prerequisite: Either ART 2250 or ART 2450 or consent of instructor.

ART 2830 - Directed Readings

Credits: (1-3)
Typically taught:
Spring [Full Sem]

Individually chosen readings on specialized topics supervised by a faculty member. Prerequisite: Consent of faculty supervisor prior to registration. May be repeated twice with a maximum of 3 credit hours.

ART 2890 - Cooperative Work Experience

Credits: (1-2, 6 maximum)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An opportunity for students to receive academic credit for faculty approved on-the-job learning experiences within certain visual arts areas of emphasis. C/NC only. Prerequisite: Instructor approval (before enrollment) and previous or concurrent enrollment in art classes as specified by each area of emphasis. May be repeated with a maximum of 6 credit hours.

ART 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will be determined by the department. May be repeated 5 times with a maximum of 6 credit hours with different topics.

ART 3085 - Critical Issues in Art

Credits: (3)
Typically taught:
Spring [Full Sem]

This course introduces students to the history of ideas in art from the ancient Greeks to the most contemporary currents, with a focus on Modernism and Post-Modernism up to the present. The goal of this course is the creation of a critical and theoretical foundation that will allow student to locate themselves and their work within the context of critical dialogues in the contemporary art world. Class time will involve discussions of assigned readings, with images presented to supplement and inform the ideas under consideration. Prerequisite: ART 1040 or consent of instructor.

ART 3120 - Figure Drawing

Credits: (3)
Typically taught:
Fall ~~[Full Sem]~~
~~Spring~~ [Full Sem]

Study of the anatomical structure of the human body. The student, by means of drawing from the model, explores literal and experimental interpretation of form. Prerequisite: ART 1110 and ART 1120; or consent of instructor.

ART 3150 - Photography Seminar

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course is designed to introduce students early to the type of intense investigation and experimentation necessary to define and execute a semester long project in photography. Emphasis will be on development of ideas, fine-tuning technique, and improving ability in critical evaluation and writing. Other topics covered will be an introduction to professional medium-format cameras, and portfolio preparation. Prerequisite: ART 2250 and ART 2450. May be repeated twice with a maximum of 6 credit hours.

ART 3200 - Intermediate Printmaking

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An intermediate level class with emphasis on screenprinting, relief, and intaglio with further exploration into print

processes that include photographic stencils and multicolor printing. Prerequisite: ART 1120 and ART 2200; or consent of instructor.

~~**ART 3310 - Intermediate Handbuilt Ceramics**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~

~~Intermediate problems in handbuilt ceramics with emphasis on functional and sculptural form. Various firing techniques explored. Prerequisite: ART 1130 and ART 2310; or consent of instructor.~~

~~**ART 3320 - Intermediate Wheelthrown Ceramics**~~

ART 3210 - Relief Printmaking

Credits: (3)
Typically taught:
Fall [Full Sem]

Students will learn the basic printmaking processes and traditional techniques of carving and printing both wood and linoleum relief blocks. Contemporary approaches to relief processes through digital media experimentation will be introduced. Emphasis is on development of the student's own ideas through experimentation, using traditional and non-traditional forms and processes. Safety issues will be addressed. Students will work from an introductory through an intermediate level, with a variety of progressive projects, each resulting in a small edition. The course will be administered through lecture, process demos, in class work time, and peer/individual critiques. Materials fee will cover most studio costs, excluding plates and paper. May be repeated once up to 6 credit hours.

ART 3215 - Etching Printmaking

Credits: (3)
Typically taught:
Spring [Full Sem]

Students learn basic platemaking and printing techniques used in etching while learning to incorporate their own drawing skills and points of view. Line work, aquatint, and ancillary techniques will be explored. Safety issues will be addressed. Historical and contemporary prints and printmakers are reviewed. Emphasis is on development of the student's own ideas through experimentation, using traditional and non-traditional forms and processes. The course will be administered through lecture, demos, in class work time, and formal and informal peer critiques. Materials fee to cover most supplies except for printing plates and paper. May be repeated once up to 6 credit hours.

ART 3310 - Ceramics II

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

~~Intermediate problems in wheelthrowing with emphasis on functional form and surface decoration. Kilns and various firing techniques~~ The second class in a two-part introductory ceramics series. This course expands upon hand-building and covers wheel-thrown techniques in greater depth. Additional approaches to clay surfacing are explored. Students learn clay mixing, glaze testing and principles of kiln firing. Prerequisite: ART 2310.

ART 3320 - Ceramics III: Intermediate

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course addresses craftsmanship, form and content through assignments and projects. Students will conduct directed research, draft proposals, fire kilns, make clay and mix glazes. Prerequisite: ART ~~1130 and~~3310, ART ~~2310;~~1130 or consent of instructor.

ART 3350 - Small Metals/Jewelry II

Credits: (3)
Typically taught:
Spring [Full Sem]

Development of design concepts and procedures with emphasis on basic techniques and concept development in fabrication, casting, enameling, cold connectors, surface enrichment. Prerequisite: ART 2350 or consent of instructor.

~~**ART 3420A - Bitmap Imaging**~~

ART 3410 - Design Seminar for Juniors

Credits: (~~1~~)
~~Emphasis on the principle of bitmap imaging using industry-standard software. This course builds on studies in basic two-dimensional design and provides the conceptual and technical foundation for more advanced work in color photography, graphic design, illustration, web-based and other digital medial. Primary software: Adobe Photoshop. Prerequisite: ART 1120 or consent of instructor.~~

~~**ART 3420B - Vector Drawing**~~

~~**Credits: (1**~~**3)**
Typically taught:
Fall [~~1st Blk, 2nd Blk~~Full Sem]
Spring [~~1st Blk, 2nd Blk]~~

~~Emphasis on vector drawing as applied~~**Full Sem]**

Orientation to ~~problems in~~professional Graphic Design practice for the Junior Graphic Design student. Includes art direction and work situations, client relations, portfolio and resume preparation, self promotion, and career advancement. Course contents will be explored through reading, writing, lecture, discussion, critique, simulation, guest presentations, studio visits, and ~~design. This course builds on studies in basic two-dimensional design and provides the conceptual and technical foundation for more advanced~~project work ~~in graphic design, animation, 3D~~

~~modeling, and web design. Primary software: Adobe Illustrator. Prerequisite:~~tailored to individual portfolio development. Prerequisite: ART 2430, ART 3430, ART ~~1120 or consent of instructor.~~

3435, ART ~~3420C - Digital Page Composition~~

~~**Credits: (1)**~~
~~**Typically taught:**~~
~~**SuFall [1st Blk, 2nd Blk]**~~
~~**Spring [1st Blk, 2nd Blk]**~~

~~Emphasis on the principles of layout using industry-standard software tools. This course builds on studies in basic two-dimensional design and provides the conceptual and technical foundation for more advanced work in typography and graphic design. Primary software: Quark Express. Prerequisite:~~ 3455 and ART ~~1120 or consent of instructor.~~

~~**ART 3420D - Design for the Internet**~~

~~**Credits: (1)**~~
~~**Typically taught:**~~
~~**Fall [1st Blk, 2nd Blk]**~~
~~**Spring [1st Blk, 2nd Blk]**~~

~~Emphasis on the principles of web design using industry-standard software. This course builds in studies in basic two-dimensional design and provides the conceptual and technical foundation for more advanced work in digital media and web design. Primary software: Macromedia Dreamweaver. Prerequisite: ART 1120~~ 3445 or consent of instructor.

ART 3430 - Typography and Publication Design

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Orientation to typographic communications including methods and processes, aesthetics, readability, typographic systems, grids, layout, and digital page composition. Class meets 2 times/week for 3-hour sessions. Prerequisite: ART ~~1120~~2430 or consent of instructor.

ART 3435 - Experimental Typography

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Investigation into experimental and expressive aspects of typographic communication. Emphasis is placed upon the historical development of letter design, letter and text as visual form, and typographical illustration. Prerequisite: ART ~~1120~~2430 or consent of instructor.

~~**ART 3440 - Graphic Design**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~

~~Studies in perception, visual organization, media, design process, and integrated message formulation with word and image. Emphasis is placed on the application of visual language skills to communication problems. Class meets 2 times/week for 3-hour sessions. Prerequisite: ART 3430 or ART 3435 or consent of instructor.~~

ART 3445 - Web Design for Visual Arts

Credits: (3)
Introduction to designing for the Internet. Emphasis on the application of visual communication principles to the creation of functioning, well designed websites. Course will include basic HTML and CSS programming, methods for organizing and understanding website content, ways and processes for working with clients and/or creating content, and ways to translate design and typographic fundamentals to the landscape of the Internet. Prerequisite: ART 1140 (Color Theory), ART ~~3420B~~2420B (Vector Drawing), and ART ~~3420C~~2420C (Digital Page Composition), or consent of instructor.
May be repeated once for credit.

ART 3455 - Design Theory and Practice

Credits: (3)
A thematic investigation of selected movements, theories, and figures from the history of graphic design. Topics are selected according to relevance and significance to the design profession in our current day and include the role of design research in contemporary practice. This is a studio course oriented to the interests of the visual communication program within the art major. Prerequisite: ART 2430 (and either ART 3430~~ and ARTH 3451~~ or ART 3435) or consent of instructor.

ART 3460 - Illustration

Credits: (3)
Typically taught:
Fall [Full Sem]

Introduction to theory, methods, tools and materials, and the professional practice of illustration. Emphasis is placed on concept development, media exploration and technique as applied to a variety of problems in pictorial communication. Prerequisite: ART 1110 and ART 1120 or consent of instructor.

ART 3465 - Motion Design

Credits: (3)
Typically taught:
Spring [Full Sem]

This course is an introduction to Motion Design (in relation to Graphic Design) and will cover the history and aesthetics of motion design, ways to think in time and space, techniques and methods for planning motion sequences,

ways to think about and design with typography in motion, and the use of motion-specific industry-standard software and tools (Apple Motion, Adobe Flash, Adobe After Effects). This course aims to: provide historic and current perspectives regarding motion graphics and design; introduce students to categories, styles, terminology and vocabulary used in motion graphics and design; introduce students to basic techniques, methods and concepts used in motion design; work with typography and image in terms of motion; reinforce graphic design tenets and practices, and show how they extend to motion design. Prerequisite: ART 3430, ART 3435, and ART ~~3440~~2430 or consent of instructor.

ART 3500 - Advanced Time-Based Media/Video Art

Credits: (3)
Typically taught:
Spring [Full Sem]

A project-oriented studio course providing a more in-depth exploration of time-based media as used by contemporary artists with an emphasis on video. We will explore installation, projection and the web as environments for video art, as well as other media which allows the employment of time as a central element. Prerequisite: ART 2750.

ART 3515 - Art Methods and Resources for Secondary Teachers I [Art Methods I]

Credits: (3)
Typically taught:
Fall [Full Sem]

This class prepares the art education candidate for teaching in the classroom, grades 7-12 and adaptable to K- 6. Experiences will include art activities, processes, materials, tools and resources, with the development and preparation of the accompanying curricula materials, lesson plans and assessments by the candidate. Curriculum aligns with State of Utah's core curriculum and national standards in the visual arts. Content will focus on the foundations of art education programming, including the art elements and design principles. In addition, this class will examine classroom management strategies and practices for the beginning teacher in the contemporary classroom. Art Education majors should have completed 40 credit hours; minors must have completed 12 credit hours. Prerequisite: (Recommended) Professional Core Level, College of Education, or permission of instructor. This course is required for secondary certification and is designed be taken prior to student teaching.

ART 3520 - Art Methods and Resources for Secondary Teachers II [Art Methods II]

Credits: (3)
Typically taught:
Spring [Full Sem]

Examination of advanced approaches, methodologies, and curriculum appropriate to teaching visual arts in grades 7-12, and adaptable to K- 6. Candidate will develop and prepare materials for advanced visual arts programming. Further investigation of classroom management practices appropriate to adolescents and young adults. Collaboration, mentorship and leadership will be emphasized. Curriculum aligns with State of Utah's core curriculum and national standards in the visual arts. Art education Majors should have completed 40 credit hours; minors must have completed 12 credit hours. Prerequisite: ART 3515, or by consent of instructor. This course is required for secondary certification and is designed to be taken prior to student teaching.

ART 3525 - Practicum: WSU ArtsBridge Service-Learning

Credits: (1-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This service-learning course provides the fine arts teacher candidate with academic credit for designing and teaching an integrated arts course in a grade K-12 classroom or equivalent community education program. The candidate will work closely with a University faculty mentor, host school teacher and ArtsBridge director in implementing and assessing integrated arts curricula and producing a final project by K-12 classroom students. Course components include: curricula pre-planning and implementation, in-class teaching, student assessment, candidate self-assessment and ArtsBridge seminar components. By permission only. Fine arts education content area supervisor and successful interview with faculty mentor and/or ArtsBridge director. Content methodology course(s) complete or in progress. May be repeated once with a maximum of 12 credit hours.

ART 3530 - Art Methods and Resources for Elementary Art Teachers K-6

Credits: (3)
Typically taught:
Spring [Full Sem]

Examination of advanced approaches, methodologies, and curriculum appropriate to teaching visual arts in grades K-6. Candidate will develop and prepare materials for elementary visual arts programming, in alignment with state and national standards. Prerequisite: ART 3515.

ART 3550 - Photography: View Camera Techniques

Credits: (3)
Typically taught:
Fall [Full Sem]

The theory, aesthetics, and techniques of photographic image making with the view camera. Students will learn the operation of large format cameras, the Zone System method of negative exposure and development and methods for fine-tuning black and white photographic printing. The history of and contemporary trends in working with large format negatives will also be explored. Prerequisite: ART 3150 or consent of instructor. May be repeated once with a maximum of 6 credit hours.

ART 3600 - Painting II

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Consolidates and further develops material covered in Painting I. Investigations include the figure, mixed media, and abstraction. Historical precedents are discussed through slide lecture as an aid to development. Prerequisite: ART 1120 and ART 2600; or consent of instructor.

ART 3700 - Sculpture II

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An introduction to the form language of sculpture with projects designed to develop conceptual thinking skills, to learn technical skills, and to explore new areas of interest in the three-dimensional visual arts. Prerequisite: ART 1130 and ART 2700; or consent of instructor.

ART 3720 - Public Art

Credits: (3)
Typically taught:
Spring [Full Sem]

Public Art focuses on contemporary public art and includes an historical overview. Successful examples of public art proposals will be presented and analyzed. Students will learn the steps necessary to research, collaborate and implement a public art commission. Each student will research a current national public art "call for proposals". The student will then prepare and submit a completed public art research project to the national venue. In addition, a three-dimensional fabricated, architectural model will be required as a final project. Course activity may include an actual public art commission in the region. Students will receive a letter grade and can repeat the course for additional credit a maximum for 2 times (6 credit hours total). Prerequisite: ART 1120, ART 1130 and on of the following: ART 2200, ART 2310, ART 2600, ART 2700.

ART 3800 - Travel-Study Studio

Credits: (1-3)
Variable title course
Typically taught:
Summer [Full Sem]

Studio projects will be based in response to the opportunities afforded by travel-study. These works may be a direct response to the country or region and its culture or they may be related to an event that takes place in that area while students are visiting. Instruction will be given in English. Prerequisite: ART 1040 or Instructor's Approval. May be repeated up to 4 times and up to 12 credit hours.

ART 3995 - BFA Seminar

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This is a seminar/discussion and studio course that guides BFA students in the research, development, and articulation of a thematic body of work, within the context of contemporary art. Studio projects will be directed toward bringing individual vision toward full expression. Prerequisite: BFA students who have completed second-level course in their studio area only.

ART 4010 - Museum Methods

Credits: (3)
Typically taught:
Spring [Full Sem]

This course explains and demonstrates the three main areas of emphasis within the museum studies field: collections management, curation and interpretation, and arts administration. The course meets two time a week for a three hour session. Prerequisite: Consent of instructor.

ART 4110 - Advanced Drawing

Credits: (3)
Typically taught:
Spring [Full Sem]

Continued drawing exploration in various media with emphasis on focused personal direction, independent serial work, presentation of assigned research into related contemporary work, active participation in the critique process. Prerequisite: ART 3120 or consent of instructor. May be repeated 3 times with a maximum of 9 credit hours-please consult a faculty advisor.

ART 4120 - Advanced Figure Drawing

Credits: (3)
Typically taught:
Fall ~~[Full Sem]~~
~~Spring~~ [Full Sem]

Advanced study of the structure of the human body with a greater stress on draftsmanship, historical uses of the figure in art, and individual explorations. Prerequisite: ART 3120 or consent of instructor. May be repeated 3 times with a maximum of 9 credit hours-please consult a faculty advisor.

ART 4150 - Photography: Alternative Processes

Credits: (3)
Typically taught:
Spring [Full Sem]

Studio assignments are based on photographic alternatives to the silverprint. Historical references and perspectives provide the context for supervised studio/computer/assignments. Prerequisite: ART 3150 and ART 1140 or consent of instructor. May be repeated 3 times with a maximum of 9 credit hours-please consult a faculty advisor.

ART 4200 - Advanced Printmaking

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An advanced level class in printmaking with emphasis on screenprinting, relief, intaglio, and/or lithography.

Emphasis on individual portfolio production. Prerequisite: ART 3200 or consent of instructor. May be repeated 3 times with a maximum of 9 credit hours-please consult a faculty advisor.

~~ART 4300 - Ceramic Glaze Formulation~~

~~Credits: (3)~~
~~Typically taught:~~
~~Spring [Full Sem]~~

~~Using natural and manufactured raw materials to create ceramic glazes. Understanding traditional glaze chemistry and calculations (using atomic symbols and weights). Exploring sources of glaze color and texture, and the effects of temperature and kiln atmosphere on ceramic glazes. Prerequisite: ART 3310 or ART 3320 or consent of instructor. May be repeated 3 times with a maximum of 9 credit hours-please consult a faculty advisor.~~

ART 4310 - Ceramics IV: Advanced ~~Handbuilt Ceramics~~

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Advanced ~~problems~~Issues in ~~ceramic design~~craftsmanship and ~~construction using traditional~~concepts are addressed through lecture and ~~contemporary handbuilding (nonwheel) techniques with an emphasis on aesthetics. Individual~~proposal based projects ~~to be determined by consultation with instructor. Kiln operation. Prerequisite: ART 3310~~. Research assignments that explore ceramic processes and current trends in ceramic art are emphasized. Prerequisite: ART 3320, ART 1130, ART 1040 or consent of instructor. May be repeated ~~3~~2 times with a maximum of 9 credit hours-please consult a faculty advisor.

ART 4320 - ~~Advanced Wheelthrown~~ Ceramics V: The Artist's Identity

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

~~Advanced problems in~~Intensive research on ceramic ~~design~~processes and concepts as it relates to creating ~~wheelthrown forms~~a unique identity as a ceramic artist is emphasized. Proposal based initiatives are coupled with ~~an emphasis on aesthetics. Individual project to be determined by consultation with instructor. Kiln operation.~~ critical thinking, writing and research assignments. This is a suggested preparatory course for the BFA capstone classes. Prerequisite: ART ~~3320~~ 4310, ART 1130, ART 1040 or consent of instructor. May be repeated ~~3~~2 times with a maximum of 9 credit hours-please consult a faculty advisor.

ART 4350 - Small Metals/Jewelry III

Credits: (3)
Typically taught:
Spring [Full Sem]

Development of advanced design concepts and procedures with emphasis on basic techniques and concept

development in fabrication, casting, enameling, cold connectors, and surface enrichment. Prerequisite: ART 3350 or consent of instructor. May be repeated 3 times with a maximum of 9 credit hours-please consult a faculty advisor.

ART 4400 - Advanced Graphic Design

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Application of design theory and process to complex problems in visual communication. Emphasis is placed on research, analysis, problem definition, and the development of individual design solutions. Studio projects vary each term and will generally involve visual identity, indormation design, environmental graphics, publication design, and design for interactive media. Prerequisite: ART 2430, ART 3430, ART 3435, ARTH 3451 and ~~ART 3440~~BFA program admission or consent of instructor. May be repeated 3 times with a maximum of 9 credit hours-please consult a faculty advisor.

ART 4410 - Design Seminar

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Orientation to professional practice in visual communication including art direction and work situations, client relations, portfolio and resume preparation, self promotion, and career advancement. Course contents will be explored through reading, writing, lecture, discussion, critique, simulation, guest presentations, studio visits, and project work tailored to individual portfolio development. Prerequisite: ART 4400, ART 3445 and BFA program admission or consent of instructor. May be repeated 3 times with a maximum of 9 credit hours-please consult a faculty advisor.

ART 4415 - Design Production

Credits: (3)
Typically taught:
Spring [Full Sem]

Technical processes and procedures for Art Major, Visual Communication emphasis. Emphasis is placed on file preparation and technical procedures for electronic media and for offset printing including proofing methods, paper, binding and other finishing processes. Prerequisite: ART 3430 and ART 3435 or consent of instructor.

ART 4420 - Advanced Digital Media

Credits: (3)
Typically taught:
Spring [Full Sem]

Students will further develop personal expression in the visual arts using computer media through aesthetic problem solving and further development of digital media skills. There will be an emphasis on strengthening the students'

ability to work independently while supplying the necessary feedback from the interaction of a class. Prerequisite: ART ~~3420A~~2420A, ART ~~3420B~~2420B, ART ~~3420C~~2420C, ART ~~3420D~~2420D, or consent of instructor. May be repeated 3 times with a maximum of 9 credit hours-please consult a faculty advisor.

ART 4440 - Interaction Design

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course is an introduction to the principles of interaction design as it relates to physical and digital space, with a focus on designing user-centered artifacts like interactive publications and apps for hand-held devices. Theoretical concepts like ethnography, user-testing, and the use of mapping in design will be explored. We will also explore the landscape of technology as it relates to interaction, and the use of appropriate tools and software to create prototypes and functioning digital designs. Prerequisite: ART 1120 (2-D Design), ART 1140 (Color Theory), or consent of instructor. May be repeated once for credit.

ART 4460 - Advanced Illustration

Credits: (3)
Typically taught:
Spring [Full Sem]

Development of individual approaches to advanced problems in illustration. Emphasis is placed on the formulation of visual metaphor, articulation of form, and on professional practices. Studio projects vary each term and will generally involve editorial, reportorial, scientific, advertising, and instructional problems in pictorial communication. Prerequisite: ART 3460 or consent of instructor. May be repeated 3 times with a maximum of 9 credit hours-please consult a faculty advisor.

ART 4550 - Photography: Studio Lighting

Credits: (3)
Typically taught:
Spring [Full Sem]

This is a practical course that enables students to better control and use light and lighting in their work. Students will be introduced to a range of artificial light sources and lighting techniques to be used as a means of creative control. Work will center in the studio where controlled conditions and a directorial approach can yield the artist's intent. Prerequisite: ART 3150 or consent of instructor. May be repeated once with a maximum of 3 credit hours.

ART 4600 - Painting III

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Emphasis on developing independence in the painting student and to provide an opportunity for them to pursue their

own area of interest in painting while providing the necessary feedback from the interaction of a class. Prerequisite: ART 3600 or consent of instructor. May be repeated 3 times with a maximum of 9 credit hours-please consult a faculty advisor.

ART 4660 - Special Topics in Photography

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A study of specific topics in photography, the subject and faculty change each time this course is offered. Example topics include "Documentary Photography," "Visual Books," "Video Art," and "Directed Visions." Prerequisite: ART 3150 or consent of instructor. May be repeated 2 times for credit – consult with faculty advisor.

ART 4700 - Sculpture III

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Advanced individual problems in selected areas of concentration; research and development of conceptual, technical, and methodological concerns. Prerequisite: ART 3700 or consent of instructor. May be repeated 3 times with a maximum of 9 credit hours-please consult a faculty advisor.

ART 4750 - Experimental Photography

Credits: (3)
Typically taught:
Fall [Full Sem]

Experimental photographic alternatives to the traditional methods of photographic image making. Emphasis will be placed on using the camera, darkroom techniques and digital and emerging technology in ways that will give the students the mind-set and ability to push the limits of the medium. Prerequisite: ART 3150. May be repeated 3 times with a maximum of 9 credit hours-please consult a faculty advisor.

ART 4801 - College of Arts & Humanities Leadership Lecture Series

Credits: (1)
Typically taught:
Spring [Full Sem]

This one-credit elective course will give arts and humanities' majors the opportunity to interact with successful guest lecturers whose undergraduate backgrounds are in the arts and humanities. Lecturers will clarify how the talents and skills associated with their degrees have contributed to their pursuit of successful careers and lives.

ART 4830 - Directed Readings

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Individually chosen readings on specialized topic supervised by a faculty member. Prerequisite: Consent of faculty supervisor prior to registration. May be repeated twice with a maximum of 3 credit hours-please consult a faculty advisor.

ART 4890 - Cooperative Work Experience

Credits: (1-2, 6 maximum)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An opportunity for students to receive academic credit for faculty approved on-the-job learning experiences within certain visual arts areas of emphasis. C/NC only. Prerequisite: By instructor approval only and previous or concurrent enrollment in art classes as specified by each area of emphasis. May be repeated for a maximum of 6 credit hours-please consult a faculty advisor.

ART 4900 - Individual Studies

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Individual studies in selected areas of emphasis. Open to juniors and seniors by instructor approval only. May be repeated for a maximum of 6 credit hours-please consult a faculty advisor.

ART 4910 - Photography: Internship

Credits: (1-3)
Typically taught:
Spring [Full Sem]

Students have the opportunity to engage in a close learning relationship with professional photographers. These opportunities include workshops, seminars, professional assistantships, and residencies. Students will be responsible for researching and proposing mentorships. Area faculty will approve proposals, help place students with mentors and review the progress of mentorships. Prerequisite: ART 3150 or consent of instructor. May be repeated for credit – consult with faculty advisor.

ART 4920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

In order to provide flexibility and to meet many different needs, a number of specific offerings are possible using this catalog number. When the number is used it will be accompanied by a brief and specific descriptive title. The specific title with the credit authorized for the particular offering will appear on the student transcript. May be repeated 5 times with a maximum of 6 credit hours with different topics.

ART 4930 - Teaching Assistantship Experience

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Designed for students who wish to gain teaching experience for graduate school. By observation and participation with the instructor, students will learn how a basic art course is designed and taught. Prerequisite: Student must be in the BFA program and have instructor consent.

ART 4990 - BFA Thesis

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Emphasis on portfolio preparation and professional writing skills pertinent to the completion of the BFA Thesis Exhibit and future career applications. Students work on the development and synthesis of ideas, and fine-tune relevant artistic and critical evaluation skills. During this course students will be required to produce new work for the BFA Thesis Exhibit. Prerequisite: Senior level BFA student. Completion of ART 3995 BFA Seminar. Registration by departmental approval only. Course cannot be taken during the semester immediately following BFA Seminar. May be repeated for credit - consult with faculty advisor.

ARTH 1090 CA - Art and Architecture of the World: Paleolithic-AD 1000

Credits: (4)
Typically taught:
Fall [Full Sem]
Summer [1st Blk]

A global survey of the history of art and architecture from BC 15,000 to AD 1000. Visual art from the first artistic expressions on rocks to the art of emerging civilizations (such as Mesopotamia, Egypt, China, India, and Africa), and the monuments and small-scale artifacts of the Medieval Ages will be analyzed in its historical, social, political, and broader cultural contexts.

ARTH 1100 CA - Art and Architecture of the World: AD 1000-Present

Credits: (4)
Typically taught:
Spring [Full Sem]
Summer [2nd Blk]

A global survey of the history of art and architecture from AD 1000 to the present. Visual art from Gothic cathedrals and Islamic book art to Renaissance Europe and the Chinese Empire, from the Age of Enlightenment to contemporary art will be analyzed in its historical, social, political, and broader cultural contexts.

ARTH 2040 - Art and Architecture of Asia

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A historical account of the architecture, sculpture, and painting of Asia (India, Nepal, Tibet, Myanmar, Sri Lanka, Thailand, Cambodia, Indonesia, China, Korea, and Japan), including the political, religious, and intellectual history informing the arts of each country.

ARTH 3030 - Native American Art of the Southwest: From the Anasazi to the Present

Credits: (4)
Typically taught:
Fall [Full Sem] odd years

Focuses on the arts of the Native Americans in the Southwest from their archaeological past to the present with occasional relevant explorations of Native American art in general. Study of traditional and contemporary modes of artistic expressions.

ARTH 3040 - Modern Art

Credits: (4)
Typically taught:
~~Fall [Full Sem]~~Check with Department

The history of the visual arts (including painting, sculpture, architecture and photography) from 1850 to the 1950s. Study of issues in European and American Modernism; multicultural perspectives; the political, social, and intellectual history informing the arts of that period. Prerequisite: ARTH 1100 or consent of instructor.

ARTH 3050 - Contemporary Art

Credits: (4)
Typically taught:
Spring [Full Sem]

Critical analysis of developments in the arts (including multimedia art, photography, performance art, installations, and feminist art) from 1960s to the present. Emphasis on post modern currents and issues and their study in the context of broader cultural contexts. Prerequisite: ARTH 1100 or consent of instructor.

ARTH 3055 - Special Topics in Art History

Credits: (4)
Typically taught:
Spring [Full Sem] ~~every two~~odd years

This course will explore different topics and content related to art history and the contemporary practice of art; the content of the course will change as the main topic changes. Students will gain the benefit of a deep dive into a specific time period, discourse, or exploration of media.

ARTH 3060 - The Art and Architecture of India

Credits: (4)
Typically taught:
Fall [Full Sem]

An historical account of the architecture, sculpture, and painting of India, including the political, religious, and intellectual history informing the arts of various regions.

ARTH 3070 - The Art and Architecture of China

Credits: (4)
Typically taught:
Spring [Full Sem]

An historical account of the architecture, sculpture and painting of China including the political, religious, and intellectual history informing the arts of different regions. May be repeated for a maximum of 4 credit hours-please consult a faculty advisor.

ARTH 3080 - The Art and Architecture of Japan

Credits: (4)
Typically taught:
Fall [Full Sem]

An historical account of the architecture, sculpture and painting of Japan, including the political, religious, and intellectual history informing the arts of different regions. May be repeated for a maximum of 4 credit hours-please consult a faculty advisor.

ARTH 3100 - The Art and Architecture of the Islamic World

Credits: (4)
Typically taught:
Spring [Full Sem]

An historical survey of the architecture, sculpture, and painting of the Islamic world, including the political, religious, and intellectual history informing the arts of different countries: Iran, Iraq, Egypt, Turkey, North Africa, India, Spain, and Indonesia.

ARTH 3451 - History of Design

Credits: (4)
Significant figures and movements in the history of graphic design from the development of written languages to the present. Contents include intersections with art movements and related disciplines such as architectural, products, and interactive design along with the social, political, and technical forces that have influenced these disciplines over time. Prerequisite: ARTH 1100 or consent of instructor.

ARTH 3850 - Travel-Study Art History

Credits: (1-4)
Variable title course
Typically taught:
Summer [Full Sem]

The study of the history of art and architecture will be in direct response to a country or region and its culture or it may be related to an event that takes place in that area while students are there. Instruction will be given in English. Prerequisite: ARTH 1090 or ARTH 1100 or ARTH 2040.

ARTH 3950 - Photography: History, Theory and Criticism

Credits: (4)
Typically taught:
Spring [Full Sem]

This is a reading, writing and discussion course, which addresses historical and contemporary issues of photographic art practices. Written projects and class discussions will focus on developing a critical understanding of the readings as they relate to the historical development and contemporary practice of photography as a fine art, to the influence photography has had on the history of art and to the broader cultural impact of photography and digital media. Prerequisite: ARTH 1100 or consent of instructor.

ASTR 1040 PS - Elementary Astronomy

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]

A brief survey of the physical universe using the fundamental laws of physics. Topics include the history of astronomy, the solar system, the sun, the evolution of stars, pulsars, black holes, the Milky Way galaxy, galaxies, quasars, and the Big Bang. Three hours of lecture per week. Cross-listed with PHYS 1040.

ASTR 2040 PS - Principles of Observational Astronomy

Credits: (3)
Typically taught:
Fall [Full Sem]

An introductory course in observational astronomy. Topics will include planetary, stellar, and galactic astronomy, with a focus on modern observational techniques, including digital imagery, spectroscopy, and observing with

science-grade astronomical instrumentation. *Cross-listed with PHYS 2040*. Prerequisite: MATH 1060 (minimum grade of C).

ASTR 2800 - Introductory Individual Research Problems

Credits: (1-3)
Time and credit to be arranged. Intended for students working on a directed research project which includes physics/astronomy at the lower division level for one or more semesters. Prerequisite: Consent of instructor. Cross-listed with PHYS 2800. May be repeated up to 10 times.

ASTR 2830 - Introductory Readings in Physics/Astronomy

Credits: (1-3)
Time and credit to be arranged. Intended for students working on a directed reading project which includes physics/astronomy at the lower division level for one or more semesters. Prerequisite: Consent of instructor. Cross-listed with PHYS 2830. May be repeated up to 10 times.

ASTR 3160 - Stellar and Planetary Astrophysics

Credits: (3)
Typically taught:
Spring [Full Sem] odd years

Selected topics in astrophysics with a focus on stellar and planetary systems. Topics may include celestial mechanics, interaction of light and matter, stellar and planetary spectroscopy, stellar atmospheres and interiors, binary star systems, planets and planet formation, and extrasolar planets. Prerequisite: PHYS 2220. Cross-listed with PHYS 3160.

ASTR 3170 - Galaxies and Cosmology

Credits: (3)
Typically taught:
Spring [Full Sem] even years

Selected topics in astrophysics, with a focus on galactic astronomy and cosmology. Topics may include gravitational dynamics, interaction of light and matter, galaxy classification, galaxy formation and evolution, the structure of the universe, cosmology, and the origin and fate of the universe. Prerequisite: PHYS 2220. *Cross-listed with PHYS 3170*.

ASTR 4800 - Individual Research Problems

Credits: (1-3)
Time and credit to be arranged. Open to qualified students for one or more semesters. Prerequisite: Consent of instructor. Cross-listed with PHYS 4800. May be repeated up to 10 times.

ASTR 4830 - Readings in Physics/Astronomy

Credits: (1-3)
Topics which can be studied include (but are not limited to): mechanics, thermodynamics, kinetic theory, statistical mechanics, electronics, electromagnetism, optics, solid-state physics, modern physics, nuclear physics, relativity, cosmology, and astrophysics. These courses may be taken at any time on a personalized basis. Time and credit to be arranged. Prerequisite: Consent of instructor. Cross-listed with PHYS 4830. May be repeated up to 10 times.

AT 1300 - First Aid: Responding to Emergencies

Credits: (2)
Typically taught:
Fall [1st Blk]
Spring [1st Blk]
Summer [1st Blk]

Training the lay person to respond correctly in emergencies and act as the first link in the emergency medical service system. Course leads to American Red Cross certification in Adult, Infant and Child CPR and First Aid: Responding to Emergencies. Cross-listed with HLTH 1300.

AT 1500 - Introduction to Athletic Training (First Semester)

Credits: (3)
Typically taught:
Fall [Full Sem]

Provides an opportunity for students to observe the function of an athletic training facility and become aware of the various duties performed by a Certified Athletic Trainer. Students who wish to apply for admission to the Athletic Training major must take this course. Five (5) clinical hours outside of class at an on-campus athletic training setting are required as assigned.

AT 1501 - Clinical Application of Athletic Training I

Credits: (1)
Typically taught:
Fall [Full Sem]

Provides an opportunity for students to receive skill proficiency testing in the areas of acute care of injury and illnesses. Two lab hours per week. Prerequisite: AT 1500, AT 2300, and formal admission to the AT education program.

AT 1550 - Introduction to Athletic Therapy

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course is designed to introduce students to health care professions that the majority of athletic therapy majors

pursue. These health care professions include: athletic training (AT), physical therapy (PT), occupational therapy (OT), physician assiatant (PA), and medicine (MD or DO). Through lecture and assignments, students will learn the process to apply for the gradaute school of their choice and learn skills and perform activities to get them ready for graduate school.

AT 2175 - Introduction to Sports Medicine

Credits: (3)
Presents the duties and functions of the certified athletic trainer and their relationship to other allied health care and sports medicine professionals. The course will focus on the fundamental causes, prevention, recognition, care, reconditioning of musculoskeletal injuries/illnesses, and program organization and administration. ~~The course will include the planning, preparation, and presentation of group projects on assigned topics related to athletic training. For non-majors~~The course will cover skills needed for first aid and CPR certification. **If professional rescuer CPR certification is needed, take AT 2300.

AT 2300 - Emergency Response

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [2nd Blk]

Meets the needs of the non-health care professional who has a duty to respond in an emergency. Provides more skills and in-depth training than the First Aid: Responding to Emergencies course. Course leads to American Red Cross certification in Emergency Response and CPR for the Professional Rescuer. Cross-listed with HLTH 2300.

AT 2430 - Prevention and Care of Musculoskeletal Injuries

Credits: (3)
This course is designed to give a basic understanding of athletic training principles. Recognition, cause, prevention, and treatment of musculoskeletal injuries.

AT 2431 - Taping, Wrapping, Bracing, Padding, and Splinting

Credits: (1)
Typically taught:
Fall [Full Sem]

This course is designed to give a basic understanding of athletic training taping, wrapping, bracing, padding, and splinting techniques. Students will apply a variety of techniques to support all areas of the body. Prerequisite: AT 1500, formal admission to the AT education program.

AT 2500 - Clinical Application of Athletic Training II

Credits: (2)
Typically taught:
Spring [Full Sem]

Provides an opportunity for students to receive skill proficiency testing in the areas of risk management and injury prevention, taping, wrapping, bracing and padding, and musculoskeletal injury assessment (lower extremity). Prerequisite: AT 1501, AT 2431 and AT 3300.

AT 2501 - Clinical Application of Athletic Training III

Credits: (2)
Typically taught:
Fall [Full Sem]

Provides an opportunity for students to receive skill proficiency testing in the areas of musculoskeletal injury assessment (upper extremity). Prerequisite: AT 2500 and AT 3301.

AT 3080 - Statistics and Evidence-Based Practice

Credits: (3)
Typically taught:
Spring [Full Sem]

This course explores the concepts necessary to ensure future allied-health professionals are well prepared to utilize an evidence-based practice approach to treatment. Students will gain familiarity with the major elements of evidenced based practice, such as developing a clinically-relevant research question, completing a literature review, as well as becoming familiar with research methodology such as research design, evaluation, statistical analysis, presentation of data, and ethical considerations. This course provides an overview of descriptive and inferential statistics. Students should have a basic understanding of conducting library and Internet information searches prior to taking this course. Prerequisite: MATH 1010 or higher; or Math ACT score of 23 or higher.

AT 3200 - Psychology of Sport, Injury & Rehabilitation

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [2nd Blk]
Summer [1st Blk]

This course is designed to provide a basic understanding of the psychology of sport, injury, and rehabilitation. Topics covered include: emotion, motivation, mental skills training and use, psychological antecedents of injury, psychology of injury and rehabilitation, career transition and termination, disabilities, rehabilitation/exercise adherence, eating disorders, alcohol and drug/substance abuse, gender and cultural diversity, and research methods related to psychology of sport, injury and rehabilitation. Prerequisite: PSY 1010 and AT 3500.

AT 3300 - Evaluation and Care of Musculoskeletal Injuries: Lower Extremities

Credits: (3)
Typically taught:
Fall [Full Sem]
Summer [1st Blk]

Content of this course addresses evaluation techniques and care for musculoskeletal injuries to the trunk and lower extremities. The student must integrate knowledge of anatomical structures, physiology principles and evaluative techniques to provide a basis for critical decision-making in an injury management environment. Prerequisite: ZOOL 2100 or HTHS 1110.

AT 3301 - Evaluation and Care of Musculoskeletal Injuries: Upper Extremities

Credits: (3)
Typically taught:
Spring [Full Sem]
Summer [2nd Blk]

Content of this course addresses evaluation techniques and care for musculoskeletal injuries to the head, face and upper extremities. The student must integrate knowledge of anatomical structures, physiology principles and evaluative techniques to provide a basis for critical decision-making in an injury management environment. Prerequisite: ZOOL 2100 or HTHS 1110; AND AT 3300.

AT 3500 - Clinical Application of Athletic Training 1

Credits: (3)
Typically taught:
Spring [Full Sem]

Provides an opportunity for students to receive skill proficiency testing in the areas of acute care of injury and illness, risk management, and upper/lower extremity injury evaluation. Prerequisite: AT 1500 and AT 2300 and AT 3300 and AT 3301.

AT 3501 - Clinical Application of Athletic Training 2

Credits: (3)
Typically taught:
Fall [Full Sem]

Provides an opportunity for students to receive skill proficiency testing in the areas of taping/wrapping/bracing/padding, neuromuscular conditioning, and upper/lower extremity injury evaluation. Prerequisite: AT 2431 and AT 3300 and AT 3301 and PEP 3280.

AT 3550 - Clinical Application of Athletic Training-Supplement

Credits: (3)
Typically taught:
Summer [Full Sem]

Provides an opportunity for students to gain clinical experience with varied patient populations in the areas of assessment, evaluation, modalities and rehabilitation. Prerequisite: AT 3500.

AT 3600 - Ergonomics for Health and Safety

Credits: (2)
Examines and analyzes the effects of the workplace on employees and adaptations of the work environment to suit the individual. The focus is on the interaction of work and people, i.e., physiological and environmental stresses with the primary intent to establish ways to reduce injuries, accidents, and fatigue and to improve human performance at work. Prerequisite: ~~PEP~~ESS 3500 or consent of instructor.

AT 4100 - Basic Therapeutic Modalities for Musculoskeletal Injuries

Credits: (3)
Typically taught:
Fall [Full Sem]
Summer [1st Blk]

Through lecture, discussion, and laboratory experience, the scientific basis of musculoskeletal rehabilitation involving therapeutic modalities will be examined. This course is designed to introduce students to the contemporary usage and basic foundation of therapeutic modalities, transmission of energy, infrared, and mechanical therapy. Prerequisite: AT 3300 and AT 3301; and PHYS 1010; AND (HTHS 1110 OR ZOOL 2100) and Formal Admission into the Athletic Training Program.

AT 4101 - Advanced Therapeutic Modalities for Musculoskeletal Injuries

Credits: (3)
Typically taught:
Spring [Full Sem]
Summer [2nd Blk]

Through lecture, discussion, and laboratory experience, the scientific basis of musculoskeletal rehabilitation involving therapeutic modalities will be examined. This course is designed to build upon the basic foundations of therapeutic modalities established in AT 4100. Topics for discussion include the application of electrotherapy devises, ultrasound, light therapy, and short-wave diathermy. Prerequisite: AT 4100.

AT 4150 - Therapeutic Modalities for Athletic Therapy majors

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Specifically designed for the pre-professional student, the course will introduce the student to contemporary usage and basic foundation of therapeutic modalities. Through lecture, discussion, and laboratory experience, the scientific basis of musculoskeletal rehabilitation involving therapeutic modalities will be examined. Emphasis will be placed on fundamental concepts of tissue healing and pain control techniques, as well as an introduction to cryo/thermotherapy, massage, traction, ultrasound and electrical stimulation. Prerequisite: AT 3300, AT 3301, Admission to the Athletic Therapy major.

AT 4200 - Basic Rehabilitation of Musculoskeletal Injuries

Credits: (3)
Typically taught:

Fall [Full Sem]
Spring [Full Sem]
Summer [2nd Blk]

Content of this course provides basic understanding of therapeutic exercise as it relates to the rehabilitation process of musculoskeletal injures. Course provides basic concepts and hands on techniques used in the rehabilitation of the athlete/patient from an injury state to a highly competitive state. Prerequisite: AT 3300, AT 3301, and ~~PEP~~ESS 3450 and Formal Admission into the Athletic Training Program.

AT 4201 - Advanced Rehabilitation of Musculoskeletal Injuries

Credits: (3)
Typically taught:
Fall [Full Sem]

Content of this course provides advanced understanding of therapeutic exercise as it relates to the rehabilitation process of musculoskeletal injuries. This course provides advanced instruction and hands on techniques in the rehabilitation of an athlete/patient from an injury state to a highly competitive state. Prerequisite: AT 4200 and ~~PEP~~ESS 3500 and PHYS 1010.

AT 4250 - Rehabilitation for Athletic Therapy majors

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course provides an overview of therapeutic exercise as it relates to the rehabilitation process of musculoskeletal injuries for Athletic Therapy majors. This course provides instruction and hands-on techniques in basic therapeutic rehabilitation techniques. Prerequisite: AT 3300, AT 3301, ~~PEP~~ESS 3450, Admission to Athletic Therapy major.

AT 4500 - Clinical Application of Athletic Training 3

Credits: (4)
Typically taught:
Fall [Full Sem]

Provides an opportunity for students to receive skill proficiency testing in areas of basic therapeutic exercise, basic therapeutic modalities, general medical conditions, and pharmacology. Prerequisite: AT 3501 and AT 4100 and AT 4200 and AT 4550.

AT 4501 - Clinical Application of Athletic Training 4

Credits: (4)
Typically taught:
Spring [Full Sem]

Provides an opportunity for students to receive skill proficiency testing in areas of advanced therapeutic exercise,

advanced therapeutic modalities, and musculoskeletal injury assessment (upper and lower extremity). Prerequisite: AT 3200 and AT 4101 and AT 4201 and AT 4500.

AT 4550 - General Medical Conditions and Advances in Athletic Training

Credits: (3)
Typically taught:
Spring [Full Sem]

Discuss general medical disorders and conditions pertaining to sports medicine and inquire into newest research of related issues. Prerequisite: AT 3300 and AT 3301 and Formal Admission into the Athletic Training Program.

AT 4600 - Administration & Management in Athletic Training

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Provides an overview of the necessary policies, procedures, maintenance, and daily operation of athletic training facilities. Applies principles of facility design and planning, information management, legal and ethical considerations in health care, and professional development as it relates to athletic training. Prerequisite/Co-requisite:
Pre/Corequisite: Student must have completed or be concurrently registered for AT 3500 OR ~~PEP~~ESS 4890.

AT 4650 - Management for Athletic Therapy majors

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Provides an overview of the necessary policies, procedures, maintenance, and daily operation of healthcare facilities. Applies principles of facility design and planning, information management, legal and ethical considerations in healthcare, and professional development as it relates to future healthcare professionals. Prerequisite: AT 3300, AT 3301, Admission to the Athletic Therapy major. Corequisite: ~~PEP~~ESS 4890.

AT 4700 - Introduction to Radiology for the Athletic Training Profession

Credits: (1)
Typically taught:
Fall [Full Sem]

This course provides an opportunity for students to gain exposure to the diagnostic imaging techniques commonly used by the medical community in diagnosis of injury in the athlete. Upon completion of the course, students will be able to identify anatomy and understand terminology used by health professionals when discussing diagnostic images. Prerequisite: AT 4200 and Formal Admission into the Athletic Training Program.

AT 4750 - Evidence-Based Evaluation & Treatment of the Sacroiliac Joint and Spine

Credits: (2)
Typically taught:
Spring [Full Sem]

This course will focus on evidence-based evaluation and management of the spine and pelvis, including the cervical spine, thoracic spine, lumbar spine and the sacroiliac joints. The students must integrate anatomical structures, physiology principles, and evaluative techniques to provide a basis for critical decision-making and management for these pathologies. Prerequisite: AT 3300 and AT 3301 and AT 3501.

AT 4800 - Individual Projects

Credits: (1-4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A comprehensive study or project in the field of Athletic Training. Hours to be arranged for seniors only. May be repeated 3 times up to 16 credit hours.

~~**AT 4990 - Senior Seminar**~~

~~**Credits: (1)**~~
~~For Seniors only. Structured seminar focuses on synthesis of ideas and portfolio preparation.~~

AT 4890 - Cooperative Work Experience

Credits: (1-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Provides academic credit for on-the-job experience.

AT 4998 - Preparation for the Board of Certification (BOC) Exam

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This is an optional course for Athletic Training Majors in the Clinical Track who are preparing for the Board of Certification (BOC) Exam. Prerequisite/Co-requisite: Prerequisite/Co-requisite: AT 3501. May be repeated once up to 2 credit hours.

AT 4999 - Critical Thinking for Musculoskeletal Injury Management

Credits: (1)
Typically taught:

Spring [Full Sem]

Content of this course addresses evaluation techniques, rehabilitation processes and return to play guidelines for specific injuries to the upper and lower extremities. The student must integrate anatomical structures, physiology principles, rehabilitation principles, and evaluative techniques to provide a basis for critical decision-making and care in an athletic injury management environment. Prerequisite: AT 4101 and AT 4201. May be repeated 3 times up to 4 credit hours.

ATHL 1080 - Strength Training Level I

Credits: (1)
-For Club Hockey Players Only

ATHL 1081 - Strength Training Level II

Credits: (1)
-For Club Hockey Players Only

ATHL 1180 - Varsity Softball

Credits: (1)
Typically taught:
Spring [Full Sem]

May be repeated 3 times for 4 credit hours.

ATHL 1510 - Varsity Volleyball

Credits: (1)
Typically taught:
Fall [Full Sem]

May be repeated 3 times up to 4 credit hours.

ATHL 1520 - Varsity Soccer

Credits: (1)
Typically taught:
Fall [Full Sem]

May be repeated 3 times up to 4 credit hours.

ATHL 1570 - Varsity Basketball

Credits: (1)
Typically taught:

Fall [Full Sem]
Spring [Full Sem]

May be repeated 3 times up to 4 credit hours.

ATHL 1575 - Rodeo I

Credits: (1)
Typically taught:
Spring [Full Sem]
Fall [Full Sem]

May be repeated 7 times up to 8 credit hours.

ATHL 1580 - Varsity Cross Country

Credits: (1)
Typically taught:
Fall [Full Sem]

May be repeated 3 times up to 4 credit hours.

ATHL 1590 - Varsity Football

Credits: (1)
Typically taught:
Fall [Full Sem]

May be repeated 3 times for 4 credit hours.

ATHL 1600 - Varsity Golf

Credits: (1)
Typically taught:
Fall [Full Sem]

May be repeated 3 times for 4 credit hours.

ATHL 1630 - Varsity Tennis

Credits: (1)
Typically taught:
Fall [Full Sem]

May be repeated 3 times for 4 credit hours.

ATHL 1640 - Varsity Track and Field

Credits: (1)
Typically taught:
Spring [Full Sem]

May be repeated 3 times for 4 credit hours.

ATHL 1680 - Varsity Indoor Track

Credits: (1)
Typically taught:
Spring [Full Sem]

May be repeated 3 times for 4 credit hours.

ATHL 1760 - Dance Promotion

Credits: (1)
Typically taught:
Spring [Full Sem]
Fall [Full Sem]

May be repeated 3 times for 4 credit hours.

ATTC 3000 - Introduction to Automotive Technology

Credits: (1)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem Online]

An introduction to the Automotive Technology program. Degree requirements and options, internship preparation, employment opportunities, required professional publications, communication, and other topics. (This course is a prerequisite for most automotive technology courses.) Prerequisite: Proof of completion of an Associate of Applied Science AAS or Associate of Science AS degree in automotive service technology or a related degree.

ATTC 3020 - Introduction to Safety Management and Hazardous Materials

Credits: (3)
Typically taught:
Spring [Full Sem, Full Sem Online]

An overview of the environmental issues related to the use and service of vehicles, with emphasis on air quality topics. Environmental regulations, safe practices, disposal of hazardous substances, such as paints and solvents. Prerequisite: ATTC 3000.

ATTC 3260 - Advanced Electrical Systems

Credits: (3)
Typically taught:
Fall [Full Sem]

A study of the advanced electrical systems in today's vehicles. Vehicle communication networks, body control systems, chassis control systems, powertrain control, hybrid control, and battery control systems. Prerequisite/Co-requisite: Prerequisites/Co-requisites: ATTC 3000 and previous automotive electrical training.

ATTC 3280 - Advanced Painting and Refinishing

Credits: (3)
Typically taught:
~~Fall [Full Sem]~~Not currently being offered

Preparation for insurance industry employment. Includes advanced topics in surface preparation and application of contemporary and specialty paints. Matching, blending and complete vehicle refinishing. Inter-Industry Conference on Auto Collision Repair (I-CAR) training modules are included. Lab included. Prerequisite/Co-requisite: ATTC 3000.

ATTC 3480 - Advanced Structural Analysis and Damage Repair

Credits: (3)
Typically taught:
Not currently being offered

Preparation for insurance industry employment. Includes advanced topics in frame and unibody repair. Replacement of major panels, measuring and corrective pulling, and occupant safety systems. Inter-Industry Conference on Auto Collision Repair (I-CAR) training modules are included. Lab included. Prerequisite: ATTC 3280.

ATTC 3520 - Fleet Management

Credits: (3)
Typically taught:
Fall [Full Sem Online]

Study of fleet standards, fixed operations, inventory and personnel management, financial policies and procedures. Includes financial statement analysis. Prerequisite/Co-requisite: Prerequisites or Co-requisites: ATTC 3000 and PS 3203.

ATTC 3620 - Automotive Business Practices

Credits: (3)
Typically taught:
Spring [Full Sem Online]

Study of independent shop and corporate dealership standards, fixed operations, inventory and personnel management, and industry report systems, financial policies and procedures. Includes financial statement analysis. Prerequisite: ATTC 3000.

ATTC 3680 - Automotive Damage Analysis and Estimating

Credits: (3)
Typically taught:
Not currently being offered

Preparation for insurance industry employment. Includes an overview of vehicle damage analysis, restraint systems, mechanical and electrical systems. Topics also include industry standard terminology, procedures, and estimation software usage. Lab included. Prerequisite: ATTC 3480.

ATTC 3760 - Advanced Automotive Technologies

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]

A study of current events/trends in the automotive industry, industry standard professional publications, and the latest technologies used by the automotive industry to meet current emissions, fuel economy, and safety regulations. Prerequisite/Co-requisite: ATTC 3000.

ATTC 3880 - Cooperative Practicum

Credits: (3)
Typically taught:
Summer [Full Sem Online]

Supervised work experience with a sponsoring employer, designed to synthesize theory and practice. Full-time, upper division related employment and approval of faculty supervisor required. Prerequisite: ATTC 3000.

ATTC 4380 - Advanced Non-Structural Analysis and Damage Repair

Credits: (3)
Typically taught:
~~**Fall [Full Sem]**~~**Not currently being offered**

Preparation for insurance industry employment. Includes advanced topics in safety, welding processes, panel repair and replacement, trim application, water and wind leakage. Inter-Industry Conference on Auto Collision Repair (I-CAR) training modules are included. Lab included. Prerequisite: ATTC 3480.

ATTC 4560 - Advanced Propulsion Systems

Credits: (3)
Typically taught:
Fall [Full Sem]

A study of advanced propulsion systems including those used on hybrid-electric vehicles, plug-in hybrids, electric vehicles, and other propulsion technologies. Advanced transmissions/transaxles, wheel motors, drive motors, etc. are included. Prerequisite: ATTC 3760.

ATTC 4720 - Capstone Project

Credits: (2)
Typically taught:
Spring [Full Sem, Full Sem Online]

The use of sophisticated diagnostic tools and equipment. Emphasis is on diagnosis and the development of analytical thinking as it applies to technical problems. Includes lab. Prerequisite: ATTC 3760.

ATTC 4760 - Alternate Fuel Systems

Credits: (3)
Typically taught:
Spring [Full Sem]

A study of alternate fuel systems including bio fuels (ethanol and bio-diesel systems), advanced diesel systems, hybrid-electric vehicles, Compressed Natural Gas (CNG) systems, hydrogen fuel cell, and other existing or emerging technologies. Prerequisite: ATTC 3760.

ATTC 4780 - Insurance Industry Business Practices

Credits: (3)
Typically taught:
Not currently being offered

An overview of the business practices used by the automotive insurance industry. Included is the use of industry standard software to determine insurance policy coverage, vehicle reparability (current value verses repair costs) and parts availability. Prerequisite/Co-requisite: Prerequisites/Co-requisites: ATTC 3680 and PS 3203.

ATTC 4830 - Directed Readings

Credits: (1-3)
Typically taught:
Fall [Full Sem Online]
Spring [Full Sem Online]

Individual readings supervised by a faculty member. Prerequisite: Approval of instructor. May be repeated twice up to 3 credit hours.

ATTC 4860 - Automotive Standards, Laws, and Regulations

Credits: (3)
Typically taught:
Spring [Full Sem]

A study of automotive industry related Society of Automotive Engineers (SAE) standards, State Regulations, U.S. Environmental Protection Agency (EPA) emissions regulations, National Highway Traffic Safety Administration (NHTSA), Federal Motor Vehicle Safety Standards (FMVSS), Corporate Average Fuel Economy (CAFE) regulations, and others. Prerequisite: ATTC 3000.

ATTC 5920 - Short Courses and Workshops

Credits: (1-4)
Consult the semester class schedule for the current offerings under this number.

AUSV 1000 - Introduction to Automotive Service

Credits: (~~3~~2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An introduction to automotive shop safety, pollution prevention, hazardous waste handling, Internet-based electronic service information, diagnostic scan tools, ASE certifications, safety inspection certifications, emissions inspection certifications, developing job interview skills, and resume writing. (This course is a prerequisite for all automotive service courses.)

AUSV 1001 - Collision Repair Fundamentals and Estimating

Credits: (2)
Typically taught:
~~Fall [Full Sem]~~not currently being offered

This course is and introduction to the collision repair industry and the construction of the modern automobile as it applies to the collision repair industry. Emphasis will be placed on locating vehicle information, basic construction of vehicles, environmental concerns and issues, and writing collision repair estimates on damaged vehicles.

AUSV 1010 - Automotive Technology Orientation

Credits: (1)
Typically taught:
Fall [1st Blk]
Spring [1st Blk]

An introduction to maintenance and light repair tasks including: lube oil and filter change, basic under vehicle inspection and maintenance, basic under hood inspection and maintenance, wheel and tire service, Internet-based electronic service information, and diagnostic scan tools, (This course is a prerequisite for all automotive service courses.)

AUSV 1020 - Braking, Steering, Suspension, and Climate Control Systems

Credits: (8)
Theory, operation, diagnosis and repair of braking, steering, and suspension systems. The use of electronic service information, the proper diagnostic process, and proper diagnostic service tools is emphasized. Prerequisite: AUSV 1000, AUSV 1325. (AUSV 1020 is equivalent to AUSV 1021, AUSV 1022, and AUSV 2320.)

AUSV 1021 - Automotive Braking Systems 1

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Theory, operation, diagnosis, and repair of braking systems. This is the first part of a two-part class. (AUSV 1021, AUSV 1022, and AUSV 2320 are equivalent to AUSV 1000, AUSV 1020.)

AUSV 1022 - Steering and Suspension Systems 1

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Theory, operation, diagnosis, and repair of steering and suspension systems. This is the first part of a two-part class. (AUSV 1021, AUSV 1022, and AUSV 2320 are equivalent to AUSV 1000, AUSV 1020.)

AUSV 1023 - Automotive Braking Systems 2

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Theory, operation, diagnosis, and repair of automotive braking systems. This is the second part of a two-part class. Prerequisite: AUSV 1021.

AUSV 1025 - Steering and Suspension Systems 2

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Theory, operation, diagnosis, and repair of steering and suspension systems. This is the first part of a two-part class. Prerequisite: AUSV 1022.

AUSV 1030 - Honda Braking, Steering, Suspension, and Climate Control Systems

Credits: (8)
Typically taught:
not currently being offered

Theory, operation, diagnosis, and repair of Honda braking, steering, suspension, and climate control systems. The use of electronic service information, the proper diagnostic process, and proper diagnostic service tools is emphasized. Prerequisite: AUSV 1000, AUSV 1335. (AUSV 1030 is comprised of AUSV 1031, AUSV 1032 and AUSV 2330.)

AUSV 1031 - Honda Braking Systems

Credits: (3)
Typically taught:
not currently being offered

Theory, operation, diagnosis, and repair of Honda braking systems. Prerequisite: AUSV 1000. (AUSV 1030 is equivalent to AUSV 1031, AUSV 1032, and AUSV 2330).

AUSV 1032 - Honda Steering and Suspension Systems

Credits: (2)
Typically taught:
not currently being offered

Theory, operation, diagnosis, and repair of Honda steering and suspension systems. (AUSV 1031, AUSV 1032, and AUSV 2330 are equivalent to AUSV 1000, AUSV 1030.)

AUSV 1040 - General Motors Braking, Steering, Suspension and Climate Control Systems

Credits: (8)
Theory, operation, diagnosis, and repair of General Motors braking, steering, suspension, and climate control systems. The use of electronic service information, the proper diagnostic process, and proper diagnostic service tools is emphasized. Prerequisite: AUSV 1000, AUSV 1345. (AUSV 1040 is comprised of AUSV 1041, AUSV 1042 and AUSV 2340.)

AUSV 1041 - General Motors Braking Systems

Credits: (3)
Typically taught:
Spring [Full Sem]

Theory, operation, diagnosis, and repair of General Motors braking systems. (AUSV 1040 is equivalent to AUSV 1041, AUSV 1042, and AUSV 2340). Prerequisite: AUSV 1000, AUSV 1345.

AUSV 1042 - General Motors Steering and Suspension Systems

Credits: (3)
Typically taught:
Spring [Full Sem]

Theory, operation, diagnosis, and repair of General Motors steering and suspension systems. Prerequisite: AUSV 1000. (AUSV 1041, AUSV 1042, and AUSV 2340 are equivalent to AUSV 1000, AUSV 1040.)

AUSV 1050 - Chrysler Braking, Steering, Suspension and Climate Control Systems

Credits: (8)
Typically taught:
not currently being offered

Theory, operation, diagnosis, and repair of Chrysler braking, steering, suspension, and climate control systems. The use of electronic service information, the proper diagnostic process, and proper diagnostic service tools is emphasized. Prerequisite: AUSV 1000, AUSV 1355. (AUSV 1050 is comprised of AUSV 1051, AUSV 1052 and AUSV 2350.)

AUSV 1051 - Chrysler Braking Systems

Credits: (3)
Typically taught:
~~**Spring [Full Sem]**~~**not currently being offered**

Theory, operation, diagnosis, and repair of Chrysler braking systems. Prerequisite: AUSV 1000, AUSV 1355. (AUSV 1050 is equivalent to AUSV 1051, AUSV 1052, and AUSV 2350).

AUSV 1052 - Chrysler Steering and Suspension Systems

Credits: (3)
Typically taught:
~~**Spring [Full Sem]**~~**not currently being offered**

Theory, operation, diagnosis, and repair of Chrysler steering and suspension systems. Prerequisite: AUSV 1000. (AUSV 1051, AUSV 1052, and AUSV 2350 are equivalent to AUSV 1000, AUSV 1050.)

AUSV 1060 - Toyota Braking, Steering, Suspension, and Climate Control Systems

Credits: (8)
Typically taught:
not currently being offered

Theory, operation, diagnosis, and repair of Toyota braking, steering, suspension, and climate control systems. The use of electronic service information, the proper diagnostic process, and proper diagnostic service tools is emphasized. Prerequisite: AUSV 1000, AUSV 1365. (AUSV 1060 is comprised of AUSV 1061, AUSV 1062 and AUSV 2360.)

AUSV 1061 - Toyota Braking Systems

Credits: (3)
Typically taught:
~~**Spring [Full Sem]**~~**not currently being offered**

Theory, operation, diagnosis, and repair of Toyota braking systems. Prerequisite: AUSV 1000, AUSV 1365. (AUSV 1060 is equivalent to 1061, AUSV 1062 and AUSV 2360.)

AUSV 1062 - Toyota Steering and Suspension Systems

Credits: (3)
Typically taught:
~~Spring [Full Sem]~~**not currently being offered**

Theory, operation, diagnosis, and repair of Toyota steering and suspension systems. Prerequisite/Co-requisite: AUSV 1000. (AUSV 1061, AUSV 1062, and AUSV 2360 are equivalent to AUSV 1000, AUSV 1060.)

AUSV 1071 - H D Truck Brakes

Credits: (2)
Operation, diagnosis, inspection, and repair of air brake systems. Equivalent to DATC proficiency #48530, 48601.

AUSV 1072 - H D Truck Steering & Suspension

Credits: (3)
Operation, diagnosis, and repair of heavy duty steering and suspension systems. Equivalent to DATC proficiency #48540, 48550.

AUSV 1080 - Non-Structural Analysis and Damage Repair 1

Credits: (4)
Typically taught:
~~Fall [Full Sem]~~**not currently being offered**

Safety, welding processes, panel repair and replacement, trim application, water leak and wind noise issues . Proper use of modern body fillers and repair techniques. I-CAR training modules are included. Prerequisite: AUSV 1001 or instructor approval.

AUSV 1085 - Painting and Refinishing 1

Credits: (4)
Typically taught:
~~Fall [Full Sem]~~**not currently being offered**

Introductory course on modern automotive paint application processes. Emphasis will be placed on Panel and part preparation as well as spray and application techniques. Prerequisite: AUSV 1001 or instructor approval.

AUSV 1100 - Principles of Technology I

Credits: (2)
Typically taught:
not currently being offered

Scientific concepts of force, work, rate, resistance and energy are applied to mechanical and fluid systems found in modern industry. Laboratory activities featuring measurement and instrumentation are emphasized.

AUSV 1120 - Automotive Engines 1

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Theory, operation, diagnosis, repair, and overhaul of automotive engines.

AUSV 1124 - Automotive Engines 2

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Theory, operation, diagnosis, repair, and overhaul of automotive engines. This is the second part of a two-part class. Prerequisite: AUSV 1120.

AUSV 1130 - Honda Engines

Credits: (3)
Typically taught:
not currently being offered

Theory, operation, diagnosis, repair, and overhaul of Honda engines. Prerequisite: AUSV 1000.

AUSV 1140 - General Motors Engines

Credits: (3)
Typically taught:
Spring [Full Sem]

Theory, operation, diagnosis, repair, and overhaul of General Motors engines. Prerequisite: AUSV 1000.

AUSV 1150 - Chrysler Engines

Credits: (3)
Typically taught:
~~Fall [Full Sem]~~not currently being offered

Theory, operation, diagnosis, repair, and overhaul of Chrysler engines. Prerequisite: AUSV 1000.

AUSV 1160 - Toyota Engines

Credits: (4)
Typically taught:
~~Fall [Full Sem]~~not currently being offered

Theory, operation, diagnosis, repair, and overhaul of Toyota engines. Prerequisite: AUSV 1000.

AUSV 1170 - H D Truck Engines

Credits: (5)
Operational principles, diagnosis and complete overhaul of diesel engines. Equivalent to DATC proficiency #48140, 48141, 48142, 48143, 48160, 48162, 48163.

AUSV 1180 - Structural Analysis and Damage Repair 1

Credits: (4)
Typically taught:
~~Spring [Full Sem]~~not currently being offered

Frame and unibody repair will be explored. Replacement of major structural panels and introduction to measuring and corrective pulling will be covered. Occupant safety and restraint systems will be examined. I-Car training modules are included. Prerequisite: AUSV 1001 or instructor approval.

AUSV 1200 - Principles of Technology II

Credits: (2)
Typically taught:
not currently being offered

Scientific concepts pertaining to electricity, heat, sound and light are applied to systems found in modern industry. Laboratory activities featuring measurement and instrumentation are emphasized. Prerequisite: AUSV 1000.

AUSV 1220 - Automotive Manual Drivetrain Systems

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Theory, operation, diagnosis, maintenance, and overhaul of manual transmissions and transaxles, front and rear drive axles and differentials, drivelines, and transfer cases. Prerequisite: AUSV 1000.

AUSV 1230 - Honda Manual Drivetrain Systems

Credits: (3)
Typically taught:
not currently being offered

Theory, operation, diagnosis, maintenance, and overhaul of Honda manual transmissions and transaxles, drive axles and differentials, drivelines, and transfer units. Prerequisite: AUSV 1000.

AUSV 1240 - General Motors Manual Drivetrain Systems

Credits: (3)
Typically taught:
Fall [Full Sem]

Theory, operation, diagnosis, maintenance, and overhaul of General Motors manual transmissions and transaxles, front and rear drive axles and differentials, drivelines, and transfer cases. Prerequisite: AUSV 1000.

AUSV 1250 - Chrysler Manual Drivetrain Systems

Credits: (3)
Typically taught:
~~Spring [Full Sem]~~not currently being offered

Theory, operation, diagnosis, maintenance, and overhaul of Chrysler manual transmissions and transaxles, front and rear drive axles and differentials, drivelines, and transfer cases. Prerequisite: AUSV 1000.

AUSV 1260 - Toyota Manual Drivetrain Systems

Credits: (3)
Typically taught:
~~Spring [Full Sem]~~not currently being offered

Theory, operation, diagnosis, maintenance, and overhaul of Toyota manual transmissions and transaxles, front and rear drive axles and differentials, drivelines, and transfer cases. Prerequisite: AUSV 1000.

AUSV 1270 - H D Truck Drive Mechanisms

Credits: (8)
Theory, operation, diagnosis, and overhaul of the clutch, transmission, drive lines, differentials, and wheel bearings. Equivalent to DATC proficiency #48401, 48403, 48603.

AUSV 1300 - Technical Mathematics

Credits: (3)
Typically taught:
Fall [Full Sem]

Measurements, common and decimal fractions, square roots, surfaces, columns, capacities. Principles of algebra and geometry.

AUSV 1320 - Automotive Electronics 1

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Electrical fundamentals, use of meters and wiring diagrams, wiring repair. Theory, diagnosis, and repair of computer

inputs, outputs, and communication systems. The use of electronic service information, the proper diagnostic process, and proper diagnostic service tools are emphasized. This is the first part of a two-part class.

AUSV 1323 - Automotive Electronics 2

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Electrical fundamentals, use of meters and wiring diagrams, wiring repair. Theory, diagnosis, and repair of computer inputs, outputs, and communication systems. The use of electronic service information, the proper diagnostic process, and proper diagnostic service tools are emphasized. This is the second part of a two-part class. ~~Prerequisite: AUSV 1320.~~

AUSV 1325 - Automotive Electronics, Electrical and Body Control Systems

Credits: (7)
Electrical fundamentals, use of meters and wiring diagrams, wiring repair. Theory, diagnosis, and repair of computer inputs, outputs, and communication systems, starting, charging, lighting, air-bags, power accessories, and various body computer control systems. The use of electronic service information, the proper diagnostic process, and proper diagnostic service tools is emphasized. (AUSV 1320, AUSV 2120 are equivalent to AUSV 1325.)

AUSV 1330 - Honda Automotive Electronics

Credits: (4)
Typically taught:
not currently being offered

Electrical fundamentals, use of meters and Honda wiring diagrams, wiring repair. Theory, diagnosis, and repair of Honda computer inputs, outputs, and communication systems. The use of Honda electronic service information, the proper diagnostic process, and proper diagnostic service tools are emphasized. Prerequisite: (Recommended) AUSV 1000.

AUSV 1335 - Honda Electronics, Electrical and Body Control Systems

Credits: (7)
Typically taught:
not currently being offered

Electrical fundamentals, use of meters and Honda wiring diagrams, wiring repair. Theory, diagnosis, and repair of Honda computer inputs, outputs, and communication systems, starting, charging, lighting, air-bags, power accessories, and various body computer control systems. The use of Honda electronic service information, the proper diagnostic process, and proper diagnostic service tools is emphasized. (AUSV 1330, AUSV 2130 are equivalent to AUSV 1335.)

AUSV 1340 - General Motors Automotive Electronics

Credits: (4)
Typically taught:
Fall [Full Sem]

Electrical fundamentals, use of meters and General Motors wiring diagrams, wiring repair. Theory, diagnosis, and repair of General Motors computer inputs, outputs, and communication systems. The use of General Motors electronic service information, the proper diagnostic process, and proper diagnostic service tools are emphasized. Prerequisite: (Recommended) AUSV 1000.

AUSV 1345 - General Motors Electronics, Electrical and Body Control Systems

Credits: (7)
Electrical fundamentals, use of meters and General Motors wiring diagrams, wiring repair. Theory, diagnosis, and repair of General Motors computer inputs, outputs, and communication systems, starting, charging, lighting, air-bags, power accessories, and various body computer control systems. The use of General Motors electronic service information, the proper diagnostic process, and proper diagnostic service tools is emphasized. (AUSV 1340, AUSV 2140 are equivalent to AUSV 1345.)

AUSV 1350 - Chrysler Automotive Electronics

Credits: (4)
Typically taught:
~~Fall [Full Sem]~~not currently being offered

Electrical fundamentals, use of meters and Chrysler wiring diagrams, wiring repair. Theory, diagnosis, and repair of Chrysler computer inputs, outputs, and communication systems. The use of Chrysler electronic service information, the proper diagnostic process, and proper diagnostic service tools are emphasized. Prerequisite: (Recommended) AUSV 1000.

AUSV 1355 - Chrysler Electronics, Electrical and Body Control Systems

Credits: (7)
Typically taught:
not currently being offered

Electrical fundamentals, use of meters and Chrysler wiring diagrams, wiring repair. Theory, diagnosis, and repair of Chrysler computer inputs, outputs, and communication systems, starting, charging, lighting, air-bags, power accessories, and various body computer control systems. The use of Chrysler electronic service information, the proper diagnostic process, and proper diagnostic service tools is emphasized. (AUSV 1350, AUSV 2150 are equivalent to AUSV 1355.)

AUSV 1360 - Toyota Automotive Electronics

Credits: (4)
Typically taught:
~~Fall [Full Sem]~~not currently being offered

Electrical fundamentals, use of meters and Toyota wiring diagrams, wiring repair. Theory, diagnosis, and repair of Toyota computer inputs, outputs, and communication systems. The use of Toyota electronic service information, the

proper diagnostic process, and proper diagnostic service tools are emphasized. Prerequisite: (Recommended) AUSV 1000.

AUSV 1365 - Toyota Electronics, Electrical and Body Control Systems

Credits: (7)
Typically taught:
not currently being offered

Electrical fundamentals, use of meters and Toyota wiring diagrams, wiring repair. Theory, diagnosis, and repair of Toyota computer inputs, outputs, and communication systems, starting, charging, lighting, air-bags, power accessories, and various body computer control systems. The use of Toyota electronic service information, the proper diagnostic process, and proper diagnostic service tools is emphasized. (AUSV 1360, AUSV 2160 are equivalent to AUSV 1365.)

AUSV 1400 - Automotive Fundamentals

Credits: (2)
Operation, diagnosis and repair of selected automotive systems, as well as general auto shop orientation for beginners and non-automotive majors.

AUSV 1890 - Cooperative Work Experience

Credits: (1-6)
Open to all first year students in Automotive Service. Provides academic credit for on-the-job experience. Grade and amount of credit will be determined by the department.

AUSV 2020 - Engine Control Systems

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Theory, operation, diagnosis, and repair of automotive fuel systems, OBD-II and Tier-2 emission control systems, and ignition systems. (AUSV 1120, AUSV 2020 are equivalent to AUSV 2625.) Prerequisite: AUSV 1000, AUSV 1325.

AUSV 2030 - Honda Engine Control Systems

Credits: (3)
Typically taught:
not currently being offered

Theory, operation, diagnosis, and repair of Honda automotive fuel systems, OBD-II and Tier-2 emission control systems, and ignition systems. (AUSV 1130, AUSV 2030 are equivalent to AUSV 2635.) Prerequisite: AUSV 1000, AUSV 1335.

AUSV 2040 - General Motors Engine Control Systems

Credits: (3)
Typically taught:
Spring [Full Sem]

Theory, operation, diagnosis, and repair of General Motors automotive fuel systems, OBD-II and Tier-2 emission control systems, and ignition systems. (AUSV 1140, AUSV 2040 are equivalent to AUSV 2645.) Prerequisite: AUSV 1000, AUSV 1345.

AUSV 2050 - Chrysler Engine Control Systems

Credits: (3)
Typically taught:
~~Fall [Full Sem]~~not currently being offered

Theory, operation, diagnosis, and repair of Chrysler automotive fuel systems, OBD-II and Tier-2 emission control systems, and ignition systems. (AUSV 1150, AUSV 2050 are equivalent to AUSV 2655.) Prerequisite: AUSV 1000, AUSV 1355.

AUSV 2060 - Toyota Engine Control Systems

Credits: (6)
Typically taught:
~~Fall [Full Sem]~~not currently being offered

Theory, operation, diagnosis, and repair of Toyota automotive fuel systems, OBD-II and Tier-2 emission control systems, and ignition systems. (AUSV 1160, AUSV 2060 are equivalent to AUSV 2665.) Prerequisite: AUSV 1000, AUSV 1365.

AUSV 2080 - Painting and Refinishing 2

Credits: (4)
Typically taught:
~~Spring [Full Sem]~~not currently being offered

Advanced surface preparation and application of modern paint system. Color matching, blending and complete vehicle refinishing. I-CAR training modules are included. Prerequisite: AUSV 1085 or instructor approval.

AUSV 2085 - Non-Structural Analysis and Damage Repair 2

Credits: (4)
Typically taught:
~~Spring [Full Sem]~~not currently being offered

This is an advanced non-structural and welding course that expands on what has previously been learned. A great deal of time will be spent working on advanced non-structural techniques and processes. Full frame, unibody, space frames and other modern frame designs will be examined along with proper repair and replacement techniques. Prerequisite: AUSV 1080 or instructor approval.

AUSV 2120 - Automotive Electrical and Body Control Systems

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Theory, diagnosis, and repair of starting, charging, lighting, air-bags, power accessories, and various body computer control systems. The use of electronic service information, the proper diagnostic process, and proper diagnostic services tools are emphasized. (AUSV 1320, AUSV 2120 are equivalent to AUSV 1325.) Prerequisite: (Recommended) AUSV 1000. Prerequisite: AUSV 1320.

AUSV 2130 - Honda Electrical and Body Control Systems

Credits: (3)
Typically taught:
not currently being offered

Theory, diagnosis, and repair of Honda starting, charging, lighting, air-bags, power accessories, and various body computer control systems. The use of electronic service information, the proper diagnostic process, and proper diagnostic services tools are emphasized. (AUSV 1330, AUSV 2130 are equivalent to AUSV 1335.) Prerequisite: (Recommended) AUSV 1000. Prerequisite: AUSV 1330.

AUSV 2140 - General Motors Electrical and Body Control Systems

Credits: (3)
Typically taught:
Fall [Full Sem]

Theory, diagnosis, and repair of General Motors starting, charging, lighting, air-bags, power accessories, and various body computer control systems. The use of electronic service information, the proper diagnostic process, and proper diagnostic services tools are emphasized. (AUSV 1340, AUSV 2140 are equivalent to AUSV 1345.) Prerequisite: (Recommended) AUSV 1000. Prerequisite: AUSV 1340.

AUSV 2150 - Chrysler Electrical and Body Control Systems

Credits: (3)
Typically taught:
~~Fall [Full Sem]~~not currently being offered

Theory, diagnosis, and repair of Chrysler starting, charging, lighting, air-bags, power accessories, and various body computer control systems. The use of electronic service information, the proper diagnostic process, and proper diagnostic services tools are emphasized. (AUSV 1350, AUSV 2150 are equivalent to AUSV 1355.) Prerequisite: (Recommended) AUSV 1000. Prerequisite: AUSV 1350.

AUSV 2160 - Toyota Electrical and Body Control Systems

Credits: (3)
Typically taught:
~~Fall [Full Sem]~~not currently being offered

Theory, diagnosis, and repair of Toyota starting, charging, lighting, air-bags, power accessories, and various body computer control systems. The use of electronic service information, the proper diagnostic process, and proper diagnostic services tools are emphasized. (AUSV 1360, AUSV 2160 are equivalent to AUSV 1365.) Prerequisite: (Recommended) AUSV 1000. Prerequisite: AUSV 1360.

AUSV 2170 - H D Truck Electrical Systems

Credits: (3)
Theory, operation, diagnosis and repair of batteries, starting, charging and electrical accessories. Equivalent to DATC proficiency #48304, 48305.

AUSV 2180 - Structural Analysis and Damage Repair 2

Credits: (3)
Typically taught:
~~Fall [Full Sem]~~not currently being offered

Expands on techniques and skills learned in AUSV 1180. Emphasis will be placed on advanced frame and unibody repair techniques and methods. Prerequisite: AUSV 1180 or instructor approval.

AUSV 2270 - H D Truck Engine Diagnosis

Credits: (3)
Engine starting, diagnosis, fuel pump timing, compression and cylinder leakage testing, and tune-up. Equivalent to DATC proficiency #48144, 48164, 48302.

AUSV 2320 - Automotive Climate Control Systems

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Theory, operation, diagnosis and repair of climate control systems. (AUSV 1020 is equivalent to AUSV 1021, AUSV 1022, and AUSV 2320). Prerequisite: AUSV 1000, AUSV 1320.

AUSV 2330 - Honda Climate Control Systems

Credits: (3)
Typically taught:
not currently being offered

Theory, operation, diagnosis and repair of Honda climate control systems. (AUSV 1030 is equivalent to AUSV 1031, AUSV 1032 and AUSV 2330.) Prerequisite: AUSV 1000, AUSV 1330.

AUSV 2340 - General Motors Climate Control Systems

Credits: (3)
Typically taught:
Spring [Full Sem]

Theory, operation, diagnosis and repair of General Motors climate control systems. (AUSV 1040 is equivalent to AUSV 1041, AUSV 1042 and AUSV 2340.) Prerequisite: AUSV 1000, AUSV 1340.

AUSV 2350 - Chrysler Climate Control Systems

Credits: (3)
Typically taught:
~~Spring [Full Sem]~~not currently being offered

Theory, operation, diagnosis and repair of Chrysler climate control systems. (AUSV 1050 is equivalent to AUSV 1051, AUSV 1052 and AUSV 2350.) Prerequisite: AUSV 1000, AUSV 1350.

AUSV 2360 - Toyota Climate Control Systems

Credits: (3)
Typically taught:
~~Spring [Full Sem]~~not currently being offered

Theory, operation, diagnosis and repair of Toyota climate control systems. (AUSV 1060 is equivalent to AUSV 1061, AUSV 1062 and AUSV 2360.) Prerequisite: AUSV 1000, AUSV 1360.

AUSV 2370 - H D Truck Air Conditioning

Credits: (2)
Operation, environmental concerns, diagnosis and repair of air conditioning and heating systems and components. Equivalent to DATC proficiency #48800, 48801.

AUSV 2480 - Auto Body Business Practices

Credits: (2)
Typically taught:
~~Spring [Full Sem]~~not currently being offered

Estimating, scheduling work, purchasing, inventory, insurance practices and applied customer relations.

AUSV 2520 - Automatic Transmissions

Credits: (4)
Typically taught:

Fall [Full Sem]
Spring [Full Sem]

Theory, operation, diagnosis and overhaul procedures of automatic transmissions. Prerequisite: AUSV 1000, AUSV 1325.

AUSV 2530 - Honda Automatic Transmissions

Credits: (4)
Typically taught:
not currently being offered

Theory, operation, diagnosis and overhaul procedures of Honda automatic transmissions. Prerequisite: AUSV 1000, AUSV 1335.

AUSV 2540 - General Motors Automatic Transmissions

Credits: (4)
Typically taught:
Fall [Full Sem]

Theory, operation, diagnosis and overhaul procedures of General Motors automatic transmissions. Prerequisite: AUSV 1000, AUSV 1345.

AUSV 2550 - Chrysler Automatic Transmissions

Credits: (4)
Typically taught:
~~**Spring [Full Sem]**~~**not currently being offered**

Theory, operation, diagnosis and overhaul procedures of Chrysler automatic transmissions. Prerequisite: AUSV 1000, AUSV 1355.

AUSV 2560 - Toyota Automatic Transmissions

Credits: (4)
Typically taught:
~~**Spring [Full Sem]**~~**not currently being offered**

Theory, operation, diagnosis and overhaul procedures of Toyota automatic transmissions. Prerequisite: AUSV 1000, AUSV 1365.

AUSV 2625 - Engine Mechanical and Engine Control Systems

Credits: (6)
Theory, operation, diagnosis, and repair of automotive engines, fuel systems, OBD-II and Tier-2 emission control systems, ignition systems. The use of electronic service information, the proper diagnostic process, and proper

diagnostic service tools is emphasized. (AUSV 1120, AUSV 2020 are equivalent to AUSV 2625.) Prerequisite: AUSV 1000, AUSV 1325.

AUSV 2635 - Honda Engine Mechanical and Engine Control Systems

Credits: (6)
Typically taught:
not currently being offered

Theory, operation, diagnosis, and repair of Honda automotive engines, fuel systems, OBD-II and Tier-2 emission control systems, ignition systems. The use of electronic service information, the proper diagnostic process, and proper diagnostic service tools is emphasized. (AUSV 1130, AUSV 2030 are equivalent to AUSV 2635.) Prerequisite: AUSV 1000, AUSV 1335.

AUSV 2645 - General Motors Engine Mechanical and Engine Control Systems

Credits: (6)
Theory, operation, diagnosis, and repair of General Motors automotive engines, fuel systems, OBD-II and Tier-2 emission control systems, ignition systems. The use of electronic service information, the proper diagnostic process, and proper diagnostic service tools is emphasized. (AUSV 1140, AUSV 2040 are equivalent to AUSV 2645.) Prerequisite: AUSV 1000, AUSV 1345.

AUSV 2655 - Chrysler Engine Mechanical and Engine Control Systems

Credits: (6)
Typically taught:
not currently being offered

Theory, operation, diagnosis, and repair of Chrysler automotive engines, fuel systems, OBD-II and Tier-2 emission control systems, ignition systems. The use of electronic service information, the proper diagnostic process, and proper diagnostic service tools is emphasized. (AUSV 1150, AUSV 2050 are equivalent to AUSV 2655.) Prerequisite: AUSV 1000, AUSV 1355.

AUSV 2665 - Toyota Engine Mechanical and Engine Control Systems

Credits: (6)
Typically taught:
not currently being offered

Theory, operation, diagnosis, and repair of Toyota automotive engines, fuel systems, OBD-II and Tier-2 emission control systems, ignition systems. The use of electronic service information, the proper diagnostic process, and proper diagnostic service tools is emphasized. (AUSV 1160, AUSV 2060 are equivalent to AUSV 2665.) Prerequisite: AUSV 1000, AUSV 1365.

AUSV 2860 - Automotive Shop Practice

Credits: (3-8)
Typically taught:

Spring [Full Sem]
Summer [Full Sem]

Provides an opportunity to practice skills needed by Automotive Service technicians derived from classroom and shop experience. Simulates line mechanic work. Prerequisite: Instructor approval required. May be taken 10 times up to 30 credit hours.

AUSV 2880 - Cooperative Practicum

Credits: (3-8)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Supervised work experience, at the sponsoring dealership, which applies directly to previous academic courses. Full-time employment and approval of faculty supervisor required. May be taken 10 times up to 30 credit hours.

AUSV 2890 - Cooperative Work Experience

Credits: (1-6)
Open to second year Automotive Service students. A continuation of AUSV 1890. NOTE: AUSV 2890 may be taken in lieu of AUSV 2860, when appropriate work experience is available and the student obtains departmental approval.

AUSV 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript.

BIS 2800 - Foundations of Integrated Studies

Credits: (3)
Typically taught:
[Not taught at this time]

Foundations of Interdisciplinary Studies provide students with theories and methods used in cross-disciplinary inquiry. Course components include: connections between academic studies and student interests, methods associated with integrated studies, and planning future employment and life-long learning goals.

BIS 3800 - BIS Capstone and Graduation Preparation

Credits: (3)
Typically taught:
Fall [Online]
Spring [Online]
Summer [Online]

This course provides BIS students with a foundation for the capstone project, as well as helping them to professionalize themselves in preparation for life after graduation. BIS 3800 is a required prerequisite for BIS 4800. *Beginning Spring 2015, BIS 2800 will be a prerequisite for BIS 3800.*

BIS 3850 - BIS Internship

Credits: (1-3)
Typically taught:
Fall [Online]
Spring [Online]
Summer [Online]

The Bachelor of Integrated Studies Program (BIS) offers BIS students the opportunity to earn 1 to 3 elective credits for a work internship. Prerequisite: For requirements and guidelines, contact the BIS office.

BIS 4800 - Bachelor of Integrated Studies Senior Capstone

Credits: (3)
Typically taught:
Fall [Online]
Spring [Online]
Summer [Online]

The Senior Capstone serves as the culmination of the Bachelor of Integrated Studies (BIS) interdisciplinary degree. After completing course work in three different areas of emphasis, BIS student synthesize their three disciplines in this capstone project. Prerequisite: BIS 3800.

BSAD 1010 - Introduction to Business

Credits: (3)
Typically taught:
Fall [Full Sem~~, Online~~]
Spring [~~Online]~~
~~Summer [Online~~Full Sem]

Relation of business managers and firms to contemporary society and the global economy. Topics include human values and ethics in the workplace, multiculturalism, social responsibilities of business, business functions, and general principles of effective business operation.

BSAD 2704 TD - Information Resources in the Business Disciplines

Credits: (1)
Typically taught:
Fall [1st Blk, Full Sem Online]
Spring [1st Blk, Full Sem Online]

Information Resources in the Business Disciplines is a one credit hour course that will assist students in developing information literacy and basic research skills to support life-long learning. Students will develop skills in identifying,

locating, retrieving, documenting, and critically evaluating both electronic and print resources that are appropriate for undergraduate research, with emphasis in the business disciplines. Completion of this course meets part D of the WSU Computer and Information Literacy requirement. Cross listed with LIBS 2704.

BSAD 2899 - Business Foundations and Admission Assessment

Credits: (0)
Typically taught:
Fall [Online]
Spring [Online]
Summer [Online]

Completion of BSAD 2899 is required of all students pursuing any major, minor, emphasis or certificate awarded by the John B. Goddard School of Business & Economics. The course objectives are: 1) assessment of Business Foundation knowledge, and 2) admittance to the Goddard School. Students must have an overall GPA of 2.5 or higher and a Business Foundation GPA of 2.5 or higher and a minimum grade of "C-" in each of the ~~five~~six Business Foundation courses. *Credit/No credit*. ~~Pre~~Prerequisite/Co-requisite: ACTG 2010, ACTG 2020, ECON 2010, ECON 2020, IST 2010, QUAN 2600. Department registration approval is required. Students should register for this course concurrent with (same semester as) their last Business Foundation course (ACTG 2010, ACTG 2020, ECON 2010, ECON 2020, IST 2010 and QUAN 2600) or after the required Business Foundation courses have been completed.

BSAD 2920 - Short Courses, Workshops, Institutes, and Special Programs

Credits: (1-6)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated 5 times with a maximum of 6 credit hours with different topics.

BSAD 3000 - Small Business Management

Credits: (3)
Typically taught:
Fall [Full Sem Online]
Spring [Full Sem Online]

This course is designed for students majoring outside the John B. Goddard School of Business & Economics. It will not be counted for credit toward graduation for students majoring in the John B. Goddard School of Business & Economics. It covers the business management concepts involved in starting and/or managing a small business.

BSAD 3200 - Legal Environment of Business

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem, Full Sem Online]

Introduction to the legal and judicial system, emphasizing the application of regulatory law (e.g., antitrust, employment discrimination, etc.) and selected common law topics (e.g., contracts, agency, etc.).

BSAD 3330 - Business Ethics & Environmental Responsibility

Credits: (3)
Typically taught:
Fall [Full Sem, ~~Online~~1st Blk, 2nd Blk]
Spring [Full Sem, ~~Online~~2nd Blk]
Summer [~~Online~~1st Blk]

An introduction to the rudiments of moral reasoning, concepts and principles, and their application to common ethical issues faced in business. Special attention will be given to moral issues associated with the use of the natural environment by businesses. Prerequisite: ~~Business Foundations;~~ BSAD 2899~~, BSAD 3200~~.

BSAD 3500 - Introduction to Business Research

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Introduces students to gathering and analyzing primary and secondary data for a wide range of business applications, such as assessing customer or employee satisfaction. Students are introduced to CD ROM databases, other library resources, questionnaire development and administration, basic data analysis, and research report writing. Prerequisite: ~~Business Foundations;~~ BSAD 2899, QUAN 3610.

BSAD 3600 - [World Region] Business and Society

Credits: (3)
~~**Typically taught:**~~
~~**Spring [Full Sem]**~~

The world region or country covered in this course varies and will be indicated in the specific course title and on the student's transcript (e.g., European Business and Society, Japanese Business and Society, etc.). For a specified world region or country, this course considers its historical and cultural roots, together with modern societal issues, as they relate to business; the role of business in society; economic development, industrial policy, and trade relations; and management and business practices, including sociocultural considerations, in the specified world region or country. Prerequisite: (Recommended) Prior course work in business or economics or the appropriate foreign language(s) or culture, or in-country experience. BSAD 2899.

BSAD 4210 - Survey of Business Law

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem]
Summer [Full Sem Online]

An overview of sales, negotiable instruments, property, and debtor/ creditor relations and other selected legal topics. Prerequisite: ~~Business Foundations;~~ BSAD 2899, BSAD 3200.

BSAD 4401 - E-Commerce

Credits: (3)
Typically taught:
Not currently being offered

Technologies, strategies, and methods for an electronic approach to financial, purchasing, marketing, and order fulfillment processes. Emphasis is on creating successful business strategies to exploit Internet and Electronic Data Interchange (EDI) capabilities. Prerequisite: MKTG 3010 or concurrent enrollment in MKTG 3010.

BSAD 4500 - Entrepreneurship

Credits: (3)
Typically taught:
~~Spring [Full Sem]~~Not currently being offered

Integration of various functional areas of business as they relate to evaluating, creating, planning, and managing new business ventures. Prerequisite: Business Foundations; BSAD 2899; MKTG 3010; MGMT 3010, MGMT 3200.

BSAD 4620 - Executive Lectures

Credits: (1)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]

This course is designed to acquaint the students with successful executives, their personal styles and philosophies as leaders, and the keys to their effectiveness. The course may be repeated for credit to a maximum of two credit hours. *Credit/No credit*. The format is a series of weekly one-hour lectures delivered by guest executives.

BSAD 4680 - Small Business Diagnostics

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Diagnostic analysis of small business issues through the use of case studies and consultation opportunities with small businesses in the community. Students will work both individually and in teams to analyze the health of sample small businesses, identify issues and develop recommendations for remediation. Case issues will cover a broad spectrum of typical small business issues and require the student to evaluate based on all areas of business operations. Research, written reports and presentations are required. Prerequisite: ENTR 2001 OR BSAD 2899 and Instructor approval.

BSAD 4780 - Strategic Management

Credits: (3)
Typically taught:

Fall [Full Sem~~, Online~~]
Spring [Full Sem~~, Online~~]
Summer [~~Online~~Full Sem]

A capstone course for seniors designed to facilitate integration of the knowledge gained in earlier courses. Focus of the course is on the total enterprise. Emphasis is on crafting well-conceived strategies and on successful strategy implementation. Prerequisite: ~~Business Foundations;~~ BSAD 2899, BSAD 3200, SCM 3050, FIN 3200, MGMT 3010, MGMT 3200 or ~~NTM~~NET 3250, MKTG 3010, Senior standing.

BSAD 4800 - Independent Research

Credits: (1-3)
Directed research and study on an individual basis. May be repeated until a total of 4 hours credit is accumulated. Prerequisite: ~~Business Foundations;~~ BSAD 2899; Senior Standing; Written Instructor Approval.

BSAD 4850 - Business Administration Study Abroad

Credits: (1-3)
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~
~~**Summer [Full Sem]**~~

This course is designed for students who wish to explore business administration theory and practice in countries other than the U.S. Students will study international business as offered through a partner university (or other university with department chair approval). Prerequisite: BSAD 2899. May be repeated once up to 6 credits.

BSAD 4920 - Short Courses, Workshops, Institutes, and Special Programs

Credits: (1-3)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated 5 times with a maximum of 6 credit hours with different topics.

BTNY 1203 LS - Plant Biology

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [1st Blk Online]

An introductory course for non-majors that emphasizes unique features of plant biology. Included are discussions on: the origins of life; important plants of the world and their habitats; plant diversity, structure, function, and reproduction; plants and environmental science; plants that changed history; practical botany; and botany as a science. Three lecture/demonstration hours per week.

BTNY 1303 LS - Plants in Human Affairs

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [1st Blk Online]

This class provides a general introduction to the importance and function of plants in human affairs. It includes an overview of science as a way of knowing, plant forms and functions, plant reproduction, and use of economically and sociologically important plants. Flowering and non-flowering plants and products such as fruits, forages, grains, medicines, herbs and spices, textile fibers, lumber, algae, and foliage plants are studied. Ecological concepts as they relate to the growth and production of world food crops will also be included. The course has a strong emphasis on the historical development of exploitation of certain plants and the role plants played in exploration and international development. This class cannot be used to fulfill requirements for a Botany major or minor. Three hours of lecture per week.

BTNY 1370 LS - Principles of Life Science

Credits: (3)
Typically taught:
Spring [Full Sem]

A survey course for elementary education majors. Course content includes cells, cell chemistry, genetics, plant and animal anatomy, plant and animal classification, physiology, immune systems, evolution, and ecology. Unifying concepts of all living things will be emphasized. Recommended for students intending to major in elementary education. This class cannot be used to fulfull requirements for a Botany major or minor. Two hours of lecture and one 3-hour laboratory per week.

BTNY 1403 LS - Environment Appreciation

Credits: (3-4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem~~]~~
~~Summer [1st Blk~~]

Development of awareness of the consequences of the impact of modern science through technology upon our environments and how we respond to issues related to threats to our biological life-support system. A definition of a quality environment is developed, with student input, and an analysis of the existing quality of our environment is made in light of this definition which challenges our collective wisdom to identify those things which we do well and to prescribe remedies for shortcomings. This course can be taken for 3 or 4 credits with the fourth credit based on a major research paper or project on an environmental issue. This class cannot be repeated for upper division credit (BTNY 3403). Three hours of lecture per week.

BTNY 2104 - Plant Form and Function

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A study of the structure, function, and reproduction of seed plants. The role of plants in making life on earth possible

is an important theme. This course is designed for science majors and is a prerequisite for selected upper division Botany courses. Two hours of lecture and two 2-hour labs per week. Botany majors are advised to take BTNY 2121 prior to or concurrently with this course.

BTNY 2114 - Evolutionary Survey of Plants

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A study of the diversity, ecology, and reproduction of plants in the context of the evolution of life on earth. The role of plants in making life on earth possible is an important theme. This course is designed for science majors and is a prerequisite for selected upper division Botany courses. Two hours of lecture and two 2-hour labs per week. Botany majors are advised to take BTNY 2121 prior to or concurrently with this course.

BTNY 2121 - Career Planning for Botanists

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A course designed for majors to introduce them to expected student learning outcomes, assessment of these expected outcomes, advisement and/or mentoring, keys to success in getting a job or into graduate school, career resources available, and how to start and develop the Botany Student Portfolio. One lecture per week. Botany majors are advised to take this course concurrently with BTNY 2104 or BTNY 2114.

BTNY 2203 - Home and Garden Plants

Credits: (3)
Typically taught:
~~Summer~~Spring [Full Sem]

Basic principles of plant science with special reference to care of home and garden plants. Includes a general study of lighting, watering, soils, fertilizer, pruning and shaping, propagation, controlling pests, and planting designs. Two hours of lecture and one 3-hour laboratory per week.

BTNY 2303 - Ethnobotany

Credits: (3)
Typically taught:
~~Fall [Full Sem]~~
Spring [Full Sem]

A global study of how plants are used by indigenous peoples for food, fiber, fabric, shelter, medicine, weapons, and tools. Plants that are well known to science as well as those with purported uses by villagers, shamans, curanderos and medicine men/women will be studied. Students will learn fundamental botanical principles, how to conduct field

work and how to collect plants and prepare them for use. Ethical questions concerning conservation, biodiversity and the continued loss of indigenous plants and cultures will also be discussed. Three lecture/demonstrations per week.

BTNY 2413 - Introduction to Natural Resource Management

Credits: (3)
Typically taught:
Fall [Full Sem] odd years

Introduces students, especially those interested in forestry and range management, to concepts and ideologies in the utilization and preservation of forests, range, soils, wildlife, water and fisheries, and the human impact on these resources. Three hours of lecture per week.

BTNY 2600 - Laboratory Safety

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An interdisciplinary, team-taught course that will be an overview of the major chemical, biological and physical safety issues related to science laboratories and field work. Class will meet once per week and will be taught in a lecture/demonstration format.

BTNY 2830 - Readings in Botany

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Cannot be repeated.

BTNY 2920 - Short Courses, Workshops, Institutes, and Special Programs

Credits: (1-4)
Consult the class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated 5 times for a maximum of 6 credit hours with different content.

BTNY 2950 - Elementary Field Botany

Credits: (1-2)
Typically taught:
~~**Spring [Full Sem]**~~**Not currently being offered**

Fundamentals of Botany as observed during field trips. Trips will be preceded by lectures and exercises designed to

prepare the student for maximizing the learning experience in the field. The course involves extensive pre- and post-trip exercises and evaluation. May be repeated once for a maximum of 2 credit hours.

BTNY 3105 - Anatomy and Morphology of Vascular Plants

Credits: (5)
Typically taught:
Fall [Full Sem] even years

The development of cell types, tissues, organs, and reproductive structures in higher plants. Variations in the development and morphology of plant organs will be examined. Three hours of lecture and two 2-hour labs per week. Prerequisite: BTNY 2104.

BTNY 3153 - Biology of the Plant Cell

Credits: (3)
Typically taught:
Spring [Full Sem] even years

A study of plant cell structure and function, including biogenesis and activities of organelles, signal transduction,, cell-cell interactions, and molecular processes involved in cellular development and responses. Three hours of lecture per week. Prerequisite: BTNY 2104, CHEM 1050 or CHEM 1120 or CHEM 2310.

BTNY 3204 - Plant Physiology

Credits: (4)
Typically taught:
~~Spring~~Fall [Full Sem] odd years

A study of the physiological processes of plants, including carbon metabolism, mineral assimilation, water relations, and phytohormones. Two hours of lecture and two 3-hour labs per week. Prerequisite: BTNY 2104, CHEM 1050 or CHEM 1120 or CHEM 2310, and MATH 1050 or MATH 1080.

BTNY 3214 - Soils

Credits: (4)
Typically taught:
~~Fall~~Spring [Full Sem]

Fundamentals of soils as related to agriculture, natural resource management, and horticulture. Three hours of lecture and one 3-hour lab per week. Prerequisite: BTNY 2104, or GEO 1110, and CHEM 1050 or CHEM 1110 or CHEM 1210.

BTNY 3303 - Plant Genetics

Credits: (3)
Typically taught:
~~Fall~~Spring [Full Sem] odd years

The principles of classical (Mendelian) and molecular genetics as applied to plants. Two hours of lecture and one 2-hour lab/discussion per week. Prerequisite: BTNY 2104 or MICR 2054, and CHEM 1050 or CHEM 1120 or CHEM 2310, and MATH 1050 or MATH 1080.

BTNY 3403 - Environment Appreciation

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem~~]~~
~~Summer [1st Blk~~]

Development of awareness of the consequences of the impact of modern science through technology upon our environments and how we respond to issues related to threats of our biological life-support system. A definition of a quality environment is developed, with student input, and an analysis of the existing quality of our environment is made in light of this definition which challenges our collective wisdom to identify those things which we do well and to prescribe remedies for shortcomings. Three hours of lecture per week. An in-depth research paper on an environmental issue and an in-class lecture are required. Prerequisite: BTNY 2104 or BTNY 2114. Cannot be repeated for lower division credit (BTNY 1403).

BTNY 3454 - Plant Ecology

Credits: (4)
Typically taught:
Fall [Full Sem] even years

Nature and development of plant communities and their relations to the environmental factors controlling them. Three hours of lecture and one 3-hour lab per week. Prerequisite: BTNY 2114, and MATH 1050 or MATH 1080.

BTNY 3473 - Plant Geography

Credits: (3)
Typically taught:
Spring [Full Sem] odd years

A study of global and regional distributions of major plant groups and communities as affected by past and present climates, biological, ecological and geomorphic factors. Three lectures per week. Prerequisite: BTNY 2114.

BTNY 3504 - Mycology

Credits: (4)
Typically taught:
Fall [Full Sem] odd years

Structure, taxonomy, biology, and physiology of the fungi. Two hours of lecture and two 2-hour labs per week. Prerequisite: BTNY 2104 and BTNY 2114, or MICR 2054.

BTNY 3514 - Algology

Credits: (4)
Typically taught:
Not currently being offered

A study of the biology of algae, their morphology, cytology, development, taxonomy, ecology, economic and experimental uses. Two hours of lecture and two 2-hour labs per week. Prerequisite: BTNY 2104 and BTNY 2114, or MICR 2054, or ZOOL 4480.

BTNY 3523 - Marine Biology

Credits: (3)
Typically taught:
~~**Spring [Full Sem]**~~**Not currently being offered**

A study of marine biology and ecology, relating to the plant and animal populations of the sea to their various habitats, including the pelagic environment, the sea bottom, sea shores, and estuaries. Two hours of lecture and one 2-hour lab per week. Prerequisite: BTNY 2114, or ZOOL 1110, or MICR 2054, or GEO 3010.

BTNY 3570 - Foundations of Science Education

Credits: (3)
Typically taught:
Spring [Full Sem]

A thorough investigation of research in science learning and curricular standards at the state and national levels. Foundations of the philosophy of science and scientific inquiry as applicable to science teaching at the secondary level. This course serves as a foundation to a preservice science teacher's education coursework.

BTNY 3583 - Herbal Medicines

Credits: (3)
Typically taught:
~~**Summer [1st Blk]**~~**Fall [Full Sem] even years**

A study of the most widely used herbal preparations for use in maintaining health and treating disease. Modern use, contraindications, side effects and drug interactions will be studied. Students will also learn how to make some extractions and preparations from plant materials. This course is especially useful for students interested in careers in Ethnobotany, Natural Medicine, Nursing and Medicine. Three hours of lecture per week. Prerequisite: BTNY 2303.

BTNY 3624 - Taxonomy of Vascular Plants

Credits: (4)
Typically taught:
Summer [1st Blk]

A study of the basic principles and concepts of vascular plant systematics with emphasis on the identification and classification of flowering plants. Two hours of lecture and two 2-hour labs per week. Prerequisite: BTNY 2114.

BTNY 3643 - Intermountain Flora

Credits: (3)
Typically taught:
Fall [Full Sem]

A taxonomic study of plants that are of major importance to the management of wildland resources. Students will learn to identify 300 of the most important grasses, woody plants, and marsh-aquatic plants. Considers federal laws for the regulation of rare and endangered species and habitat designation. One hour of lecture and two 2-hour labs per week. Prerequisite: BTNY 3624.

BTNY 4113 - Plant Evolution

Credits: (3)
Typically taught:
Not currently being offered

An exploration of fundamentals and issues of evolution through natural selection as it relates to plants including reproduction strategies, co-evolution, evolution of ecosystems, biochemical evolution and genomic evolution. Prerequisite: BTNY 2104, BTNY 2114, BTNY 3105, and BTNY 3303 or ZOOL 3300.

BTNY 4252 - Cell Culture

Credits: (2)
Typically taught:
Fall [Full Sem]

Basic methods and applications for culturing plant and animal cells in vitro. Two 2-hour combined lecture and laboratory sessions per week. Prerequisite: BTNY 2104, or MICR 2054. cross-listed with Microbiology

BTNY 4570 - Secondary School Science Teaching Methods

Credits: (3)
Typically taught:
Fall [Full Sem]

Acquaintance and practice with various teaching and assessment methods. Development of science curricula including lesson and unit plans. It is recommended that this course be completed immediately before student teaching. Prerequisite: Admission to the Teacher Education Program.

BTNY 4750 - Topics in Botany

Credits: (1-5)
An intensive exploration of selected issues in the discipline. The specific title and credit authorized will appear on the student transcript. Prerequisite: BTNY 2104 and BTNY 2114, and any specified courses selected by the instructor. May be repeated 4 times for a maximum of 5 credit hours.

BTNY 4800 - Individual Research

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Course may be repeated up to 10 times for credit. Prerequisite: BTNY 2104 and BTNY 2114 and BTNY 2121, two upper division Botany courses, and approval of instructor.

BTNY 4830 - Readings in Botany

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Course may be repeated up to 10 times for credit. Prerequisite: BTNY 2104 and BTNY 2114 and BTNY 2121, two upper division Botany courses, and approval of instructor.

BTNY 4840 - Thesis Readings

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Literature search and evaluation, culminating in the writing of a thesis proposal. Prerequisite: BTNY 2104 and BTNY 2114 and BTNY 2121, two upper division Botany courses, and approval of thesis advisor. Course may be repeated once for a maximum of 4 credit hours.

BTNY 4850 - Thesis Research

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Independent research related to a student's approved thesis proposal. May be repeated as long as satisfactory progress is being made on the thesis topic. Prerequisite: BTNY 4840 and approval of thesis advisor. Course may be repeated twice for a maximum of 6 credit hours.

BTNY 4890 - Cooperative Work Experience

Credits: (1-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Open to all students in the Botany Department who meet the minimum Cooperative Work Experience requirements of the department. Provides academic credit for on-the-job experience. Grade and amount of credit will be determined by the department. Prerequisite: Two upper-division Botany courses. Course may be repeated 5 times for a maximum of 6 credit hours.

BTNY 4920 - Short Courses, Workshops, Institutes, and Special Programs

Credits: (1-4)
Consult the class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. Prerequisite: BTNY 2104 and BTNY 2114 and BTNY 2121, and any specified courses selected by the instructor.

BTNY 4950 - Advanced Field Botany

Credits: (1-5)
Typically taught:
Spring [Full Sem] even years

A concentrated study of the flora of a specific geographical region or an extended, organized field trip under supervision. The course involves extensive pre- and post-trip exercises and evaluation. Prerequisite: At least one upper division Botany course and specified courses selected by the instructor for a specific field trip as indicated in the schedule, and with consent of the instructor. Course may be repeated 4 times for a maximum of 5 credit hours.

BTNY 4970 - Botany Thesis

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Written and oral presentation of thesis research results and evaluation. Also includes final evaluation of the student's portfolio and taking of Botany graduation assessment examination. Prerequisite: BTNY 4850 and approval of thesis advisor.

BTNY 4980 - Portfolio Summative Assessment

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Final evaluation of the Botany Student Portfolio. Prerequisite: Completion of or concurrent enrollment in courses needed to meet the minimum requirements for a degree in Botany.

BTNY 4990 - Seminar in Botany

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Oral presentation of either library research or individual research. Final evaluation of the student's portfolio and taking of Botany graduation assessment examination. The course is to be taken the last semester of the senior year. Prerequisite: Completion of or concurrent enrollment in courses needed to meet the minimum requirements for a degree in Botany.

BTNY 5030 - Botany for Teachers

Credits: (2-5)
Science content course for teachers in MEd Science Emphasis Program. To register, select another departmental course and develop a contract detailing additional work required for graduate credit. Contract must be approved by instructor, department chair, and Director of the Master of Education Program. Course may be repeated up to 10 times.

CHEM 1010 PS - Introductory Chemistry

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

A lecture-demonstration course for students with no previous chemistry background who are not majoring in areas requiring further chemistry. Three hours of lecture-demonstration a week.

CHEM 1050 PS - Introduction to General, Organic & Biochemistry

Credits: (5)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

An introduction to general, organic and biochemistry designed primarily for students of nursing and other majors that require no more than one semester of chemistry. Four hours of lecture and one 3-hour lab a week.

CHEM 1055 - Introduction to General, Organic & Biochemistry Lab

Credits: (1)
Typically taught:
Offered as needed

CHEM 1055 is a stand-alone lab course designed to accommodate transfer students from other universities. CHEM 1055 registration will be allowed only by special permission from the Chemistry Department Chair. Transfer students who have taken the CHEM 1050 lecture or equivalent without the lab should petition the Chemistry Department Chair for permission to take this course. Prerequisite: Must have completed or be currently enrolled in CHEM 1050 lecture or equivalent.

CHEM 1110 PS - Elementary Chemistry

Credits: (5)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

Fundamentals of inorganic chemistry and introduction to organic chemistry. The first course in a two-semester sequence designed primarily for students of nursing, engineering technology and some other fields of science and health professions who will take no more than one year of chemistry. Four hours of lecture and one 3-hour lab a week.

CHEM 1115 - Elementary Chemistry Lab

Credits: (1)
Typically taught:
Offered as needed

CHEM 1115 is a stand-alone lab course designed to accommodate transfer students from other Universities. CHEM 1115 registration will be allowed only by special permission from the Chair of Chemistry. Transfer students who have taken the CHEM lecture without the lab should petition the Chair of the Chemistry Department for permission to take this course. Prerequisite: Must have completed or currently be enrolled in CHEM 1110 lecture.

CHEM 1120 - Elementary Organic Bio-Chemistry

Credits: (5)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

Elementary study of the compounds of carbon and chemical compounds and reactions of biological systems. Four hours of lecture and one 3-hour lab a week. Prerequisite: CHEM 1110 or equivalent.

CHEM 1125 - Elementary Organic Bio-Chemistry Lab

Credits: (1)
Typically taught:
Offered as needed

CHEM 1125 is a stand-alone lab course designed to accommodate transfer students from other Universities. CHEM 1125 registration will be allowed only by special permission from the Chair of Chemistry. Transfer students who have taken the CHEM 1120 lecture without the lab should petition the Chair of the Chemistry Department for permission to take this course. Prerequisite: Must have completed or currently be enrolled in CHEM 1120 lecture.

CHEM 1200 - Preparation for College Chemistry

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem, Full Sem Online]

A course designed to provide the minimal prerequisite skills needed for entry into CHEM 1210. Three hours of lecture per week.

CHEM 1210 PS - Principles of Chemistry I

Credits: (5)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [~~Full Sem~~1st Blk]

This is the first course in a series designed primarily for science majors and others who will take more than one year of chemistry such as pre-medical students, clinical/medical laboratory scientists, and some engineering students. Course topics include components of matter, stoichiometry, major classes of reactions, gases and kinetic molecular theory, thermochemistry, quantum theory and atomic structure, models of chemical bonding, shapes of molecules, intermolecular forces, and properties of mixtures. The laboratory emphasizes qualitative and quantitative methods of analysis. Four hours of lecture and one 3-hour lab a week. Prerequisite: MATH 1010 or equivalent and CHEM 1200 or departmental approval. Prerequisite/Co-requisite: MATH 1050 or MATH 1080.

CHEM 1215 - Principles of Chemistry I Lab

Credits: (1)
Typically taught:
Offered as needed

CHEM 1215 is a stand-alone lab course designed to accommodate transfer students from other Universities. CHEM 1215 registration will be allowed only by special permission from the Chair of Chemistry. Transfer students who have taken the CHEM 1210 lecture without the lab or High School AP students should petition the Chair of the Chemistry Department for permission to take this course. Prerequisite: Must have completed or currently be enrolled in CHEM 1210.

CHEM 1220 - Principles of Chemistry II

Credits: (5)
Typically taught:

Fall [Full Sem]
Spring [Full Sem]
Summer [~~Full Sem~~2nd Blk]

Second semester of principles of chemistry. Four hours of lecture and one 3-hour lab a week. Prerequisite: MATH 1050 or MATH 1080 or equivalent and CHEM 1210.

CHEM 1225 - Principles of Chemistry II Lab

Credits: (1)
Typically taught:
Offered as needed

CHEM 1225 is a stand-alone lab course designed to accommodate transfer students from other Universities. CHEM 1225 registration will be allowed only by special permission from the Chair of Chemistry. Transfer students who have taken the CHEM 1220 lecture without the lab, or High School AP students should petition the Chair of the Chemistry Department for permission to take this course. Prerequisite: Must have completed or currently be enrolled in CHEM 1220 lecture.

CHEM 1360 PS - Principles of Physical Science

Credits: (3)
Typically taught:
Fall [Full Sem]

A lecture/laboratory course designed to provide an introduction to the scientific method and its application to the study of selected topics in physics and chemistry. Two hours of lecture and one 3-hour lab per week. Recommended for Elementary Education majors.

CHEM 2310 - Organic Chemistry I

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [~~Full Sem~~1st Blk]

Principles of organic chemistry, including structure and reactivity of carbon based molecules. Detailed study of mechanisms, synthesis, and reactions. Alkane, alkyl halide, alkyne, alcohol, and ether families are covered. Four hours of lecture a week. Prerequisite: CHEM 1220. Co-Requisite: CHEM 2315 lab.

CHEM 2315 - Organic Chemistry I Lab

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [~~Full Sem~~1st Blk]

Lab course designed to be taken with CHEM 2310. Includes organic laboratory techniques, synthesis, product isolation, spectroscopy and analysis. Prerequisite: CHEM 1220. Co-Requisite: CHEM 2310 lecture.

CHEM 2320 - Organic Chemistry II

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [~~Full Sem~~2nd Blk]

Principles of organic chemistry, second semester. A continuation of structure and reactivity analysis, along with structure elucidation techniques, spectroscopy and synthetic reactions. Coverage includes aromatics, carbonyls, carboxylic acid derivatives, and sugars. Four hours of lecture a week. Prerequisite: CHEM 2310 and CHEM 2315. Co-Requisite: ~~Must have completed or currently be enrolled in~~ CHEM 2325 lab.

CHEM 2325 - Organic Chemistry II Lab

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [~~Full Sem~~2nd Blk]

Lab course designed to be taken with CHEM 2320. Includes organic laboratory techniques, synthesis, product isolation, spectroscopy and analysis. Prerequisite: CHEM 2310 and CHEM 2315. Co-Requisite: ~~Must have completed or currently be enrolled in~~ CHEM 2320 lecture.

CHEM 2600 - Laboratory Safety

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An interdisciplinary, team-taught course that will be an overview of the major chemical, biological and physical safety issues related to science laboratories and field work. Class will meet once per week and will be taught in a lecture/demonstration format.

CHEM 2890 - Cooperative Work Experience

Credits: (1-6)
Typically taught:
Offered as needed

Open to all students in the Chemistry Department who meet the minimum Cooperative Work Experience requirements of the department. Provides academic credit for on-the-job experience. Grade and amount of credit will be determined by the department. May be repeated 5 times with a maximum of 6 credit hours.

CHEM 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Typically taught:
Offered as needed

Consult the class schedule for the current offering under this number. The specific title with the credit authorized will appear on the student transcript.

CHEM 2990 - Chemical Technician Seminar

Credits: (1)
Typically taught:
Spring [Full Sem]

A course designed to provide the skills necessary to enter the job market as a Chemical Technician. One hour of lecture/discussion a week. Prerequisite: CHEM 1220.

CHEM 3000 - Quantitative Analysis

Credits: (4)
Typically taught:
Fall [Full Sem]
~~Summer~~Spring [Full Sem]

Theory and methods of gravimetric and volumetric analysis and simple instrumentation. Includes statistical evaluation of results. Three hours of lecture and one 3-hour lab per week. Prerequisite: CHEM 1220. Prerequisite/Co-requisite: Prerequisite or co-requisite: CHEM 3020.

CHEM 3005 - Quantitative Analysis Lab

Credits: (1)
Typically taught:
Offered as needed

CHEM 3005 is a stand-alone lab course designed to accommodate transfer students from other Universities. CHEM 3005 registration will be allowed only by special permission from the Chair of Chemistry. Transfer students who have taken the CHEM 3000 lecture without the lab should petition the Chair of the Chemistry Department for permission to take this course. Prerequisite: Must have completed or currently be enrolled in CHEM 3000 lecture.

CHEM 3020 - Computer Applications in Chemistry

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A course designed to provide students computer skills for applications including computation and electronic data

bases searches. It is required that this course be taken before or with CHEM 3000. One hour of lecture/discussion a week. Prerequisite: CHEM 1210.

CHEM 3050 - Instrumental Analysis

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Theory and methods of modern instrumental analysis. Includes practical applications in electrochemical, spectrometric, and chromatographic techniques. Three hours of lecture and one three hour laboratory per week. Prerequisite: CHEM 3000.

CHEM 3060 - Applied Analysis

Credits: (1)
Typically taught:
Not currently being offered

Applied Analysis using modern methods of analysis with an emphasis on speed and accuracy. One 3-hour lab per week. Prerequisite: CHEM 3000. Prerequisite/Co-requisite: Prerequisite or co-requisite: CHEM 3050.

CHEM 3070 - Biochemistry I

Credits: (~~4~~3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Structure and function of biomolecules including proteins, nucleic acids, fats and carbohydrates. A focus on proteins as energy transforming and catalytic devices; their role in metabolism, defense and other biochemical processes. Three lectures ~~and one three hour lab~~ a week. Prerequisite: CHEM 2310 and CHEM 2315.

CHEM 3075 - Biochemistry I Lab

Credits: (1)
~~Stand-alone biochemistry laboratory course~~**Typically taught:**
Fall [Full Sem]
Spring [Full Sem]

Biochemistry lab course designed to ~~accommodate transfer students from other universities that have taken the equivalent of~~accompany Biochemistry I Lecture, CHEM 3070~~, Biochemistry, without the laboratory component. CHEM 3075 registration will be allowed only by special permission from the Chair of Chemistry.~~. Includes biochemical concept illustration using chemical and biological techniques and experimentation. Prerequisite~~: CHEM 2310, CHEM 2315, and~~ /Co-requisite: CHEM 3070~~ without laboratory~~.

CHEM 3080 - Biochemistry II

Credits: (3)
Typically taught:
Spring [Full Sem]

A detailed study of the molecular basis of life: nucleic acids, biosynthetic pathways, molecular aspects of disease and pharmacology. Three lectures a week. Prerequisite: CHEM 2320, CHEM 2325, and CHEM 3070.

CHEM 3090 - Biochemical Techniques

Credits: (1)
Typically taught:
Spring [Full Sem]

Advanced techniques including instrumentation for biochemistry. One 3-hour lab per week. Prerequisite: CHEM 2320, CHEM 2325, and CHEM 3070, with CHEM 3080 being prerequisite or co-requisite. To be taken concurrently with CHEM 3080.

CHEM 3400 - Molecular Symmetry and Applied Math for Physical Chemistry

Credits: (3)
Typically taught:
Fall [Full Sem]

An introduction to molecular symmetry, experimental error analysis, and physical chemistry applications of algebra, linear algebra, and differential equations. Prerequisite: MATH 1220. Co-Requisite: CHEM 3410.

CHEM 3410 - Foundations in Physical Chemistry~~ I~~

Credits: (4)
Typically taught:
Fall [Full Sem]

The ~~first~~ one-semester foundation course ~~of~~in Physical Chemistry covering chemical thermodynamics and kinetics~~. Three hours of lecture and one 3-hour lab a week.~~ with an introduction to quantum mechanics through application to spectroscopy. Prerequisite: CHEM ~~3000~~1220, and ~~PHYS 2220.~~ Prerequisite/Co-requisite: ~~CHEM 3400~~PHYS 2220.

CHEM 3420 - Physical Chemistry II

Credits: (4)
Typically taught:
Spring [Full Sem]

The second semester course of Physical Chemistry covering quantum mechanics, statistical mechanics, and chemical reaction dynamics. Three hours of lecture and one 3-hour lab a week. Prerequisite: CHEM 3410.

CHEM 3570 - Foundations of Science Education

Credits: (3)
Typically taught:
Fall [Full Sem]

A thorough investigation of research in science learning and curricular standards at the state and national levels. Foundations of the philosophy of science and scientific inquiry as applicable to science teaching at the secondary level. This course serves as a foundation to a preservice science teacher's education coursework.

CHEM 3610 - Foundations in Inorganic Chemistry

Credits: (4)
Typically taught:
Fall [Full Sem]

A foundation course for chemistry majors and minors. Topics include atomic properties, bonding, molecular symmetry, solid state structures, and transition metal complexes. This class will meet for 3 hours each week with one 3 hour laboratory per week. Prerequisite: CHEM 1220, and MATH 1060 or MATH 1080.

CHEM 4250 - Medicinal Chemistry

Credits: (3)
Typically taught:
Fall [Full Sem]

Medicinal chemistry is a fast-paced and important field that has direct impacts on overall world health and quality of life. This 3-credit-hour course is designed for students with an interest in chemistry, biochemistry, pharmacology, and medicine. It will provide an in-depth look at how pharmacologically active molecules are designed, how they chemically interact with their targets, and how they work molecularly to treat human diseases. Selected case studies will be used to illustrate the concepts being covered. In line with our university mission, an over-arching theme will be looking at how medicinal chemistry affects our worldwide community with emphasis on patents, drug development costs, risks, and ethics. Prerequisite: CHEM 3070.

CHEM 4540 - Spectrometric and Separation Methods

Credits: (4)
Typically taught:
Fall [Full Sem]

Theory and practice of spectrometric and separation methods in the study of chemical systems. Three hours of lecture and one 3-hour lab per week. Prerequisite: CHEM 3420 or permission of instructor.

CHEM 4550 - Geochemistry

Credits: (3)
Typically taught:
Even years

The chemistry of the earth and geochemical processes operating in the lithosphere, hydrosphere, and atmosphere with a synthesis of these ideas to account for the chemical evolution of the earth. Applications to mineral stability and

chemical reactions, geochemical cycles, and isotope geochemistry. Three hours of lecture a week. Prerequisite: CHEM 1220 and GEO 2050 or consent of instructor.

CHEM 4570 - Secondary School Science Teaching Methods

Credits: (3)
Typically taught:
Fall [Full Sem]

Acquaintance and practice with various teaching and assessment methods. Development of science curricula including lesson and unit plans. It is recommended that this course be completed immediately before student teaching. Prerequisite: Admission to the Teacher Education Program.

CHEM 4600 - Inorganic Chemistry

Credits: (4)
Typically taught:
Spring [Full Sem]

A study of the elements and their compounds based on the periodic table, current theories and laboratory work. Three hours of lecture and one 3-hour lab a week. Prerequisite: CHEM 3420 or permission of instructor.

CHEM 4700 - Special Topics in Chemistry

Credits: (1-3)
variable title
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course may be repeated twice for a maximum of 3 credit hours. Prerequisite: CHEM 3420 or permission of instructor.

CHEM 4710 - Chemical Preparations

Credits: (1-3)
Typically taught:
Not currently being offered

Synthesis and determination of the properties of selected chemical compounds. Three to nine hours of lab a week. Prerequisite: Permission of the instructor.

CHEM 4800 - Research and Independent Study in Chemistry

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Summer [Full Sem]

Open to qualified students for one or more semesters. May be repeated for credit up to 12 times with instructor approval.

CHEM 4890 - Cooperative Work Experience

Credits: (1-6)
A continuation of CHEM 2890. Open to all students. May be repeated for credit up to 12 times with instructor approval.

CHEM 4920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Consult the class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated 3 times with a maximum of 4 credit hours.

CHEM 4990 - Senior Seminar

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A seminar course where students will share their research results with fellow students and faculty in written and oral formats. Prerequisite: CHEM 4800 or permission of instructor.

CHEM 5030 - Chemistry for Teachers

Credits: (3-5)
Science content course for teachers in the M. Ed Science Emphasis Program. To register, select another departmental course and develop a contract detailing additional work required for graduate credit. Contract must be approved by instructor, department chair, and Director of the Master of Education Program. May be repeated twice with a maximum of 5 credit hours.

CHF 1400 - Marriage as an Interpersonal Process

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

An introductory survey course which addresses individual, interpersonal, and developmental dynamics essential for sustaining interpersonal and marital relationships.

CHF 1500 SS/DV - Human Development

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

A survey course which addresses the developmental aspects of individuals across the lifespan. Course content encompasses the study of biological, cognitive, social, and emotional developmental changes of the healthy individual in the context of the family and society. It emphasizes and demonstrates the vital connections between theory, research, and application.

CHF 2100 - Family Resource Management

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

Understanding the significance of values, goals, attitudes and planning strategies in the management of human, economic and environmental resources as they relate to increasing satisfaction and the enhancement of family relationships.

CHF 2400 - Family Relations

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

Examines dynamics of the healthy family using family theory, individual life span development, research, and active learning experiences.

CHF 2500 - Development of the Child: Birth Through Eight

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Online]

Focuses on developmental characteristics, developmental processes, and events and circumstances that influence the development of a child from birth through eight years of age. Prerequisite: CHF 1500.

CHF 2570 - Middle Childhood Development

Credits: (3)
Typically taught:

Fall [Full Sem]
Spring [Full Sem]

Focuses on the developmental characteristics, processes, and events that influence the growth of the child during the middle childhood development period. Examines the interactive efforts that the culture, family, school and peers have on development during this period. Prerequisite: CHF 1500.

CHF 2600 - Introduction to Early Childhood Education

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An overview of the historical roots of early childhood education; theoretical approaches, developmentally appropriate practice, types and efficacy of early childhood programs; and political issues and ethical conduct within the early childhood profession. ~~Two~~3 hours lecture per week and ~~two~~12 hours ~~of lab per week.~~field observation. Prerequisite: CHF 1500~~.~~, concurrent or prior enrollment in CHF 2500, or instructor consent.

Students enrolling in CHF 2600, CHF 2610 and CHF 2620 will be working with families and children; the State of Utah requires a background check and clearance. Applicants must be fingerprinted and complete a background check before being fully accepted into the program. A handout available from the department secretary explains the procedure and nominal expenses. If the background check reveals misconduct, you will not be allowed to enroll in these courses or any others that include field experience, practica or student teaching. Background checks require up to eight weeks and should be completed, or in progress, prior to enrolling in CHF 2600, CHF 2610, and CHF 2620 courses. See the department secretary for further details.

CHF 2610 - Guidance Based on Developmental Theory

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

The development of a philosophy and a plan of action for guiding the child based on theories of development. Lectures combine with laboratory experiences to provide opportunity for building relationships with young children. Students complete a minimum of 24 hours practicum arranged by the instructor. Prerequisite: CHF 1500. May be taken concurrently with CHF 2600. Students enrolling in CHF 2600, 2610 and CHF 2620 will be working with families and children; the State of Utah requires a background check and clearance. Applicants must be fingerprinted and complete a background check before being fully accepted into the program. A handout available from the department secretary explains the procedure and nominal expenses. If the background check reveals misconduct, you will not be allowed to enroll in these courses or any others that include field experience, practica or student teaching. Background checks require up to eight weeks and should be completed, or in progress, prior to enrolling in CHF 2600, 2610, and CHF 2620 courses. See the department secretary for further details.

CHF 2620 - Planning Creative Experiences for Young Children

Credits: (3)
Typically taught:

Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Development of attitudes, materials, and skills needed to plan and teach age, individually, and culturally appropriate curriculum for young children. Students complete a minimum of 24 hours practicum arranged by the instructor. Prerequisite: CHF 1500 and CHF 2610. Students enrolling in CHF 2600, CHF 2610 and 2620 will be working with families and children; the State of Utah requires a background check and clearance. Applicants must be fingerprinted and complete a background check before being fully accepted into the program. A handout available from the department secretary explains the procedure and nominal expenses. If the background check reveals misconduct, you will not be allowed to enroll in these courses or any others that include field experience, practica or student teaching. Background checks require up to eight weeks and should be completed, or in progress, prior to enrolling in CHF 2600, CHF 2610, and 2620 courses. See the department secretary for further details.

CHF 2830 - Directed Readings

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Individually chosen readings on specialized topics supervised by a faculty member. Prerequisite: Consent of faculty supervisor prior to registration. May be repeated up to 3 credit hours.

CHF 2850 - Child Development Associate Training

Credits: (2)
Understanding child development concepts and applying them to teaching situations with young children. The Professional Resource File in preparation for National Child Development Associate Credential (CDA) is compiled during the course.

CHF 2860 - Practicum

Credits: (2-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Work experience which applies prior academic learning in a supervised setting. Prerequisite: For Early Childhood majors: CHF 1500, CHF 2500, CHF 2600, CHF 2610, CHF 2620, or consent of faculty ~~supervisor~~advisor prior to registration. May be repeated up to 6 credit hours.

CHF 2890 - Cooperative Work Experience

Credits: (1-6)
Typically taught:
Fall [Full Sem]

Spring [Full Sem]
Summer [Full Sem]

Open to all students in the Child and Family Studies Department who meet the minimum Cooperative Work Experience requirements of the department. Provides academic credit for on-the-job experience. Grade and amount of credit will be determined by the department and faculty advisor. Prerequisite: For Early Childhood AAS majors: CHF 2860, or consent of faculty ~~supervisor~~advisor.

CHF 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Typically taught:
(when needed)

Consult the class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated up to 6 credit hours.

CHF 2990A - Seminar in Child Development

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Discussion and analysis of readings and selected topics in growth, development, and education of the young child. Prerequisite: CHF 1500, CHF 2500, CHF 2600, CHF 2610, CHF 2620 , and concurrent or prior enrollment in CHF 2860, or instructor's consent.

CHF 2990B - Seminar in Family Studies

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Discussion and analysis of special topics for Family Studies majors including professional skills, professional credentials, and the development of professional ethics.

CHF 3150 - Consumer Rights and Responsibilities

Credits: (3)
Typically taught:
Fall [Online]
Spring [Online]
Summer [Online]

The role and responsibilities of the family and its members as consumers. An exploration of marketplace fact and fraud and identification of consumer resources.

CHF 3350 - Diverse Families

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A comparative analysis of various types of ethnic families in the United States reflecting their social and political dynamics with extensive coverage of the family lifestyles, traditions and values. Several American ethnic groups will be examined including historical background, key ethnic cultural components, traditional and current ethnic family characteristics, and changes and adaptations to the ethnic family and culture.

CHF 3400 - Development in Middle Adulthood

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem Online]

The content of this course is designed to create a foundation of knowledge and understanding for the required core competency of the nationally recognized Family Life Education Content areas. Specifically addressing competency area number 3, Human Growth and Development across the Lifespan. The course will focus on normative and non-normative individual developmental processes, as well as systemic dynamics of social context surrounding and impacting middle-aged development. Prerequisite: CHF 1500.

CHF 3450 - Adult Development

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Growth and development through young, middle, and late adulthood within a developmental and family system context.

CHF 3500 - Young Children at Risk

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Focuses on the elements of the child's history, status, biological traits, and social circumstances that have the potential of placing the child in a position of risk in early childhood settings during the early childhood period. Prerequisite: CHF 1500 or equivalent.

CHF 3550 - Parenting Education

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Online]

A course designed to assist in the acquisition of skills and knowledge regarding the understanding and facilitation of contemporary parents in their parenting role. Course content will include conceptualizations and strategies from both contemporary theoretical and applied perspectives. Prerequisite: CHF 1400, CHF 1500, and CHF 2400, or consent of instructor.

CHF 3640 - Working with Parents

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Prepares students to be advocates and practitioners of parent involvement by exploring philosophies, processes, and methods for working with parents and involving them in their child's learning process. Components of family structure, economics, cultural diversity, second-language learners, communication skills, community resources, and a model for parent involvement are integrated into the student experience. Prerequisite: CHF 1500.

CHF 3650 - Family Processes

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An examination of family internal dynamics and family systems for the purpose of enrichment, problem prevention and education. Prerequisite: CHF 2400.

CHF 3680 - Teaching Experience in the Preschool

Credits: (3)
Provides students an opportunity to be an assistant teacher, to observe and interact with children on an individual and group basis; plan, develop, and implement activities for children. Prerequisite: CHF 1500, CHF 2610 and CHF 2620, or consent of instructor.

CHF 3850 - Current Research Methods in Child and Family Studies

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An introduction to the methods and types of research used in the study of family issues and processes. Focus of the course includes the development of student knowledge and skills used in applying the scientific method in family

studies contexts. Understanding, reviewing, evaluating, and interpreting the methods and conclusions reported in the professional empirically based journals will also be emphasized. Prerequisite: CHF 1500, CHF 2400.

CHF 4130 - Language Development and Emergent Literacy in Early Childhood

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course explores current theory, research, and evidence based practices for promoting early language and emergent literacy development (birth 8 years) in home, child care, prekindergarten, and primary education environments through collaborative practices between early childhood professionals and parents. Prerequisite: CHF 1500.

CHF 4201 - Coaching EC/ECE Professionals: Foundation & Organization of Coaching Application: Organization & Self Reflection

Credits: (3)
Typically taught:
Spring [Full Sem]

Educator coaching is an evidence-based strategy to increase program quality and teacher effectiveness in early childhood/early childhood education classrooms, programs, and home delivery systems. This course will train EC/ECE coaches using material from research-based sources and program experiences. Participants will learn recommended practices in coaching related to early childhood and develop a systematic, individualized approach to effective coaching. Participants will learn practical strategies for coaching early childhood staff of diverse backgrounds and varying adult learning styles. Materials and discussions will include interpersonal communication skills and a systematic approach to more intentional coaching. Students will apply these strategies to Case Studies and field work experiences throughout the course and will participate in hands-on activities in class to apply new skills. Coaching skills will apply to any EC/ECE curriculum or model. This is course 1 in a three course series for the Utah Coaching Credential.

CHF 4202 - Coaching EC/ECE Professionals: Connecting Awareness with Application & Deepening of Practice

Credits: (3)
Typically taught:
Summer [Full Sem]

Becoming an effective coach is a result of introspection, thoughtful planning, application of coaching skills and knowledge, and continuous self–improvement. This course will identify effective ongoing support strategies for individuals providing coaching. Participants will integrate skills with effective application in real life coaching experiences. Discussions will include self-reflective practices, self- directed action, planning and goal setting, and managing progress and accountability. Students will apply these strategies to case studies and real life experiences throughout the course. Students will be encouraged to engage in self-reflection and share ideas, successes, and challenges with other students in this course. This is course 2 in a three course series for the Utah Coaching Credential. Prerequisite: CHF 4201/MED 6201 or instructor permission.

CHF 4203 - Coaching EC/ECE Professionals: Attuning for Personal and Organizational Change

Credits: (3)
Typically taught:
Fall [Full Sem]

The success of the educator coaching relationship has been based on the trusting relationship between two peers, coach, and adult learner, through a collaborative process of co-learning. The opportunity for the adult learner to self-monitor, self- analyze, and self-modify enhances the adult learner's own resourcefulness and alters his/her own personal understanding. In addition, when the act of coaching is a collaborative process, the coach is also allowed the same opportunity to reflect on self as part of their learning. This course is designed to support the coach in creating a social learning climate where a synergy of shared learning and reflective dialogue about practice are examined, analyzed and refined. Participants will integrate skills from Course 1 and 2 with opportunities to engage in conducting and constructing ongoing support strategies the coach can apply, refine and alter based on the adult learners' needs, readiness, and values about practice. Using strategies and protocols, coaching for organizational change in diverse settings (home- based programming, early care settings, classrooms, and school districts, etc.), and identifying effective ongoing personal supports will also be addressed. Students will apply these strategies to case studies and real life experiences throughout the course. This is course 3 of a three course series for the Utah Coaching Credential. Prerequisite: CHF 4201/MED 6201 and CHF 4202/MED 6202 or instructor permission.

CHF 4300 - Latino Child and Family Development

Credits: (3)
Typically taught:
Spring [Online]
Summer [1st Blk]

The Latino Child and Family Development course is designed as an upper division course for those who will work with, advocate for, or interact with children and families from a Latino background. The course uses a cultural constructivist approach to understand Latino children and their families. The central focus includes the study of Latino culture, parenting practices, couple and marital practices, and other family dynamics. Additionally, a major goal is to understand and deconstruct stereotypes associated with individuals within the Latino culture. The course will simultaneously focus on Latinos living within the United States as well as cultural groups throughout North America, South America, and the Caribbean.

CHF 4310 - Understanding the Modern United States Military Family

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course is designed to assist you in understanding the structure and formation of each service branch as well as the experiences of families serving in the U.S. Military focusing on both Active duty and Reserve components using Family Systems Theory, Risk and Resiliency Theory and Ambiguous Loss Theory. In recent years, many changes have taken place in the military family landscape. The knowledge gained in this course should provide you with insight into the complex experiences of today's U.S. Military Families. The information provided in this course is designed to assist students to be effective in professional settings working with military personnel and their families, and is a starting foundation for those interested in pursuing professional civilian careers working with military families in a variety of settings (e.g., nonprofit organizations, the U.S. Military, and others). This course will focus on different components of family life that specifically impact military families. The course format will include (1) readings, (2)

online lectures, (3) quizzes, (4) exams, and (5) online and in class discussion. Prerequisite: CHF 1400, CHF 1500, CHF 2400.

CHF 4400 - The Family in Stress

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Online]

Examining causes of stress in the family and developing strategies for coping with stress.

CHF 4450 - Children and Families in the Medical Setting

Credits: (3)
Typically taught:
Fall [Full Sem]

The purpose of this course is to understand and serve children and families in the medical setting and to provide basic background and knowledge of Child Life practices. This course prepares individuals who plan to complete a 480 hour cooperative work experience in the field of Child Life, and is required prior entering into an internship and taking the National Child Life Certification Examination.

The content of this course is designed to create a foundation of knowledge, both academically and practically, in the required core competencies of the nationally recognized Child Life Certification. The core competencies include the ability to assess and provide services to infants, children, youth, and families in a medical setting including stress management, supportive environments, team skills, professional development, and evaluation skills.

CHF 4500 - Comparative Study of Childhood and Adolescent Development

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Online]

An advanced level course that addresses the understanding of the principles and theories of growth and development within and between the stages of children in childhood and adolescence. Covers the physiological, intellectual, social, emotional domains of development. Prerequisite: CHF 1500 and CHF 2400.

CHF 4510 - Contemporary Issues in Planning for Children

Credits: (1-3)
Variable Title
An in-depth study of a contemporary issue in childhood. In some cases, this course may substitute for one of the minor requirements when it has received prior approval from a department advisor. May be repeated up to 3 credit hours.

CHF 4520 - Basic Mediation Training

Credits: (3)
Typically taught:
(when needed)

A basic mediation training course addressing the theory and skills to effectively deal with conflict situations. The course leads to certification in basic theory and skills of mediation. (Supervised mediation practice is required to complete certification.)

CHF 4600 - Family Studies Field Experiences

Credits: (1-8)
Typically taught:
(when needed)

Six to eight weeks internship, which may require off-campus residence. Credit and hours as arranged with instructor. Prerequisite: consent of instructor. May be repeated up to 8 credit hours.

CHF 4650 - Family Life Education Methods

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Preparing students to be Family Life Educators by exploring philosophies, methods, and skills for teaching and working with parents and family members. Prerequisite: CHF 3350, CHF 3550, CHF 3650, and CHF 3850, or consent of instructor.

CHF 4660 - Advanced Skills for Family Life Educators

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This upper division course is centered on students' development of interpersonal and pedagogical skills as Family Life Educators under the direct supervision of course instructors. This theory-based course will provide students with hands-on skills and experiences that are vital for today's family life educators. This includes building audience engagement and trust through the use of observational feedback, responding to nonverbal cues, and addressing common teaching challenges. This course will teach students to present specific family life education program curricula. The course training will include students reviewing and presenting the family life education materials in two contexts: 1-within the classroom among peers and faculty and 2-within the community. This course also provides students with a number of teaching tools and philosophies considered key to becoming effective in the field of Family Life Education, and it also provides students with the experience of having presented a community education program in multiple contexts. Prerequisite: CHF 1400, CHF 1500, CHF 2400, CHF 2990B.

CHF 4710 - Advanced Guidance and Planning for Early Childhood Education

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A synthesis of guidance and planning with an emphasis on assessment, appropriate objectives and strategies for individual and specific groups of children. Requires both lecture and lab time. Students majoring in EC, ECE, or taking an early childhood specialization with their K-6 license will register for the section that is offered the first 5 weeks of the semester, and take it concurrently with CHF 4720. ~~Teacher Education majors who are K-6 candidates and not taking an early childhood specialization will register for the full semester section. Prerequisite: CHF 2610 and CHF 2620. Minors take it concurrently with CHF 4860~~Prerequisite: CHF 1500, CHF 2500, CHF 2600, CHF 2610, CHF 2620, and CHF 3640.

CHF 4711 - Advanced Guidance and Planning for Teacher Education

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A synthesis of guidance and planning with an emphasis on assessment, appropriate learning objectives and strategies for individuals and specific groups of children in early learning settings. Requires both lecture and lab time. This course is intended for teacher education majors who are K-6 candidates not completing an early childhood specialization. Students majoring in EC, ECE, or taking an early childhood specialization with their K-6 license should enroll in CHF 4710 instead of 4711. Prerequisite: CHF 2610 and CHF 2620.

CHF 4720 - Student Teaching in the Children's School

Credits: (3-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Experience in application of generalizations regarding growth, guidance, and development of children in the Melba S. Lehner Children's School. For juniors and seniors. Prerequisite: ~~EC and ECE majors:~~ CHF 1500, CHF 2500, CHF 2600, CHF 2610, CHF 2620 and CHF 3640. ~~K-6 Candidates: CHF 2610 and CHF 2620.~~ To be taken concurrently with CHF 4710. (Will be taken the last 10 weeks of the semester.) May be repeated 2 times up to 9 credit hours.

CHF 4730 - Early Childhood/Early Childhood Education Program Development

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course prepares students with skills specific to leadership roles in early childhood education programs including: professional ethics, ensuring the health and safety of children, ongoing quality improvement, program leadership, planning, and management. Content and skills focus on practices endorsed by the National Association for the

Education of Young Children (NAEYC) and are aligned with the NAEYC Standards for Early Childhood Professional Preparation Programs. Prerequisite: CHF 2600, CHF 2610, CHF 2620, or consent of the instructor, and concurrent or prior enrollment in CHF 4710 and CHF 4720.

CHF 4800 - Individual Research

Credits: (1-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Supervised projects and primary research in various areas of Child and Family Studies. Limited to advanced students upon consent of faculty supervisor. May be repeated up to 6 credit hours.

CHF 4830 - Directed Readings

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Individually chosen readings on specialized topics supervised by a faculty member. Credit for this course towards a Child and Family Studies major or minor will only be accepted when the course is completed with a grade of B- or better. Prerequisite: Consent of faculty supervisor prior to registration. May be repeated up to 3 credit hours.

CHF 4860 - Practicum

Credits: (1-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Work or volunteer experience which applies prior academic learning in a supervised setting. Consent of faculty supervisor is required prior to registration. Prerequisite: for Family Studies Majors include CHF 3350, CHF 3550, CHF 3650, CHF 3850, and completed background clearance. May be repeated up to 6 credit hours.

CHF 4890 - Cooperative Work Experience

Credits: (1-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Open to all students in the Child and Family Studies Department who meet the minimum Cooperative Work Experience requirements of the department. Provides academic credit for on-the-job experience. Grade and amount

of credit will be determined by the department and faculty supervisor. Prerequisite: for Early Childhood BS majors: CHF 4710 and CHF 4720, or consent of faculty supervisor.

CHF 4900 - Career Strategy Seminar

Credits: (1)
Open to first semester Juniors through first semester Seniors in all academic schools. Course objectives are to help students develop a career strategy to meet expected career goals, i.e., acquire a career position or successfully prepare for graduate school acceptance.

CHF 4920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Typically taught:
(when needed)

Consult the class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated up to 6 credit hours.

CHF 4980 - Early Childhood Senior Synthesis Seminar

Credits: (1)
Synthesis of Early Childhood/Elementary Education program of study with specific emphasis on beginning a professional career in teaching. Senior project not required. To be taken concurrently with student teaching.

CHF 4990A - Seminar in Child Development

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Discussion and analysis of special topics for advanced Early Childhood and Early Childhood Education majors. Prerequisite: CHF 2500, CHF 2600, CHF 3640, and CHF 3500 (or EDUC 2010) or instructor's consent, and concurrent or prior enrollment in CHF 4710 and CHF 4720.

CHF 4990B - Senior Seminar in Family Studies

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Discussion and analysis of special topics for seniors in Family Studies major. Prerequisite: CHF 3350, CHF 3550, CHF 3650, CHF 3850, or consent of instructor.

CJ 1010 SS - Introduction to Criminal Justice

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

An introduction to the history, processes and functions of the American criminal justice system and its primary components, law enforcement, courts, and corrections.

CJ 1070 - Law Enforcement/Corrections Academy, Part I

Credits: (~~3~~)
~~Core curriculum to provide~~ **9)**
Experiential credit for students ~~the basic training required to certify as~~completing a ~~reserve~~State of Utah authorized SFO/BCO or ~~special function officer. P.O.S.T. certification only.~~SFO/LEO POST Academy. Credit is earned concurrently with CJ 1080. Register through the ~~Division~~Department of ~~Continuing Education~~Criminal Justice. *Does not count for ~~CJ~~ credit toward CJ major, CJ minor or BIS emphasis in CJ*.

CJ 1080 - Law Enforcement/Corrections Academy, Part II

Credits: (~~3~~)
~~Police officer curriculum required to certify as~~**9)**
Experiential credit for students completing a ~~peace officer~~State of Utah authorized SFO/BCO or SFO/LEO POST Academy. Credit is earned concurrently with ~~full police powers. (A student must have completed the Core curriculum,~~ CJ 1070~~, to register for this course.) P.O.S.T. certification only.~~. Register through the ~~Division~~Department of ~~Continuing Education~~Criminal Justice. *Does not count for ~~CJ~~ credit toward CJ major, CJ minor or BIS emphasis in CJ*.

CJ 1300 - Corrections: History, Theory and Practice

Credits: (3)
Typically taught:
Fall [~~Online~~Full Sem]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

An introductory overview of the correctional system including: the historical development and societal context of corrections, contemporary correctional theory and law, jails and prisons, community corrections, treatment, juvenile corrections, and contemporary correctional issues.

CJ 1330 - Criminal Law and Courts

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem~~, Online~~]
Summer [~~Full Sem,~~ Online]

Surveys American criminal law and the criminal court system. Elements of crime, defenses, historical foundation, limits, purposes and functions of criminal law. History, theory and practice of criminal courts.

CJ 1340 - Criminal Investigation

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Online]

This is an introduction to Criminal Investigation including the necessary functions of interviewing witnesses and suspects, techniques in the collection and preservation of evidence, crime scene processing including some post-crime scene processing of evidence, follow-up investigation and recent techniques of enhancing the criminal investigation function.

CJ 1350 - Introduction to Forensic Science

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]

An introduction to the various types of physical evidence commonly encountered at crime scenes (e.g., fingerprints, hairs, fibers, drugs, glass, etc.), including discussion of comparison and identification techniques (i.e., optical examination/comparison, instrumental analysis, and many chemical processes) used in the analysis of such physical evidence.

CJ 2300 - Policing: History, Theory and Practice

~~Credits: (3)~~Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Online]

This course will provide an overview of the history of policing and the role of police in modern society. Particular emphasis will be placed on problems and issues confronting police and solutions within an organizational framework.

CJ 2330 - Juvenile Justice

Credits: (3)
Typically taught:
~~Fall [Full Sem]~~
Summer [Online]

Origin, philosophy, and development of the juvenile justice system, particularly the juvenile court. Emphasis placed upon laws, detention, adjudication, probation, after-care, foster homes, and other alternative correctional practices.

CJ 2340 - Crime Scene Investigation

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course is designed to give students an understanding of the integration of the criminal investigative process with complex scientific application of modern technology in searching for and processing physical evidence in crime scenes. It will provide background into the theory behind Crime Scene Science and the ethical and legal challenges faced by Forensic Scientists and Crime Scene Investigators. Using modern instructional materials, students will learn of the complexity of processing and documentation of Crime Scenes with the ultimate goal of having a successful outcome in the court system. Prerequisite: CJ 1350.

CJ 2350 - Laws of Evidence

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Deals with the principles and rules of law emphasizing evidentiary problems related to criminal cases.

CJ 2810 - Experimental Course

Credits: (1-3)
This number is used for newly developed experimental courses. May be repeated up to two additional times if new topic(s), for a combined total not exceeding 9 credit hours.

CJ 2860 - Criminal Justice Field Experience

Credits: (3)
Typically taught:
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~
~~**Summer [Full Sem]**~~**Not currently offered (see CJ 4860)**

Field experience in an internship with city, county, and state criminal justice agencies. May be repeated once for 6 credit hours.

CJ 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Consult the semester class schedule for the current offering under this number. The specific title with the credit authorized will appear in the semester schedule and on the student transcript. May be repeated up to one additional time for a combined total not exceeding 4 credit hours.

CJ 3020 - Criminal Justice Management

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Current command level problems and trends in criminal justice organizations and management including work environment, motivation, leadership, morale, discipline, evaluation, planning, and functioning of line and staff.

CJ 3040 - Community Policing

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Problem solving and the development of community trust are integral to community policing. The philosophy, concepts and methods in support of identifying the issues in a community that relate to crime are outlined and studied. The goal of creating healthy neighborhoods and sustaining the quality of neighborhood life are explained in detail. Crime is pervasive in American society, but victims and criminals have identified characteristics. These characteristics impact certain neighborhoods more than others. These characteristics and issues surrounding them are explored and researched.

CJ 3060 - Corrections in the Community

Credits: (3)
Typically taught:
Fall ~~[Full Sem]~~
~~Spring~~ [Full Sem]
Summer [Full Sem]

An overview of community based correctional programs focusing upon the historical origin, development, and current practices in probation, parole, the halfway house, work and educational release, as well as furlough programs.

CJ 3120 - Professional Practice for the Forensic Expert

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An in-depth analysis of critical issues for forensic experts in all fields. Topics such as evidence preservation, report writing, expert testimony and ethics are investigated. The course will focus on theory and practice through lecture, writing and practical exercises. 2 hour lecture, 3 hour lab. Prerequisite: CJ 1350; or instructor approval.

CJ 3130 - Investigation of Computer Crime

Credits: (3)
Typically taught:
~~**Fall [Online]**~~
~~**Spring [Full Sem]**~~
~~**Summer [Full Sem]**~~**Not currently being offered**

Deals with the threats, vulnerabilities, and risks of unauthorized system access. Understanding the modus operandi of criminal acts associated with computer crime and how to investigate them. Cryptography and network security will be closely examined.

CJ 3270 - Theories of Crime and Delinquency

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem, Online]
Summer [~~**Full Sem,**~~ **Online]**

Study of the nature, extent, causes, and treatment of crime.

CJ 3300 - Victimology

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [~~**Full Sem,**~~ **Online]**

This course is designed to review key research areas in the field of victimology. Particular emphasis will be placed on theory, measurement, and empirical results related to different types, consequences, and prevention of victimization.

CJ 3340 - Crime Scene Photography

Credits: (3)
Typically taught:
Spring [Full Sem]

Theory and practice behind photographic documentation of crime scenes. Practice of proper documentation methodology, injury photography, evidence photography special lighting considerations, etc. This hybrid course is a combination of lecture, laboratory, community workshops, and individual exercises. Prerequisite: CJ 2340; Prerequisite/Co-requisite: ART 2250 or ART 2450; or instructor approval.

CJ 3350 - The American Jail

Credits: (3)
Typically taught:
Spring [Full Sem]

Summer [Online]

Course critically examines the American jail with particular emphasis on history, management, operations and contemporary issues.

CJ 3360 - Prisons - Contemporary Issues and Dilemmas

Credits: (3)
Typically taught:
~~**Fall [Online]**~~
Spring [Full Sem~~, Online~~]

A course which focuses upon the contemporary adult prison with a particular emphasis upon current problems, issues and dilemmas. Diversity issues such as integration of the prison work force by women and minorities as well as the problems of elderly, women, and minority inmates will be examined.

CJ 3400 - Drugs and Crime

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The historic, economic, social and political roles of legal and illegal drugs; their contribution to crime of many kinds, accidents, and impacts on the criminal justice system; production and distribution systems; efforts to combat; decriminalization, prevention and treatment.

CJ 3600 - Criminal Justice Statistics

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

An introduction to descriptive and inferential statistics and data analysis for use in criminal justice and the social sciences. Prerequisite: WSU Math Competency.

CJ 4000 - Critical Legal Studies

Credits: (3)
Typically taught:
~~**Spring [Full Sem]**~~**Not currently being offered**

Critical Legal Studies comprehends the development and application of the criminal law and criminal justice institutions in the United States from a critical perspective. The course begins with a short review of slavery and race, civil rights and civil liberties, and the transformation of legal thought in America. Readings provide a perspective for how the criminal law and justice system are used to bolster the lives of the affluent classes while remaining oblivious or acting as a detriment to the lives of disadvantaged, under-represented and marginalized members of society. The

course concludes with readings that provide an understanding for the meaning of justice, the role of the law in fostering a more just society, and the legal tools available to the advocate of social change to propose changes through legal reform.

CJ 4065 - Law and Society

Credits: (3)
Typically taught:
Fall [Full Sem]

This course explores how law operates in society and how society influences the nature of the law. Topics may include the role of race in law, legal consciousness, efficacy of legal action, and the nature of the legal profession. Students may take either POLS 4065 or CJ 4065, but may not take both courses.

CJ 4110 - Physical Methods in Forensic Science

Credits: (4)
Typically taught:
Fall [Full Sem]

Physical methods for evidence analysis including microscopy, pattern based physical evidence (firearms, footwear, etc.) pattern recovery and analysis and statistical foundations for pattern comparison. Prerequisite: CJ 2340, CJ 3120 and either CHEM 1120 or CHEM 1220; or instructor approval.

CJ 4115 - Friction Ridge Analysis

Credits: (4)
Typically taught:
Spring [Full Sem]

Legal and scientific methodology behind identification, analysis and comparison of finger and palm prints including computer database methodology. 3 hours lecture, 1 hour lab. Prerequisite: CJ 2340, CJ 3120 and either CHEM 1120 or CHEM 1220; or instructor approval.

CJ 4116 - Friction Ridge Development

Credits: (4)
Typically taught:
Fall [Full Sem]

Basic and applied scientific theory and practice behind the detection, development, recovery and preservation of latent finger and palm prints. 3 hours lecture, 3 hour lab. Prerequisite: CJ 4115.

CJ 4125 - Advanced Methods in Forensic Science

Credits: (4)
Typically taught:
Spring [Full Sem]

Selected topics in forensic instrumentation, trace evidence, pattern evidence, biological and chemical analysis, research methods and data analysis, and senior assessment. 3 hours lecture, 3 hour lab. Prerequisite: Completion of or concurrent enrollment in all CJ Core Forensic Science Courses; or instructor approval.

CJ 4165 - Constitutional Rights

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

This course critically examines Amendments to the United States Constitution related to criminal justice issues including the 4th, 5th, 6th, 8th, and 14th amendments. It examines citizen's rights and criminal justice agent's responsibility and liability in connection with those rights.

CJ 4200 - Ethical Issues in Criminal Justice

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem]
Summer [Full Sem]

Critically examines selected criminal justice ethical issues such as capital punishment, official corruption, use of deadly force, discretion and deception by the police. Prerequisite: CJ 1010.

CJ 4300 - History of Law Enforcement

Credits: (3)
Typically taught:
~~**Spring [Full Sem]**~~**Not currently being offered**

An introduction to the history of America's law enforcement organizations, stressing the development, community issues, and organizational designs. The early leaders in policing and the early crime problems in America will be discussed and studied. From slave patrols prior to the Civil War to the U.S. Marshals of the old west, police development issues will be presented.

CJ 4700 - International Criminal Justice

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Compares United States criminal justice system with other international systems from throughout the world, and reviews the nature and extent of international crime. Prerequisite: CJ 1010.

CJ 4810 - Experimental Course

Credits: (1-3)
This number is used for newly developed experimental courses. May be repeated up to two additional times if new topic(s), for a combined total not exceeding 9 credit hours.

CJ 4830 - Directed Readings and Special Projects

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Assigned reading or project with evaluation by faculty member. Requires approval of the Department Chair. May be repeated for up to 6 credit hours cumulative course work. May not be used as an elective to complete CJ minor or A.S.

CJ 4860 - Criminal Justice Internship

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Volunteer experience with city, county, and state criminal justice agencies. Junior or Senior standing and CJ majors only. ~~Prerequisite: Consent of instructor.~~ Students may take this course for a combined total of six (6) credit hours.

CJ 4900 - Current Issues in Criminal Justice

Credits: (3)
Typically taught:
Fall [Full Sem~~, Online~~]
Spring [Full Sem~~, Online]~~
~~Summer [Full Sem, Online~~]

In-depth study of current theoretical issues in criminal justice. Specific offering will be identified by name and will be listed on student's transcript with authorized credit. May be repeated two additional times, for a total of three such classes with different titles.

CJ 4920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Typically taught:
Fall [Full Sem]

Consult the semester class schedule for the current offering under this number. The specific title with the credit

authorized will appear in the semester schedule and on the student transcript. May be repeated up to one additional time for a combined total not exceeding 4 credit hours.

CJ 4950 - Field Trips/Travel Study

Credits: (1-6)
Typically taught:
Spring [Full Sem]
Summer [Full Sem]

Designed to provide students with access to both national and international law enforcement agencies, prisons, detention centers, courts and institutions dealing with criminals and delinquents - male and female. Field trips include 2-3 weeks of intense instruction and then 3-5 days of on-site visits, interviews, and lectures by practitioners in the field. Course may be repeated for a total of six (6) hours of criminal justice credit. Additional hours will be counted toward 120 elective hours of study. May not be used as an elective to complete CJ minor or A.S.

CJ 4980 - Research Methods in Criminal Justice

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem]
Summer [Full Sem, Online]

Addresses the social scientific methodology utilized in criminal justice and criminological research. The essentials of the scientific method will be studied such as research design, probability sampling, qualitative methods and the classic experimental design. The course will familiarize the student with the methods and problems of social science research as applied to the information needs of criminologists, criminal justice agencies, and criminal justice policy-makers. Students will acquire a better sense of criminology or criminal justice research and of exactly what it is that academic researchers do. Prerequisite: CJ 1010, CJ 3600 and junior or senior standing; or instructor approval.

CJ 4995 - Criminal Justice Senior Capstone

Credits: (1)
Typically taught:
Fall [~~Full Sem~~Online]
Spring [~~Full Sem~~Online]
Summer [~~Full Sem~~Online]

Program assessment for graduating seniors combined with an exploration of selected issues and dilemmas surrounding the criminal justice field. Credit/No credit. Prerequisite: Criminal Justice major core course requirements completed and senior standing; or department chair approval.

CMT 1100 - Construction Management Orientation

Credits: (1)
Typically taught:
Fall [Full Sem]

This course provides an overview of the U.S. construction industry with particular focus on the social, cultural, and economic trends, issues, and events that impact and shape the industry and its occupations. The course is also designed to help students develop a clearer focus on their educational and occupational goals. Ethics as it relates to construction management will be discussed.

CMT 1150 - Construction Graphics

Credits: (3)
Typically taught:
Spring [Full Sem]

Students will gain knowledge of and experience graphical communications as used in the construction industry. Includes print reading and interpretation of architectural, structural, electrical, and mechanical drawings. Residential and commercial plans will be used. Prerequisite: CMT 1210 (can be taken concurrent).

CMT 1210 - Residential Construction Materials and Methods

Credits: (3)
Typically taught:
Fall [Full Sem]

This course provides students with knowledge of residential building techniques and materials. The course will examine common construction materials, components, and systems as related to wood frame structures, including sustainable materials. The residential construction process will be analyzed from site planning to finish construction.

CMT 1310 - Commercial Construction Materials & Methods

Credits: (3)
Typically taught:
Spring [Full Sem]

This course provides students with knowledge of commercial building techniques and materials. Basic materials and installation methods for commercial construction are studied. The application of sustainable construction methods will be discussed.

CMT 1500 - Computer Applications in Construction

Credits: (3)
Typically taught:
Spring [Full Sem]

Computer applications used in the construction field will be examined. Various software packages will be introduced and studied specifically to their application in the construction industry. Prerequisite: ~~NTM~~WEB 1700.

CMT 2220 - Construction Contracts and Specifications

Credits: (3)
Typically taught:

Fall [Full Sem]

Students will learn to interpret contract documents used in the various construction delivery methods. Contracts, bidding documents, bonding and insurance, conditions of the contract, general requirements, and technical specifications will be covered. Prerequisite: ENGL 1010 or ENGL 2010 and CMT 1100.

CMT 2330 - Concrete Technology

Credits: (3)
Typically taught:
Fall [Full Sem]

The student will obtain knowledge of concrete, its physical and mechanical properties, and the design and quality control of concrete mixes.

CMT 2340 - Construction Surveying

Credits: (2)
Typically taught:
Fall [1st Blk]
Spring [2nd Blk]

The student will perform basic surveying operations necessary for the location, layout, and construction of a building. Interpretation of site plans and topographic maps is included. Prerequisite: MATH 1080. (Hybrid)

CMT 2360 - Building Codes and Inspection

Credits: (2)
Typically taught:
Spring [Fall Sem]

Students will learn to interpret current building codes and how they apply to the construction and use of buildings. Prerequisite: ENGL 2010.

CMT 2640 - Architectural Estimating

Credits: (2)
Typically taught:
Fall [Full Sem]

The student will develop material estimates for building projects. Involves manual and computer applications in working with architectural drawings and reference materials. Prerequisite: MATH 1010 or higher, CMT 1150, CMT 1210, CMT 1310, and CMT 1500.

CMT 2880 - Internship

Credits: (3)
Typically taught:

Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Supervised work experience in the construction industry with placement and course objectives approved by the faculty supervisor. Ethics as it relates to construction management will be discussed.

CMT 2899 - AAS Graduation Assessment and Signoff

Credits: (0)
This course includes final assessment (e.g., exit interviews) and signoff needed for graduation with an AAS degree from the program. Contact your advisor during your last semester before graduation to complete this requirement. Credit/no credit.

CMT 3115 - Construction Cost Estimating

Credits: (3)
Typically taught:
Fall [Full Sem]

The student will learn the methods and procedures for estimating and bidding construction projects. The course will emphasize computerized estimating, development of unit costs, and advanced estimating principles. Ethics as it relates to bidding will be discussed. Prerequisite: MATH 1080, CMT 1150, CMT 1210, CMT 1310, CMT 1500, and CMT 2640.

CMT 3130 - Construction Planning & Scheduling

Credits: (3)
Typically taught:
Spring [Full Sem]

Provides students with the fundamental skills necessary to plan and schedule the construction process and familiarize them with computer scheduling software packages. Students will learn to balance resources to complete projects. Prerequisite: MATH 1080, CMT 1500, and CMT 2640.

CMT 3210 - Construction Management

Credits: (3)
Typically taught:
Fall [Full Sem]

Provides students with the skills necessary to successfully manage construction projects. Ethics as it relates to project management and the construction industry will be discussed. Prerequisite: CMT 2220 and ENGL 2010.

CMT 3260 - Mechanical and Electrical Systems

Credits: (4)
Typically taught:

Fall [Full Sem]

This course provides basic knowledge of electrical, plumbing, and HVAC systems used in residential and light commercial buildings. Emphasis is placed on advantages and disadvantages of various systems, and how their design and installation integrates into the management of the building process.

CMT 3350 - Applied Structures

Credits: (4)
Typically taught:
Spring [Full Sem]

Students will analyze the behavior of engineered structures. Includes properties of materials and mechanics as they relate to the structural behavior of load resisting components. Prerequisite: MATH 1080 and PHYS 2010.

CMT 3510 - Building Mechanical & Electrical Systems

Credits: (3)
Typically taught:
Fall [Full Sem] odd years

Practical application of mechanical and electrical system design, operation and maintenance principles pertinent to commercial buildings and emphasizing a designer's perspective on mechanical and electrical power equipment and distribution systems, energy management, fire protection, communication, control and signal systems, lighting, and security systems.

CMT 3540 - Facilities Management Administration

Credits: (3)
Typically taught:
Fall [Full Sem] odd years

Practical applications of the administrative principles and skills required of a successful facility manager focusing on administration, management, and leadership of the facility function, finance and accounting, repair, alterations and maintenance, planning, programming, budgeting and execution.

CMT 3630 - Environmental Issues in FM

Credits: (3)
Typically taught:
Spring [Full Sem] odd years

Practical application of environmental practices and procedures pertinent to preservation, protection, compliance and conservation issues related to facilities management with emphasis on the regulatory and permitting process, environmental planning, auditing and assessment, recycling, indoor air quality (IAQ) and ozone level depleting substances (OLDS), Environmental Protection Agency (EPA) programs and permitting procedures, Occupational Health and Safety Act (OSHA) programs, and sustainable practices. Prerequisite: BTNY 1403 (can be taken concurrently).

CMT 3660 - Energy Management

Credits: (3)
Typically taught:
Spring [Full Sem] even years

The course addresses the methodologies of estimating annual energy consumption, undertaking energy audits, and monitoring and targeting energy consumption of fossil fuels. The material covered is for building services engineering, building engineering, and environmental engineering in facilities management. Prerequisite: CMT 3510.

CMT 3680 - FM Operations

Credits: (3)
Typically taught:
Spring [Full Sem] even years

Practical applications of the operational principles and skills required to be a successful facilities manager focusing or touching on leasing and real-estate, programming, planning, maintenance, and services. Prerequisite: CMT 3540.

CMT 4120 - Construction Accounting and Finance

Credits: (3)
Typically taught:
Fall [Full Sem]

Provides students with the fundamental skills necessary to apply the principles of construction finance, accounting, and cost control. Prerequisite: ACTG 2010, MATH 1080, and CMT 1500.

CMT 4150 - Construction Equipment and Methods

Credits: (3)
Typically taught:
Fall [Full Sem]

Provides an overview of different types of equipment used in highway/heavy construction projects. Includes applications, performance criteria, selection, and economics. Prerequisite: MATH 1080.

CMT 4210 - Facility Planning and Layout

Credits: (3)
Typically taught:
Fall [Full Sem] even years

Practical aspects of facilities planning as a function of location and design with specific application to the following facilities: manufacturing and production, warehousing, and other commercial uses.

CMT 4270 - Computer Aided FM

Credits: (3)
Typically taught:
Fall [Full Sem] even years

A study of the availability, capabilities, analysis, selection, justification, acquisition, installation and operation of computerized systems designed to enhance facilities management.

CMT 4310 - Long-term Facility Planning

Credits: (3)
Typically taught:
Spring [Full Sem] odd years

A study of the life cycle of a building including strategic planning of facilities; design, construction, and decommission of facilities; and assessment of facility performance. Prerequisite: ACTG 2010.

CMT 4350 - Design of Construction Systems

Credits: (2)
Typically taught:
Fall [Full Sem]

Provides basic knowledge of the structural design of temporary structures and systems such as formwork, scaffolding, dewatering, and excavation shoring. Prerequisite: CMT 3350.

CMT 4550 - Construction Safety

Credits: (2)
Typically taught:
Spring [Full Sem]

This course is designed to explain the Occupational Safety and Health Act and other federal/state legislation that apply to safety requirements and responsibilities of the construction management industry. Ethics as it relates to construction safety will be discussed.

CMT 4610 - Senior Experience

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course explores leadership as applied to the construction industry and the use of construction management skills in the operation of a construction company. Prerequisite: CMT 3115, CMT 3130, CMT 3210, and CMT 4120.

CMT 4620 - Senior Project

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course covers the application of skills, knowledge, techniques and concepts to an actual construction project. Emphasis is placed on integrated project management, including estimated and bidding, project organization and control, as well as project documentation. CMT 4620 should be taken the last semester before graduation. Faculty must approve each student's application. Students must apply for Senior Project the semester before they plan to take CMT 4620. Prerequisite: At a minimum the following courses must have been taken: CMT 3115, CMT 3130, CMT 3210, CMT 4120, and ~~NTM~~NET 3250.

CMT 4650 - FM Senior Project

Credits: (2)
Typically taught:
Spring [Full Sem]

The application of skills, knowledge, techniques and concepts to an actual facility's management project. Emphasis on integrating the concepts taught in the facilities management classes. Students must apply for Senior Project the semester before they plan to take CMT 4650. Prerequisite: CMT 3115, CMT 3130, CMT 3630, CMT 3660, CMT 3680, CMT 4210, CMT 4270 and CMT 4310, or instructor approval. CMT 3630, CMT 3660, CMT 3680, CMT 4210, CMT 4270, and CMT 4310 may be taken concurrently.

CMT 4800 - Individual Projects and Research

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Individual research or projects in Construction Management Technology. Credit and time determined by the student and faculty advisor. Prerequisite: Junior or Senior standing and consent of instructor. May be repeated up to 9 credit hours.

CMT 4830 - Directed Studies

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

The student will receive credit for approved studies in an area not covered in the CMT program. Credit and time determined by the student and faculty advisor. Prerequisite: Junior or Senior standing and consent of instructor. May be repeated up to 9 credit hours.

CMT 4890 - Practicum

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Supervised work experience in the construction industry with placement and course objectives approved by the faculty supervisor. This course can be used to help the student satisfy the CMT program requirement of 800 hours of approved supervised work experience. Ethics as it related to construction management will be discussed. Prerequisite: CMT 2880. May be repeated up to 9 credit hours.

CMT 4899 - BS Graduation Assessment and Signoff

Credits: (0)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

This course includes final assessment (e.g., exit interviews) and signoff needed for graduation with a BS degree from the program. Contact your advisor during your last semester before graduation to complete this requirement. Credit/no credit.

CMT 4920 - Short Courses, Workshops, Institutes, and Special Programs

Credits: (.5-4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Consult the semester class schedule for the current offering under this number. The specific title and credit authorized for the particular offering will appear on the student transcript. Prerequisite: Junior or Senior standing and consent of instructor. May be repeated up to 4 credit hours.

COMM 1020 HU - Principles of Public Speaking

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Introduces theories and principles of effective speaking with emphasis on: audience analysis and adaptation, listening, organization, content development, use of language, and extemporaneous delivery. Designed to improve the student's ability to research, organize, develop and make presentations.

COMM 1040 - Convocations

Credits: (1)
Typically taught:
Not currently offered

Features distinguished speakers and artists in broad fields of humanities, sciences, technology, education, national and world affairs, and specialized artists in the fine arts from specialties such as music, theatre, interpretation, ballet and art. May be repeated 5 times up to 6 credits.

COMM 1130 - Media Writing

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Beginning instruction in information-gathering techniques and media writing styles that inform, entertain and/or persuade. Approach recognizes that new technology is blurring the distinctions among various media and that writers must have a broad base of knowledge and skills. Prerequisite: Proficiency in word processing.

COMM 1270 - Analysis of Argument

Credits: (3)
Typically taught:
Spring [Full Sem]

Students will learn to analyze, evaluate, develop and refute arguments using formal argumentation methods and research based evidence. The course is designed to increase student competence and confidence in constructing, defending and critiquing a broad range of arguments found in public discourse.

COMM 1500 - Introduction to Mass Communication

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Online]

Examines mass media development and impact upon society. Considers newspapers, magazines, film, radio, TV and multimedia. The role of media in providing information, opinion, entertainment and advertising support are considered along with the social political-economic controls which affect the media.

COMM 1560 - Audio Production and Performance

Credits: (3)
Typically taught:
Fall [Full Sem]

An introductory course in audio production and performance. Training in audio console operation, use of recorders

and microphones, and audio editing. Class includes basic announcing and formatting for radio stations. Course emphasizes hands-on projects.

COMM 2010 HU - Mass Media and Society

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Media literacy course which examines the non-legal, but ethical and social problems of mass media. Discusses current media issues and explores constructive steps to improve media relationships.

COMM 2110 HU - Interpersonal and Small Group Communication

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Explores the dynamics of verbal and nonverbal communication in personal relationships and small groups. The emphasis is on practical application of course content to enhance interpersonal relationships and to achieve competence as group members.

COMM 2200 - In-studio Video Production and Performance

Credits: (3)
Typically taught:
Fall [Full Sem]

An introductory course in all aspects of in-studio video production. Skills include performing for video as well as the use of cameras, switching, lighting, electronic graphics and audio equipment. In-class projects emphasize directing, writing and performing for video.

COMM 2210 - Intercollegiate Debate

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Preparation and competition on the national debate resolutions and participation in individual events. Prerequisite: Permission of instructor. May be repeated 7 times up to 8 credits. However, only 6 credits may be used toward the Communication major.

COMM 2250 - Essentials of Digital Media

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course introduces the basic digital communication skills necessary to be successful in today's multimedia environment. Students will learn how to produce and edit audio, stills, and video. Students will also learn to upload content for presentation on the Web and will learn to use social media to disseminate information relative to your content. Concepts will first be discussed in two lecture periods, and then put into practice in a lab.

COMM 2270 - Argumentation and Debate

Credits: (3)
Typically taught:
Fall [Full Sem]

An examination of the theory and practice of argumentation with emphasis on parliamentary and policy debate formats. Emphasis also placed on making claims and inferences, research and the use of evidence, cross-examination, case construction, rebuttals and style of presentation.

COMM 2730 - Radio Production Workshop

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Students meet once a week and work as contributors to the Weber State student radio station, KWCR. Work may include such things as station management, announcing, production, news, sales or engineering. At least one shift of 4 hours per week is required. Specific hours to be arranged. ~~Prerequisite: Instructor permission.~~ May be repeated 3 times up to 4 credits.

COMM 2751 - Field Video Production and Performance

Credits: (3)
Remote video production and performance. Skills include performance, program planning and writing, use of field cameras and post-production. May be taken in same semester as COMM 2200.

COMM 2890 - Cooperative Work Experience for The Signpost

Credits: (1)
Typically taught:
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~**Check with Department**

Newspaper lab experience at The Signpost for all majors in the Journalism and the Public Relations & Advertising

concentrations. Journalism students should register for 1 credit for three consecutive semesters. Public Relations & Advertising students should register for 1 credit for two consecutive semesters. Students will learn facets of producing a print and/or on-line publication. Skills include news reporting and writing, advertising, design and photography. Prerequisite: COMM 1130. May be repeated for a maximum of 4 credit hours. A maximum of 3 credit hours may be counted for the major.

COMM 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-6)
Consult the class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated 5 times up to 6 credit hours.

COMM 3000 - Communication Theory

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

This course is intended to provide students with an overview of communication theory. It will give students a working knowledge of theories used to explain a wide range of communication phenomena, enabling them to build upon selected theories in other upper-division courses in their chosen communication major concentration. Prerequisite: COMM 2110 or permission of instructor.

COMM 3050 - Interpersonal Communication and Conflict Management

Credits: (3)
Typically taught:
Spring [Full Sem]

The purpose of this course is to provide students an opportunity to explore interpersonal communication concepts in depth. Upon successful completion of this coures, students will have a greater understanding of interpersonal communication theories and strategies and will be able to enrich their relationships with personal application of this material. A special emphasis will be given to conflict management as an interpersonal communication skill. Students will be provided the analytical and communication tools to understand, evaluate, and respond effectively to conflicts. Prerequisite: COMM 3000 or permission of instructor.

COMM 3060 - Listening and Interviewing

Credits: (3)
Typically taught:
Fall [Full Sem]

This course covers the purpose, structure, focus, and techniques employed in effective listening and interviewing. Emphasis is placed on observing, attending, listening, responding, recording, and summarizing in a variety of interviewing settings. This course is designed to offer students insight into improved listening and interviewing practices. The theory and research concerning the process of listening and the practice of interviewing will form the basis for students' understanding about listening and interviewing behavior. This course then applies

that knowledge to the development of listening and interviewing skills. Prerequisite: COMM 3000 or permission of instructor.

COMM 3070 - Performance Studies

Credits: (3)
Typically taught:
Check with Department

Study of aesthetic texts through performance featuring the view of text or literature as communicative event and textual meaning as response in readers and audience. A primary emphasis will be placed on the relationship between performative choices and textual understanding. Prerequisite: COMM 1020 or permission of instructor.

COMM 3080 - Intercultural Communication

Credits: (3)
Typically taught:
Fall [Full Sem]

Explores theoretical perspectives in intercultural communication. Through analysis of various intercultural theories, students will become aware of cultural influences on communication in both international and domestic cultures. Prerequisite: COMM 2110 or permission of instructor.

COMM 3085 - Family Communication

Credits: (3)
Typically taught:
Spring [Full Sem]

No activity is more fundamental to emotional need fulfillment, overall personal satisfaction, and the maintenance of community-social systems than family communication. It is in the recursive cycle of family communication that we learn how to relate to others. This course examines current studies in family communication research and its implications. Students will add to the scholarship of family communication by completing a research project in conjunction with this course. Prerequisite: COMM 2110 or permission of instructor.

COMM 3090 - Gender and Communication

Credits: (3)
Typically taught:
Spring [Full Sem]

This course is designed to help students understand the influence that communication has upon the shaping of gender and the influence that gender has in shaping communication interactions. Students become aware of, sensitive to, and more experienced in the issues, implications and skills necessary to successfully and meaningfully communicate with males and females, and about males and females, in a wide range of communication contexts. Prerequisite: COMM 2110 or permission of instructor. Cross listed in WGS 3090.

COMM 3100 - Small Group Facilitation and Leadership

Credits: (3)
Typically taught:
Spring [Full Sem]

Theories and practical communication processes are examined and applied to develop fundamental attitudes and skills for facilitating and leading effective groups. Prerequisite: COMM 2110 or permission of instructor.

COMM 3120 - Advanced Public Speaking

Credits: (3)
Typically taught:
Spring [Full Sem]

Enhanced speaking skills across a range of situations such as the professional workplace and via social media. Increase understanding of audience, publics, and the overall definition of "speaking" as a result of our ever-changing society. Prerequisite: COMM 1020 or permission of instructor.

COMM 3130 - News Reporting and Writing

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Develops journalism skills relevant to newspapers and online news services. Emphasizes news gathering, interviewing and news writing. Prerequisite: COMM 1130 or permission of instructor.

COMM 3150 - Communication Research Methods

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Explores methods of gathering, analyzing and interpreting data. Topics include: asking questions, observing and measuring communication variables; designing valid and reliable research; research ethics, experimental design and survey research. Emphasis is also placed on how to present research and how to read scholarly journal articles. Prerequisite: COMM 3000 or permission of instructor.

COMM 3200 - Live Event Production

Credits: (1-3)
Students will learn to operate field video cameras, switchers, instant-replay and other equipment while experiencing the pressures of live-sports production. Students will be part of a crew supplying the visuals for Weber State's football and basketball scoreboards. The crew will also provide visuals necessary to fulfill production commitments. ~~Prerequisite: COMM 2200 or permission of instructor.~~ May be repeated 2 times up to 6 credit hours.

COMM 3220 - Editing

Credits: (3)
Typically taught:
Fall [Online]

Develops editing knowledge and skills for print and online publications. Covers copy editing, content editing and page editing. Prerequisite: COMM 1130 or permission of instructor.

COMM 3230 - Health Communication

Credits: (3)
Typically taught:
~~Fall [Online]~~Check with Department

A broad examination of communication theory, application, and research in health care delivery and management. Examines many different levels and channels of communication including the development and application of interpersonal communication, small group communication and teamwork, organizational communication, communication ethics, leadership, and motivation skills in dealing with health care providers, staff, and consumers in a variety of health care environments. Cross-listed with HAS 3230.

COMM 3350 - Visual Communication

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Visual messages have great power to inform, educate and persuade. In all fields of communication, visual presentation of the message helps determine the success of the message. This course is designed to help students become effective and ethical visual communicators on the page or the screen. In addition to creating design projects, students will learn how to critically analyze visual designs and to understand major visual communication theories. Prerequisite: COMM 1130.

COMM 3400 - Introduction to Public Relations

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Philosophy and practice of public relations in business, government, education and non profit organizations. Case studies will be selected from a wide range of actual public relations concerns to foster decision-making skills and a mature understanding of public relations management. Prerequisite: COMM 1130 ~~and COMM 3150,~~ or permission of instructor.

COMM 3440 - Public Relations Writing

Credits: (3)
Typically taught:
Spring [Full Sem]

Explores principles and practices of a variety of public relations writing formats ranging from news releases to websites. Prerequisite: COMM 3400 or permission of instructor.

COMM 3460 - Public Relations and Social Media

Credits: (3)
Typically taught:
Fall [Full Sem Online]

This course will combine theory and practice in teaching the principles of the new "Social Media" or "PR 2.0." Students will learn how new web technologies have expanded the practice of Public Relations beyond the traditional arena and into the fast-moving and dynamic world of public communication on the web. They will learn how to communicate with the news media and directly with the public. The course will prepare them to use the newest technology and practices effectively as they represent their companies and their clients.

COMM 3550 - Organizational Communication

Credits: (3)
Typically taught:
Fall [Full Sem]

Study of communication in organizations from various theoretical perspectives with an emphasis on the organizational culture perspective. Includes topics such as communicating with external audiences, decision- making, conflict resolution, and power relationships. Prerequisite: COMM 3000 or permission of instructor.

COMM 3650 - Communication Law

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [1st Blk]

First Amendment origins, interpretations and philosophy underlying regulation of the mass media. Prerequisite: COMM 3000 or permission of instructor.

COMM 3730 - Media Programming and Audiences

Credits: (3)
Typically taught:
Check with Department

This course focuses on principles, strategies and approaches for creating and scheduling content for radio, television and the World Wide Web. The course also provides an analytical framework for understanding industry trends in media programming, and how those trends are influenced by audience research. Students create and schedule

programs, apply programming strategies and philosophies, and learn relevant terminology and audience measurement techniques. Prerequisite: Permission of instructor.

COMM 3740 - ~~Copy~~ Writing for Audio and Video

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Specialized concepts and techniques required to write effectively for radio, television, advertising, and other new media technologies. Prerequisite: COMM 1130.

COMM 3780 - Broadcast News Writing and Production

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Classroom instruction and practical experience in writing, reporting, performing, producing, and editing for television news. Students will produce newscasts for a local cable channel. Prerequisite: COMM 1130 and COMM 2250, or permission of instructor.

COMM 3820 - Persuasive Communication

Credits: (3)
Typically taught:
Fall [Full Sem]

Study of theories and principles of persuasion from classical to modern times. Examines persuasion as a means of influence in interpersonal communication, public speaking, public relations, advertising, politics, and other contexts. Prerequisite: COMM 3000 or permission of instructor.

COMM 3850 - Advertising

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A practical and theoretical study of advertising. Course is designed for students planning careers in advertising, as well as for those who are simply lifelong consumers of advertising and want to understand its role in the economic system. Prerequisite: COMM 1130 or permission of instructor.

COMM 3890 - Advanced Cooperative Work Experience with Signpost

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Open to students who are Signpost editors and managers. Prerequisite: COMM 1130 or permission of instructor. (A maximum of 6 credit hours total from COMM 3890, COMM 3891, COMM 3892 and COMM 3893 may be counted for the major.)

COMM 3891 - Advanced Cooperative Work Experience with KWCR

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Open to students who are KWCR senior staff. Prerequisite: COMM 2730 or permission of instructor. (A maximum of 6 credit hours total from COMM 3890, COMM 3891, COMM 3892 and COMM 3893 may be counted for the major.)

COMM 3892 - Advanced Cooperative Work Experience with Public Relations

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Prerequisite: COMM 3400 and permission of instructor. (A maximum of 6 credit hours total from COMM 3890, COMM 3891, COMM 3892 and COMM 3893 may be counted for the major.)

COMM 3893 - Advanced Cooperative Work Experience with Studio 76

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Open to students who are members of Weber State News' crew or staff and/or crew members of other student produced television programs. Prerequisite: COMM ~~1130~~2250 or permission of instructor. (A maximum of 6 credit hours total from COMM 3890, COMM 3891, COMM 3892 and COMM 3893 may be counted for the major.)

COMM 4130 - In-depth and Investigative Journalism

Credits: (3)
Typically taught:
Spring [Full Sem] odd years

Emphasizes finding and writing news stories that move from explanations of what happened to how and why something happened. Examines research techniques and discusses ways to use the law to access information. Prerequisite: COMM 1130 or permission of instructor.

COMM 4150 - Rhetorical Theory and Criticism

Credits: (3)
Typically taught:
~~Fall [Full Sem]~~Check with Department

Studies the origins of rhetorical theory in Greece and Rome in the works of Corax, Isocrates, Plato, Protagoras, Aristotle, Cicero and Quintilian. Tensions between rhetoric and philosophy. Study and application of neo-classical standards of rhetorical criticism. Prerequisite: COMM 3820.

COMM 4160 - Contemporary Rhetorical and Communication Theories

Credits: (3)
Typically taught:
Check with Department

Study of contemporary rhetorical and communication theories. Prerequisite: COMM 3000 and COMM 4150 or permission of instructor.

COMM 4210 - Intercollegiate Debate

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Preparation and competition on the national debate resolutions and participation in individual events. Prerequisite: COMM 2270 or permission of instructor. May be repeated 7 times up to 8 credit hours. However, only 6 credits may be used toward the Communication major.

COMM 4400 - Public Relations Media and Campaigns

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Apply communication principles to internal and external publics; research, plan and evaluate social interrelationships; study of the controlled and uncontrolled media and their role in public relations; prepare a major public relations campaign for a selected client. Prerequisite: COMM 3150 and COMM ~~3400~~3440, or permission of instructor.

COMM 4440 - Developing and Evaluating Health Communication Campaigns

Credits: (3)
Typically taught:

Check with Department

This course prepares students to understand the planning, implementation, and refinement of communication campaigns that affect individual and group level behavior changes in relation to health care issues. It will thus address public health problems. Throughout the semester, students study, practice, and apply the various stages of a health communication campaign based on real world conditions. The course content will draw from health behavior theory; formative (including pretesting), process, impact, and outcome research; and expert opinion. Prerequisite: COMM 3400 or permission of instructor.

COMM 4500 - Topics in Communication

Credits: (3)
variable title
The study and application of Communication in contemporary society is dynamic and ever changing. This course will provide students with opportunities to explore specialized topics in contemporary journalism, electronic mediated communication, human communication studies, and public relations in a seminar format. Prerequisite: COMM 3000 or permission of instructor. May be taken 2 times up to 6 credit hours with different designations.

COMM 4750 - Advanced Audio and Video Production

Credits: (3)
Typically taught:
Spring [Full Sem]

Capstone course for audio and video production. Emphasis is placed on combining production types to produce longer and more complex programs. Prerequisite: COMM ~~2200 and COMM 2751~~2250.

COMM 4760 - Electronic Media Management

Credits: (3)
Typically taught:
Spring [Full Sem]

Analysis of complex systems necessary to manage media companies such as radio stations, television stations and cable outlets. Students will develop a master plan for a new media company. Prerequisite: COMM 1500 or permission of instructor.

COMM 4800 - Special Study and Individual Projects

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Work with an assigned faculty member on a project of special interest. May be repeated for a maximum of 6 credit hours. Prerequisite: COMM 3000 and permission of instructor. May be taken 3 times upt to 6 credit hours. A maximum of 3 credit hours may be counted for the major.

COMM 4801 - College of Arts & Humanities Leadership Lecture Series

Credits: (1)
Typically taught:
Spring [Full Sem]

This one-credit elective course will give arts and humanities' majors the opportunity to interact with successful guest lecturers whose undergraduate backgrounds are in the arts and humanities. Lecturers will clarify how the talents and skills associated with their degrees have contributed to their pursuit of successful careers and lives.

COMM 4840 - Teaching Journalism and Advising Student Media in the Secondary School

Credits: (3)
Typically taught:
~~**Fall [Online]**~~**Check with Department**

Prepares students to be teachers of journalism and advisors of student media in secondary schools. Designed to confront problems involved in organizing a staff, gathering material and publishing a newspaper, yearbook and literary magazine. Prerequisite: COMM 3000 or permission of instructor.

COMM 4850 - Teaching Speech and Directing Speech Activities in the Secondary School

Credits: (3)
Typically taught:
Fall [Online]

Methods and techniques for teaching speech communication in secondary schools. Techniques and practices for coaching and supervising high school speech activities such as individual events, legislative forum, and debate. Prerequisite: COMM 3000 or permission of instructor.

COMM 4890 - Communication Internship

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

An opportunity for students to receive academic credit for faculty approved on-the job learning experiences within certain communication areas of emphasis. Prerequisite: COMM 3000. May be repeated for 5 times up to 6 credit hours. A maximum of 3 credit hours may be counted for the major. *Credit/No credit only*.

COMM 4920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-3)
Consult the class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated 5 times up to 6 credit hours.

COMM 4990 - Senior Seminar

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

A capstone course that prepares students to do a senior project and a portfolio to be used in job interviews or application to graduate school. Prerequisite: Communication major, COMM 3000 and COMM 3150.

CS 1010 CA - Introduction to Interactive Entertainment

Credits: (3)
Typically taught:
Fall [Full Sem~~, Online~~]
Spring [Full Sem~~, Online~~]
Summer [Online]

This course examines and analyzes the history, philosophy, and impact of digital entertainment (video and computer games along with simulations) on an individual and society. Students take a critical look at the artistic, but also the cultural, economic and social aspects of this expressive medium. Students imagine and articulate their own ideas and work through a series of projects helping them understand the creative challenges behind interactive entertainment design. Implications of certain values embedded in games will be discussed. Elements of the ethical code of conduct for a game creator will be formulated. The issue of balancing individual creativity vs. socio-cultural impact will also be discussed. Students will be required to play video games outside of the regularly scheduled class times. A lab fee is required for this class.

CS 1022 - Software Development

Credits: (4)
Application of the most recent implementation of a selected programming language to the solution of technical and scientific problems. Prerequisite: CS 1030 and basic skills in Algebra.

CS 1023 - Selected Programming Language

Credits: (4)
Introduction and application of the most recent implementation of a selected programming language to the solution of technical and scientific problems. The language for a particular instance of this course will be based upon demand. Prerequisite: CS 1030 and basic skills in Algebra.

CS 1030 TE - Foundations of Computer Science

Credits: (4)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

This course follows the core body of knowledge specified by the ACM which provides students with a broad overview of topics they might encounter within the Computer Science curriculum. The course is taught at an introductory level and includes topics such as: history of computers, computer architecture, operating systems, world-wide web and HTML, programming with Java, database, software engineering, networking, and more. ~~Prerequisite/Co-requisite: Computer Literacy.~~

CS 1400 - Fundamentals of Programming

Credits: (4)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

This course covers basic operating system navigation and components of the program development process. The majority of the course covers basic problem solving and program design of a software application using a selected language. Topics presented and discussed depending on selected language include: thinking logically to solve problems, working with input/output devices, compilation and library use, structured programming and modularity concepts, conditional and iterative structures including recursion, object oriented design, data types and structures, and pointers. Prerequisite/Co-requisite: CS 1030 or ~~NTM~~NET 1300.

CS 1410 - Object-Oriented Programming

Credits: (4)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

An introduction to the C++ language. Topics will include data types, control structures, functions, pointers, arrays, I/O streams, classes, objects, encapsulation, overloading, inheritance and use of these concepts in problem solving. Prerequisite: CS 1400 or CS 2250 and ENGL 1010 or ENGL 2010.

CS 2130 - Computational Structures

Credits: (4)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem]
Summer [Full Sem, Online]

Advanced principles of discrete computational models and algorithm analysis. Topics include: the design of efficient algorithms, order statistics, set manipulation problems, Turing machines, graph algorithms, matrix operations, integer and polynomial arithmetic, combinatorics, and pattern matching algorithms. Emphasis will be on the application of abstract models in a discrete software computational context. Prerequisite: CS 1400.

CS 2140 - Computer Systems Administration

Credits: (4)
Typically taught:
not currently offered

An introduction to managing computer operating systems. Covers installation of the operating system, network, and application software. The course will cover the UNIX operating system. Topics include working with disk drives, allocation of resources, security, administering user accounts, monitoring system performance, tuning concepts, remote mounting of file systems, and setting up systems on networks. Prerequisite: CS 1400.

CS 2250 - Structured Computing in a Selected Language

Credits: (4)
Typically taught:
Spring [Full Sem]

Introduction to structured problem solving using objects, data enumeration and encapsulation in a selected language. The language for a particular instance of this course will be based upon demand. Prerequisite: Basic skills in fundamental Algebra.

CS 2335 - Introduction to User Experience Design for Web & Mobile

Credits: (3)
Typically taught:
Fall [Full Sem]

This course is designed to introduce students to the elements of user experience design for the web and mobile. The following topics will be covered: history of user experience, user centric design, agile development, user interface best practices for web and mobile applications, and analytics. Using current technologies and tools, students will create a basic web or mobile application.

CS 2350 - Web Development

Credits: (4)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Online]

This course provides an introduction to Internet programming and Web application development. Subjects covered include basic Web page design, dynamic Web page development, and an introduction to server-side scripting and database connectivity. The course will explore various technologies such as HTML, XML, CSS, Javascript, and/or PHP. Prerequisite: CS 1400.

CS 2400 - Project Management

Credits: (3)
Strategies and techniques for managing a project from inception to completion to meet all schedule, cost, and technical objectives. Knowledge and skills learned in this course prepare students to perform successfully the role of a project manager in any construction, engineering, health, information technology, business, or research and

development project, although emphasis will be on project management applied to Software Engineering. Topics include organizational structures, project planning and evaluation, cost estimating, quantitative methods in schedule and cost management, project information systems, communication skills, and conflict resolution.

CS 2420 - Introduction to Data Structures and Algorithms

Credits: (4)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

General principles of common data structures and design of efficient algorithms. Topics include: arrays, linked-lists, stacks, queues, trees, graphs, tables, storage and retrieval structures, searching, sorting, hashing, and algorithmic analysis. Emphasis will be on abstraction, efficiency, re-usable code, and object-oriented implementation. Prerequisite: CS 1410. Prerequisite/Co-requisite: Prerequisite/Corequisite: MATH 1080 or MATH 1050 and MATH 1060.

CS 2450 - Software Engineering I

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem, Online]
Summer [Online]

An Object Oriented Analysis and Design course which provides practical guidance on the construction of object-oriented systems. Its specific goals are: to provide a sound understanding of the fundamental concepts of the Software and Project Development Life-Cycle for the object model; to facilitate a mastery of the notion and process of object oriented analysis and design, and to teach quality design and development style through applications of object-oriented project development within a variety of problem domains. In depth coverage of UML and current Software Engineering models. Prerequisite: CS 1410.

CS 2550 - Introduction to Database Design and SQL

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem, Online]
Summer [Online]

This course is an introduction to databases, specifically focusing on the relational database model, database design and modeling and the structured query language (SQL). Students will become proficient at formulating data query requests using SQL and will also gain experience in database normalization and entity-relationship modeling. Prerequisite: CS 1030 or ~~NTM 2300~~NET 1300.

CS 2705 - Network Fundamentals and Design

Credits: (4)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Online]

A comprehensive examination of the hardware and software components of a network and the practical techniques for designing and implementing computer systems in a network. Topics will include the purpose and use of various LAN, MAN, WAN configurations (Ethernet, rings HDLC, SMDS, ATM, Frame Relay, ISDN, xDSL, TCP/IP UDP/IP, x.25, PPP, Sonet and new protocols. Media type and structures (repeaters, bridges, switches, hubs, routers with routing algorithms, and gateways), signaling/data encoding, multiplexing, error detection/correction and flow control, packet formats, network classes, and subnetting. Prerequisite: CS 1030 and CS 1400.

CS 2780 - Windows Application Programming

Credits: (4)
Typically taught:
not currently offered

This course provides participants with a working knowledge of the Windows Operating System. The students will develop applications to run under Windows, using the C/C++ languages. Concepts of Memory Management, DLLs, Resources, and Child Window development will be emphasized. The course also introduces the student to the use of OLE controls and MFC architecture. Prerequisite: CS 1410 and basic algebra skills.

CS 2800 - Individual Projects & Research

Credits: (1-4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

The purpose of this course is to permit Computer Science majors to develop an individual project, program, system, or research paper, with coordination and approval of a faculty mentor. The final grade and amount of credit awarded will be determined by the department, depending on the complexity of the upper division work performed. Prerequisite: CS 1410. May be repeated 3 times up to 6 credits. Note: Only 4 credit hours of either CS 2800 or CS 2890 can apply to a CS degree as an elective course, and only a maximum of 6 hours of both CS 2800 and CS 2890 may be taken to satisfy missing credits or to achieve full time academic status.

CS 2810 - Computer Architecture/Organization

Credits: (4)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Online]

(Formerly 2650). A fundamental course designed to explore the specific physical and functional characteristics of computer systems. Topics will include the architecture of the PC including BIOS, interrupts, addressing, memory management, types of disk drives (such as SCSI and EIDE), types of buses, video cards, modems, network cards, hardware compatibility issues, number representations, and/or gates and basic digital circuit concepts. The course

also introduces assembly language skills in popular 16 and 32 bit microprocessors. Prerequisite: CS 1410 or CS 1400 and NET 3200.

CS 2890 - Cooperative Work Experience

Credits: (1-4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

The purpose of this course is to permit Computer Science majors who are currently working in a computer related job or internship to receive academic credit for their work, with coordination and approval of a faculty mentor and their supervisor. The amount of upper division credit awarded will be determined by the department, depending on the nature and quantity of work performed. Prerequisite: CS 1410. May be repeated 3 times up to 6 credits. Note: Only 4 credit hours of either CS 2800 or CS 2890 can apply to a CS degree as an elective course, and only a maximum of 6 hours of both CS 2800 and CS 2890 may be taken to satisfy missing credits or to achieve full time academic status.

CS 2899 - Associate Degree Assessment

Credits: (0)
This course is to serve as an assessment tool whereby all AAS degree seeking students in the Department of Computer Science demonstrate core knowledge acquired from course studies in the discipline as specified in the AAS degree program.

CS 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Typically taught:
Summer [Full Sem]

Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated 5 times up to 6 credits.

CS 3030 - Scripting Languages

Credits: (4)
Typically taught:
Fall [Full Sem]

This course addresses the design of scripting languages and their applications. Scripting languages can be used to manipulate text and data using subtle and complex coding to automate many tasks. Students will learn to write simple scripts to automate system administration tasks using appropriate languages. This course explores the nature of scripting, the role of scripting languages, introduces some of the popular scripting languages and their applications, and provides skills in scripting language design. Prerequisite: CS 1400 and CS 2705 or CS 1400 and ~~NTM 2300~~NET 3200.

CS 3040 - Windows/Unix/Linux Infrastructure and Administration

Credits: (4)
Typically taught:
Fall [Full Sem]
Summer [Full Sem]

This is the second course for understanding Windows operating systems and the first in the Unix/Linux operating system. It includes administration in a client/server directory services environment. Taught in a networking setting, it builds upon complex issues learned in previous courses. Provides the knowledge and skills necessary to install, configure, network and administer both operating systems. Prerequisite: CS 2705.

CS 3100 - Operating Systems

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Online]

An overview of computer operating systems concepts, system software components with emphasis on installation, management, monitor/supervisor and I/O management, control commands, network installation, and device drivers. The operating systems studied will be Windows or UNIX. Prerequisite: CS 2420 and CS 2810.

CS 3210 - UNIX System Programming and Internals

Credits: (4)
Typically taught:
Fall [Full Sem]

This course provides hands-on experience with writing programs using UNIX system calls and inter-process Communication mechanisms, from simple file I/O and I/O management subsystems to network client and server programs. The internal design and operation of the UNIX operating systems are studied. A detailed examination of the UNIX SVR4 source code will be included in the course. Prerequisite: CS 2420.

CS 3230 - Object Oriented User Interface Development with Java

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An introduction to the design and coding of applications using threads. Topics will include the use of threads in the design of operating systems, device drivers, utility programs and general applications. Language used in the course will be Java. Applications will include multimedia, Web Servers, search engines, security issues, and the use of the Java language in the development of applets for home pages. Prerequisite: CS 2420.

CS 3250 - Advanced Object Oriented Programming

Credits: (4)
Develop and expand abilities in solving lengthy, advanced problems, multiple parallel tasks, generic packages, and other object-oriented techniques using selected languages. Prerequisite: CS 2420.

CS 3260 - Mobile Development for the iPhone

Credits: (4)
Typically taught:
Spring [Full Sem]
Summer [Full Sem]

Introduction to developing applications for mobile iOS devices (iPhone, iPod Touch and iPad) using the iPhone SDK, in conjunction with the Xcode/Cocoa development environment. Students will learn the basics of the Objective-C programming language and use it to develop applications for the iPhone family of devices. Students will also gain experience in working in a team environment. Prerequisite: CS 1410, CS 2350 and CS 2550.

CS 3270 - Mobile Development for Android

Credits: (4)
Typically taught:
Fall [Full Sem]
Summer [Online]

Introduction to developing applications for Android mobile devices. Students will use the Eclipse IDE in conjunction with the Android SDK. Students will gain advanced experience in Java and XML as they develop mobile applications both individually and as members of a development team. Prerequisite: CS 2350, CS 2550 and CS 3230.

CS 3280 - Object Oriented Windows Application Development

Credits: (4)
Typically taught:
Spring [Full Sem]
Summer [Full Sem]

This course is designed to teach students how to write Windows programs in C# using the .NET environment. The student will learn how to develop programs based on Microsoft Windows Forms and the .NET Framework. They will also be introduced to APIs and MFC/AFX styles of Windows programming and to become familiar with various data sharing methods and .NET services. Prerequisite: CS 2420.

CS 3540 - Database Administration

Credits: (4)
Typically taught:
Spring [Full Sem]

This course describes the role of the Database Administrator in managing an organization's most valuable asset - its data. Topics covered include DBMS architecture, database layout, database development, data fragmentation, rollback segments, database tuning, database security, backup and recovery, database networking, and distributed

databases. Special emphasis is given to working with current database management systems such as Oracle, SQL Server and DB2. Prerequisite: CS 2550.

CS 3550 - Advanced Database Programming

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

This course is designed to teach students to design, implement, and maintain a distributed database application. Applications development using database programming techniques emphasizing database structures, such as stored procedures, user defined functions, cursors, triggers, and distributed queries will be covered. Other topics will include: advanced transaction processing as well as distributed database problems and solutions using enhanced SQL and XML. Prerequisite: CS 2550.

CS 3610 - Introduction to Game Industry

Credits: (4)
Typically taught:
Summer [Full Sem]

This is course is an introduction to the game industry and the skills and best practices needed in order to become a game developer. The course will evaluate different gaming hardware, genre, skills, tools, and roles. Students will also understand the elements in creating a game including the game design document, story line, vision, virtual worlds, playfields, and the mathematics and physics that are involved with game development. Prerequisite: CS 1400.

CS 3620 - Server-Side Web ~~Development~~Architecture

Credits: (4)
An introduction to server-side Web development using the most current Web server technologies. General Web development principles such as usability, reliability, maintainability and scalability will be applied to current Web development environments such as ASP.NET, PHP, Python, Ruby and Java. Students will gain real-world experience in creating Websites for multiple Web platforms. Prerequisite: CS 2350 and CS 2550.

CS 3630 - Rich Internet Application Development

Credits: (4)
An introduction to developing and deploying rich Internet applications (RIAs) using current technologies. Students will develop engaging websites by incorporating RIAs in the web application development process. Prerequisite: CS 2350 and CS 2550.

CS 3645 - Advanced User Interface Design

Credits: (3)
Typically taught:
Spring [Full Sem]

Students will learn the elements of user interface design as it applies to front-end web development and software engineering. Students will identify best practices in user interface design. The following topics will be covered: wire-framing, color palettes, typography, information architecture, contrast, uniformity, and responsive design techniques. Using current technologies and tools, students will wireframe, design, and program effective interfaces. Prerequisite: ~~NTM 2335~~WEB 2500 or CS 2335, ~~NTM 2532~~WEB 1400 or CS 1400, or permission of instructor.

CS 3650 - Human-Computer Interaction

Credits: (4)
Typically taught:
Fall [Full Sem]

This course introduces the skills and concepts of Human-Computer Interaction (HCI) that enable computer scientists to design systems that effectively meet human needs. A concrete illustration of the practice of HCI, this course covers iterative design processes, interactive prototype construction, discount evaluation techniques, and the historical context of HCI. This course includes both theoretical and practical usability including best practices. Prerequisite: CS 2420, CS 2450 or WEB 3110 , WEB 3410.

CS 3705 - Protocol Analysis

Credits: (4)
Typically taught:
Fall [Full Sem]

This course provides an in depth look at the fundamentals of what protocols do and how they work, how addresses and routing are used to move data through the network, and how information is exchanged over the Internet. In depth analysis of network traffic packets will include normal traffic as well as protocol attack patterns. Topics include: DNS, Apache, email, Samba, PPP, DHCP, TCP, IP, and UDP troubleshooting, and security. Prerequisite: CS 2705 or ~~NTM~~NET 2435.

CS 3720 - Network Architectures and Protocols

Credits: (4)
Typically taught:
not currently offered

A practical applications course designed to teach the basic concepts associated with local and wide area networks and protocols. The course will concentrate on the TCP/IP and other protocols in the UNIX and Windows NT environments. Covers TCP/IP extensively, NFS, Sockets, RPC and TLI interfaces. The course also covers the use of Domain Name Servers, remote system calls, ports, services, configuration, IP addressing, and UNIX and Windows NT monitoring commands. Prerequisite: CS 3705.

CS 3730 - Client/Server Network Programming

Credits: (4)
Typically taught:
not currently offered

Covers client/server architecture and application development using TCP/IP and other protocols. The course covers client/server operations on a single machine and across an Ethernet network to multiple machines. The course will also cover distributed processing concepts and applications. Applications include the use of STREAMS, Sockets, TLI, network listener facility, drivers, RPC, and ONC. The course will concentrate mainly on UNIX but will cover some concepts and applications using Windows NT. Prerequisite: CS 2705 and CS 3210.

CS 3750 - Software Engineering II

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

(Community Engaged Learning Designation) This course emphasizes teamwork in small groups on a substantial software engineering project that will be performed for a real customer in the community. It is the intent of the course to provide a capstone experience that integrates the material contained in the CS curriculum through work on a software project that applies this material. Projects are chosen so as to provide an interdisciplinary service learning component with project proposals being solicited from the community at large. Projects that integrate students and faculty from other disciplines are also encouraged. Lectures will be directed towards the software development lifecycle, requirements gathering and design documentation, as well as software project management. Each team member will contribute to all phases of the project as well as the development of a project prototype. Prerequisite: CS 2350, CS 2450, CS ~~2420, CS~~ 2899, CS 3550, CS 3230 or CS 3280, and ENGL 3100 or ENGL 2250 or PHIL 1250 or ~~NTM~~NET 3250.

CS 3805 - Computer and Network Security

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course is designed to provide students with a solid foundation in network security including a treatment of security issues related to computers and computer networking. The primary emphasis is on developing security policies, security auditing, security models and laws related to security. Prerequisite: CS ~~2420, CS 3705,~~2705 and ~~ENGL 3100 or ENGL 2250 or PHIL 1250 or NTM 3250~~CS 2420.

CS 3830 - Writing Secure Code

Credits: (4)
This course focuses on how to develop software systems that are robust and can withstand repeated attacks from malicious intruders. The course coverage includes the need for secure systems, basic security principles and strategies, designing secure applications, secure coding techniques, dangerous APIs, data input issues, network security problems, testing secure applications, security code reviews, secure software installation, and writing security documentation. Prerequisite: CS 2420.

CS 3840 - Computer Forensics for Security Assurance

Credits: (4)
Typically taught:
Fall [Full Sem]

This course is a foundational course in file system analysis, digital forensics and computer media analysis. A combination of lectures and labs will give students a strong understanding of low-level file system knowledge to prepare them for involvement in digital forensic analysis, data recovery and other related tasks. Students will examine widely used file systems such as Windows NTFS and FAT32, UFS, EXT2 and UFS2. Students will also become familiar with software tools used in computer forensic work. Prerequisite: CS 2420.

CS 4110 - Concepts of Formal Languages and Algorithms for Computing

Credits: (4)
Typically taught:
Spring [Full Sem]
Summer [Full Sem]

Concepts of formal language definition, automata theory, Turing theory, and solvability, with an introduction of algorithms and computational methods used in advanced computer science courses. Prerequisite: CS 2420 and either MATH 1630 or CS 2130.

CS 4230 - Java Application Development

Credits: (4)
Typically taught:
Spring [Full Sem]
Summer [Full Sem]

This course is a continuation of CS 3230 and examines the development of Java applications intended for an enterprise environment. The course is programming intensive and concentrates on designing and implementing multi-tier and Web applications based on the Java Enterprise Edition (Java EE) specification. Topics include JavaBeans, Java Database Connectivity, client/server interactions, servlets, session tracking, JavaServer Pages, JavaServer Faces, Struts, the Model-View-Controller approach, remote method invocation, Enterprise JavaBeans, and application servers. Lab exercises will emphasize how Java Enterprise programming supports the operation of robust, distributed object architectures. Prerequisite: CS 3230, CS 3750.

CS 4280 - Computer Graphics

Credits: (4)
This course introduces and investigates the mathematical and programming basis for generating pictures and images using a computer. Fields impacted by visual rendering technologies include filmmaking, publishing, banking, engineering, and education. Students are introduced to the theory and practice of computer graphics, with an emphasis on designing and developing working applications using currently available graphics libraries. The course focuses on strategies for rendering geometric data (points, lines, and polygons), and the analysis of the processing stages and components of the graphics pipeline, including transformations, viewing volumes, and projections. Programming and mathematical techniques related to modeling, viewing, coordinate frames, and perspective will be primary topics for discussion and code development. The course covers the key processing steps and structures needed to appropriately map 3D geometric primitives to 2D screen positions while maintaining a realistic look, which involves hidden surface removal, proper lighting, and simulated material properties. Prerequisite: CS 2420.

CS 4350 - Advanced Internet Programming

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

This course builds on the knowledge of CS 2350 to go deeper into the areas of eBusiness, multimedia, HTML, DHTML, XML, Javascript, Java, ASP, PHP, Python, Perl, Flash, and other technologies focusing on the server-side coding and database manipulation required for enterprise level web applications. It requires a high level of programming skill and knowledge of databases. Prerequisite: CS 3620, CS 3750.

CS 4450 - Advanced Software Engineering Methods

Credits: (4)
Typically taught:
Spring [Full Sem]
Summer [Full Sem]

(Formerly 4750) This course teaches the architectural and operational implications of open source development and explores its implementation using selected software development methodologies. The course will also focus on test-driven software development and re-engineering practices in a team based environment. Prerequisite: CS 3750.

CS 4500 - Artificial Intelligence and Neural Networks

Credits: (4)
Typically taught:
Fall [Full Sem]

This course covers basic artificial intelligence principles and introduces students to AI languages. Concepts of programming parallel architecture machines are introduced and developed. The neural network design of parallel computing is studied, along with its implications in Artificial Intelligence software development. Prerequisite: CS 2420 and either MATH 1630 or CS 2130.

CS 4640 - Foundations of Game Development

Credits: (4)
This course introduces students to 2D game development using a programming language, scripting, and a gaming engine. The work includes team work project, graphical programming, GUI, and all other aspects of creating a game program associated with a game design document. Prerequisite: CS 1010. Prerequisite/Co-requisite: Pre or Co-requisite: CS 4280.

CS 4650 - Advanced Game Development

Credits: (4)
Senior project Game Development II course focuses on 3D game programming in a team work project environment using a game engine. At conclusion student should be able to add the resulting program into their game portfolio. Prerequisite: CS 4640, CS 3750.

CS 4730 - Applied Cryptography

Credits: (4)
This course provides an introduction to the principles of number theory and how they are applied to cryptographic algorithms. Different topics that will be examined are: several classic ciphers, modern cryptographic methods, symmetric encryption, public key cryptography, hash functions, key management, digital signatures, certificates, electronic mail security, steganography, and recent developments affecting security and privacy on the Internet. The focus will be on how cryptography and their application can maintain privacy and security in computer networks. Prerequisite: CS 2420 and either MATH 1630 or CS 2130.

~~**CS 4740 - Security Vulnerabilities and Attack Prevention**~~

~~**Credits: (4)**~~
~~**Typically taught:**~~
~~**Spring [Full Sem]**~~
~~**Summer [Full Sem]**~~

~~A treatment of security issues related to computers and computer networking. This course is designed for advanced users, system administrators and network administrators. The course covers TCP/IP security issues, security policies, packet filtering, Internet firewall architecture and theory, detecting and monitoring unauthorized activity, password authentication, intrusion detection and prevention and other security issues involving Linux, UNIX and Microsoft Windows operating systems. A team project is included. Prerequisite: MATH 1040 or MATH 1220 or MATH 3410, and ENGL 3100 or ENGL 2250 or PHIL 1250 or NTM 3250, and CS 3100 and CS 3705.~~

~~**CS 4750 - Advanced Software Engineering Methods**~~

~~**Credits: (4)**~~
~~**Typically taught:**~~
~~**Spring [Full Sem]**~~
~~**Summer [Full Sem]**~~

~~This course teaches the architectural and operational implications of open source development and explores its implementation using selected software development methodologies. The course will also focus on test-driven software development and re-engineering practices in a team based environment. Prerequisite: CS 3230 or CS 3280, CS 3750.~~

CS 4790 - ~~ASP~~.NET Web ~~Programming~~Application Development

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course is designed to teach sound concepts in ASP.NET Web Application Development using MVC and/or N-Tier methodologies. Students will develop large-scale web applications in a team environment using Agile, RAD and Test-Driven Development techniques. Representative skills mastered in this course will include: ASP.NET and the .NET Framework, C#, MVC, ADO.NET and Entity Frameworks, RAZOR, HTML5, Javascipt, jQuery, Agile, Scrum and Design Patterns. Prerequisite: CS 3280, CS 3750.

CS 4800 - Individual Projects and Research

Credits: (1-4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

The purpose of this course is to permit Computer Science majors to develop an individual project, program, system, or research paper, with coordination and approval of a faculty mentor. The final grade and amount of credit awarded will be determined by the department, depending on the complexity of the upper division work performed. Prerequisite: CS 2420. May be repeated 3 times up to 4 credit hours. Note: Only 4 credit hours of CS 4800 or CS 4850 or CS 4890 can apply to a CS degree as an elective course, and only a maximum of 6 hours of CS 4800, CS 4850, and CS 4890 may be taken to satisfy missing credits or to achieve full time academic status.

CS 4820 - Compiler Design

Credits: (4)
A study of compilers, grammars, finite-state and push down automata, scanning, parsing, error handling, semantic analysis and code generation. Prerequisite: CS 2420, CS 4110.

CS 4830 - Advanced Topics in Computer Science

Credits: (1-4)
Variable Title
Typically taught:
Spring [Full Sem]

Advanced topics which are demanded by industry, are currently popular in this rapidly changing field, or which meet special needs of students in Computer Science will be offered. Individualized material will be taught on a one time basis as needed. Time and credit to be arranged. Prerequisite: Consent of instructor. May be repeated 2 times up to 8 credit hours.

CS 4850 - Faculty Directed Research

Credits: (1-4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

The purpose of this course is to permit Computer Science majors to work closely and consistently with a faculty mentor on specific research related to current, experimental topics in Computer Science. The final grade and amount of credit awarded will be determined by the faculty mentor, depending on the complexity of the advanced, upper division work performed. Prerequisite: CS 2420. May be repeated 3 times up to 4 credit hours. Note: Only 4 credit hours of CS 4800 or CS 4850 or CS 4890 can apply to a CS degree as an elective course, and only a maximum of 6 hours of CS 4800, CS 4850 and CS 4890 may be taken to satisfy missing credits or to achieve full time academic status.

CS 4890 - Cooperative Work Experience

Credits: (1-4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

The purpose of this course is to permit Computer Science majors who are currently working in a computer related job or internship to receive academic credit for their work, with coordination and approval of a faculty mentor and their supervisor. The amount of upper division credit awarded will be determined by the department, depending on the nature and quantity of work performed. Prerequisite: CS 2420. May be repeated 3 times up to 4 credit hours. Note: Only 4 credit hours of CS 4800 or CS 4850 or CS 4890 can apply to a CS degree as an elective course, and only a maximum of 6 hours of CS 4800, CS 4850, and CS 4890 may be taken to satisfy missing credits or to achieve full time academic status

CS 4899 - Bachelor's Degree Assessment

Credits: (0)
This course is to serve as an assessment tool whereby all BS/BA degree seeking students in the Computer Science Department demonstrate their learned knowledge in at least three areas of computer science. At present, this knowledge will be demonstrated through the use of Chi Tester exams administered through the Campus Testing Center. The course is taken during the last term prior to receiving the BS/BA degree. Prerequisite/Co-requisite: Prereq/Coreq: Successful completion of requirements for the Bachelor's Degree.

CS 4920 - Short Courses, Workshops, Institutes and Special Projects

Credits: (1-4)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated 3 times up to 4 credit hours.

CS 6100 - Distributed Operating Systems

Credits: (3)
Distributed systems or distributed computing deals with the issues encountered while running programs across a computer network. This course will cover key topics including: models of distributed systems, timing, synchronization, coordination and agreement, fault tolerance, naming, security, and middleware. Students will learn both the theoretical background of distributed systems as well as work on hands-on projects developing distributed systems applications. Prerequisite: CS 3100.

CS 6420 - Advanced Algorithms

Credits: (3)
Introduction to fundamental principles of advanced algorthm design, including asymptotic analysis; divide-and-conquer algorithms and recurrences; greedy algorithms; practical data structures (heaps, hash tables, search trees, graphs); dynamic programming; graph algorithms; and randomized algorithms. Prerequisite: CS 2420.

CS 6500 - Artificial Intelligence and Neural Networks

Credits: (4)
This course covers basic artificial intelligence principles and introduces students to AI languages. Concepts of programming parallel architecture machines are introduced and developed. The neural network design of parallel computing is studied, along with its implications in Artificial Intelligence software development. Prerequisite: CS 2420 and either MATH 1630 or CS 2130.

CS 6600 - Machine Learning

Credits: (3)
Introduction to fundamental principles and practical techniques of machine learning and its applications, including parametric and non-parametric algorithms, support vector machines, kernels, neural networks, clustering algorithms, dimensionality reduction, recommender systems, and deep learning. Prerequisite: CS 2420.

CS 6610 - Computer Architecture

Credits: (3)
Investigation of high-performance computer processing architectures, including concurrent, multicore platforms; memory hierarchy; static and dynamic scheduling; instruction-level parallelism, including branch prediction; graphics processing units; cache performance and analysis. Prerequisite: CS 2810.

CS 6820 - Compiler Design

Credits: (4)
A study of compilers, grammars, finite-state and push down automata, scanning, parsing, error handling, semantic analysis and code generation. Prerequisite: CS 2420, CS 4110.

CS 6840 - Formal System Design

Credits: (3)
Methods for developing high-quality hardware/software systems that are delivered on time, within budget, and according to requirements. Techniques for specifing programs and reasoning about them, including formal logical proofs, correct code synthesis, model checking, type theory specifications, and properly evaluating concurrent programs. Prerequisite: CS 2420.

CS 6850 - Parallel Programming and Architecture

Credits: (3)
In parallel programming you will learn how to utilize multiple CPU's/Cores/Nodes in parallel to increase the performance of your applications. Different architectures will be discussed along with the advantages and disadvantages of each. This course will cover key topics parallel programming including: memory models, parallel programming architectures, Flynn's Taxonomy, synchronization, and performance analysis and tuning. In addition to learning the theoretical background of parallel programming, you will work on hands-on projects using multiple parallel programming languages and libraries including (CUDA, openMP, MPI, open CL, and python). Prerequisite: CS 3100.

DANC 1010 CA/DV - Introduction to Dance

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

An introduction to dance providing a knowledge base from which to experience dance from a variety of viewpoints: historically, culturally, aesthetically, critically, and creatively. This course takes a close-up look at the rules, messages, and meanings embodied in dance around the world. This is a writing intensive course. Students are expected to attend dance concerts and cultural dance experiences outside regularly scheduled class time. Open to all students.

DANC 1100 - Ballet I

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Introduction to the techniques of the classical ballet including alignment, positions, port de bras, and allegro combinations. May be repeated for a maximum of 4 credit hours. Open to all students. May be repeated for credit, but use toward Major/Minor must be approved by program advisor.

DANC 1200 - Modern I

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Introduction to the movement techniques of modern dance. May be repeated for a maximum of 4 credit hours. Open to all students. May be repeated for credit, but use toward Major/Minor must be approved by program advisor.

DANC 1310 - Music for Dance

Credits: (2)
Typically taught:
Spring [Full Sem] odd years

Study of the relationship between sound and movement, accompaniment and dance. Focus extends to creative and working relationship(s) between accompaniment/composer and teacher/choreographer with emphasis on practical applications of methods and understandings.

DANC 1450 - Special Topic Dance Form

Credits: (1)
variable topic
Typically taught:

Fall [Full Sem]
Spring [Full Sem]

This course is designed to provide enrichment opportunities for those who undertake dance as a field of study or as recreational activity. It allows for the study of changing series of dance forms, including, but not limited to African, Flamenco, Middle Eastern, Clogging, Ballroom, Renaissance, etc. May be repeated for 2 credit hours, but use toward Major/Minor must be approved by program advisor.

DANC 1500 - Jazz I

Credits: (1)
Typically taught:
Fall [Full Sem]

Introduction to the style, technique, and rhythmic structures of jazz dance with emphasis on increasing movement capabilities and personal expression. May be repeated for a maximum of 4 credit hours. Open to all students. May be repeated for credit, but use toward Major/Minor must be approved by program advisor.

DANC 1520 - Folk & Ethnic Dance

Credits: (1)
Typically taught:
Fall [Full Sem]

Folk and ethnic dances of Europe, Near and Far East, Africa, and the Americas as they relate to concert dance. Open to all students. May be repeated for up to 4 credit hours, but use toward Major/Minor must be approved by program advisor.

DANC 1580 - Tap Dance

Credits: (1)
Typically taught:
Fall [Full Sem] even years

Special training in tap dance skills and techniques. May be repeated 3 times up to 8 credit hours, but use toward Major/Minor must be approved by program advisor.

DANC 2250 - Alignment and Conditioning for Dance/Pilates

Credits: (1)
Typically taught:
Spring [Full Sem] even years

Strength and alignment for dancers, using Pilates mat exercises. The class addresses areas of strength essential for dancers, focuses on breathing techniques integral to the exercises, and uses the exercises as a means to better understand and improve alignment. The course also addresses how strength and alignment facilitates more ease and efficiency in movement. To repeat the class a student must have the permission of the instructor. May be repeated twice for up to 3 credit hours, but use toward Major/Minor must be approved by program advisor.

DANC 2300 - Dance Kinesiology

Credits: (~~2~~3)
Typically taught:
Fall [Full Sem] even years

This course provides a study of anatomy and dance kinesiology with a specific focus on anatomical analysis, conditioning principles and injury prevention, with special attention given to application of information to technique class, rehearsal, choreography and individual anomalies. The course prepares the student to understand basic kinesiological analysis and fundamental concepts of somatic inquiry. Prerequisite/Co-requisite: Pre/Co-requisite: NUTR 1020~~ Foundations in Nutrition~~.

DANC 2410 - Improvisation

Credits: (2)
Typically taught:
Spring [Full Sem]

Guided exploration in the elements of dance for the creative development of personal movement repertoire, spontaneous group interaction, and choreographic skills. May be repeated for credit, but use toward Major/Minor must be approved by program advisor.

DANC 2470 - Ballet II

Credits: (1.5)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Technique course designed to increase skill in classical ballet. May be repeated for a maximum of 4 credit hours. Prerequisite: DANC 1100 (2 credit hours minimum), or DANC 2470 (1 credit hour minimum), or by audition. May be repeated for credit, but use toward Major/Minor must be approved by program advisor.

DANC 2490 - Modern II

Credits: (1.5)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Refinement of beginning skills, emphasis on development of technical abilities and performance qualities. Prerequisite: DANC 1200 (2 credit hours minimum), or DANC 2490 (1.5 credit hour minimum), or by audition. May be repeated for a maximum of 6 credit hours.

DANC 2500 - Jazz II

Credits: (1)
Typically taught:
Fall [Full Sem]

Refinement of beginning skills, emphasis on development of technical abilities and performance qualities. May be repeated for a maximum of 4 credit hours. Prerequisite: DANC 1500 (2 credit hours minimum), or DANC 2480 (1 credit hour minimum), or by audition. May be repeated for credit, but use toward Major/Minor must be approved by program advisor.

DANC 2610 - Dance and Digital Technology

Credits: (2)
Typically taught:
Spring [Full Sem] even years

This course will provide students with an opportunity to explore the integration of dance and technology, specifically the use of the digital video medium and the use of the internet for creative and professional distribution. DANC 2610 will introduce students to dance-videography, video editing, dissemination of work through media such as the DVD format, YouTube, Vimeo and the creation/maintenance of on-line portfolios. May be repeated for credit, but use toward Major/Minor must be approved by program advisor.

DANC 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. In individual cases, this course might be considered as an elective in the Dance Major. May be repeated up to 4 credit hours, but use toward Major/Minor must be approved by program advisor.

DANC 2950 - Dance Festival Participation

Credits: (1)
Students attend the American College Dance Festival Association's regional gathering to study a variety of dance forms with professionals from across the country. Students see the choreographies of peers and professionals. Students may be responsible for their own registration fees and transportation, lodging and meal costs. Prerequisite: Audition and permission. May be repeated for up to 4 credit hours, but use toward Major/Minor must be approved by program advisor.

DANC 3010 - Dance History I

Credits: (3)
Typically taught:
Fall [Full Sem] odd years

Study of the history and philosophy of dance from lineage-based societies through the early decades of modern dance. Areas covered will include pre-Christian civilizations, the Middle Ages, the Renaissance and the Golden Age of Ballet. Prerequisite: DANC 1010.

DANC 3020 - Dance History II: 20th Century Art and Education

Credits: (3)
Typically taught:
Spring [Full Sem] even years

Study of the history and philosophy of dance in art and education from the Age of Innovation in Ballet through the Contemporary Period of history. Areas of study will include ballet and modern dance today, black dance in America, vernacular forms and dance as public art. Prerequisite: DANC 1010.

DANC 3320 - Techniques and Materials for Teaching Modern Dance

Credits: (~~2~~3)
Methods, teaching techniques, accompaniment, and practical experience in teaching modern dance. This is the secondary teaching methods class. Prerequisite: DANC 2490.

DANC 3440 - Dance for Musical Theatre

Credits: (1)
Typically taught:
Spring [Full Sem] even years

Dance skills and techniques taken from the repertoire of the modern musical theatre. Special emphasis on characterization and style as demonstrated by the works of the leading choreographers of this genre. Prerequisite: DANC 1200 and DANC 1500. May be repeated up to 4 credit hours, but use toward Major/Minor must be approved by program advisor.

DANC 3450 - Special Topic Dance Form

Credits: (1)
variable titles
This course is designed to provide enrichment opportunities for those who undertake dance as a field of study or as recreational activity. It allows for the study of changing series of dance forms, including, but not limited to African, Flamenco, Middle Eastern, Clogging, Ballroom, Renaissance, etc. May be repeated up to 2 credit hours, but use toward Major/Minor must be approved by program advisor.

DANC 3470 - Ballet III

Credits: (1.5)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Coordinating course designed to increase skill in classical ballet technique. Prerequisite: DANC 2470 (3 credit hours minimum), or DANC 3470 (1.5 credit hour minimum), or by audition. May be repeated for a maximum of 6 credit hours.

DANC 3490 - Modern III

Credits: (1.5)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Exercises and activities to develop strength, flexibility, endurance, and technical dance skill. Prerequisite: DANC 2490 (3 credit hours minimum), or DANC 3490 (1.5 credit hour minimum), or by audition. May be repeated for a maximum of 6 credit hours.

DANC 3500 - Choreography I: Space & Time/Design in Dance

Credits: (~~2~~3)
Typically taught:
Fall [Full Sem]

Study of the elements of time and space as they are artistically significant in themselves and in organized forms of meaning in dance. Considering time and space design in related fields of music and art included as relevant to choreographic design and communication in dance. Prerequisite: DANC 2410. May be repeated for up to 6 credit hours, but use toward Major/Minor must be approved by program advisor.

DANC 3510 - Choreography II: Process

Credits: (~~2~~3)
Typically taught:
Fall [Full Sem]

Study of and experience in various approaches to the choreographic process as related to artistic concepts and to the philosophy of art as espoused by various traditional and contemporary dance artists and as developed by the individual student. Prerequisite: DANC 3500. May be repeated for up to 6 credit hours, but use toward Major/Minor must be approved by program advisor.

DANC 3520 - Choreography Practicum

Credits: (2)
Supervised experience choreographing a dance for public performance. Arranged through cooperative effort of student and supervisor. Prerequisite: DANC 3510 and approval of instructor. May be repeated 3 times for a maximum of 4 credit hours.

DANC 3525 - ArtsBridge

Credits: (1-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

ArtsBridge is a course that provides undergraduate students with an internship and academic credit for designing and implementing a comprehensive, needs-based, integrated arts project with community organizations or area schools. The course will offer students a clear structure and process for navigating the complexities of community

engagement. ArtsBridge students will work closely with a WSU faculty mentor, community/school stakeholder, peers, and the ArtsBridge program coordinator throughout the process culminating in the development of a arts integrated project. Prerequisite: Recommendation by education supervisor in fine arts content area faculty mentor. Content methodology course(s) completed or in progress. Following faculty recommendation, please contact the ArtsBridge coordinator for an interview.

DANC 3580 - Intermediate/Advanced Tap Dance

Credits: (1)
Typically taught:
Fall [Full Sem] even years

Intermediate/Advanced training in tap dance skills and techniques. Prerequisite: Lower Division Tap Dance (DANC 1580) and/or instructor approval. May be repeated for up to 3 credit hours, but use toward Major/Minor must be approved by program advisor.

DANC 3640 - Teaching Creative Dance in the Elementary School

Credits: (~~2~~3)
Typically taught:
Fall [Full Sem]

Techniques for teaching creative dance and basic dance forms. Suggested for Elementary Education majors.

DANC 3860 - Field Experience

Credits: (1-3)
A course designed to provide opportunities for students to gain practical experience in the field by assisting in the activities of community agencies, schools, and Weber State. Prerequisite: DANC 3320 for those who plan to teach in a middle or secondary school or DANC 3640 for those who plan to teach in an elementary school. May be repeated ~~for~~twice, up to ~~4~~3 credit hours, but use toward Major/Minor must be approved by program advisor.

DANC 3910 - Moving Company: Rehearsal & Development

Credits: (2)
Typically taught:
Fall [Full Sem]

The Moving Company is designed to give students the opportunity to learn about the various aspects of creating, rehearsing, and implementing performances off-campus and to reach the community with our dance program. The commitment is for both fall (rehearsal - 3910) and spring (performance - DANC 3911) semesters. This segment deals with preparation and rehearsal. May be repeated 3 times up to 8 credit hours, but use toward Major/Minor must be approved by program advisor.

DANC 3911 - Moving Company: Performance

Credits: (2)
Typically taught:

Fall [Full Sem]

The Moving Company is designed to give students the opportunity to learn about the various aspects of creating, rehearsing, and implementing performances off-campus and to reach the community with our dance program. The commitment is for both fall (rehearsal - DANC 3910) and spring (performance - 3911) semesters. This segment deals with implementation and performance. Prerequisite: DANC 3910. May be repeated 3 times up to 8 credit hours, but use toward Major/Minor must be approved by program advisor.

DANC 4250 - Alignment and Conditioning for Dance/Pilates

Credits: (2)
Typically taught:
Spring [Full Sem] even years

Strength and alignment for dancers, using Pilates mat exercises and Reformer. The class addresses areas of strength essential for dancers, focuses on breathing techniques integral to the exercises, and uses the exercises as a means to better understand and improve alignment. The course also addresses how strength and alignment facilitate ease and efficiency of movement. Co-Requisite: DANC 2250. May be repeated once up to 4 credit hours, but use toward Major/Minor must be approved by program advisor.

DANC 4610 - Dance and Digital Technology

Credits: (2)
Typically taught:
Spring [Full Sem] even years

This course will provide students with an opportunity to explore the integration of dance and technology, specifically the use of the digital video medium and the use of the internet for creative and professional distribution. DANC 4610 will introduce students to dance-videography, video editing, and dissemination of work through media such as the DVD format, You Tube, Vimeo and the creation/maintenance of on-line portfolios. May be repeated for credit, but use toward Major/Minor must be approved by program advisor.

DANC 4620 - Dance and Digital Technology Seminar

Credits: (1)
Typically taught:
Fall [Full Sem]

This seminar will provide students with individual and collaborative study and research in the field of dance and the digital video medium. The course will cover artistic and technical forms, including, but not limited to capturing dance on the digital/video medium, choreographic processes through non-linear digital editing, audio/visual editing for dance, lighting, dance theory and criticism in the context of dance in the digital age. Prerequisite: DANC 2610. May be repeated once up to 2 credit hours, but use toward Major/Minor must be approved by program advisor.

DANC 4700 - Creative Synthesis in Dance

Credits: (2)
Project oriented experience intended to coordinate student work. It will serve as guide in the synthesis of philosophy, experience, and understanding of dance as an art form and/or dance as education. This capstone course will include a

portfolio and have an artistic or scholarly outcome. Prerequisite: for BA in Dance: DANC 2610, DANC 3520 and senior dance major standing. Prerequisite: for BA/BS in Dance Education: DANC 2610, DANC 3860 and senior dance major standing.

DANC 4800 - Individual Study

Credits: (1-4)
Individual work or work in small groups by arrangements in special topics not included in the announced course offerings. Prerequisite: Approval of instructor. In individual cases, this course might be considered as an elective in the Dance Major. May be repeated 3 times up to 8 credit hours, but use toward Major/Minor must be approved by program advisor.

DANC 4801 - A&H Leadership Lecture Series

Credits: (1)
Typically taught:
Spring [Full Sem]

This one-credit elective course will give arts and humanities' majors the opportunity to interact with successful guest lecturers whose undergraduate backgrounds are in the arts and humanities. Lecturers will clarify how the talents and skills associated with their degrees have contributed to their pursuit of successful careers and lives.

DANC 4890 - Cooperative Work Experience

Credits: (1-6)
Individual work or work in small groups by arrangement; in special topics not included in the announced course offerings. Prerequisite: Approval of instructor. In individual cases, this course might be considered as an elective in the Dance Major. May be repeated 3 times up to 18 credit hours, but use toward Major/Minor must be approved by program advisor.

DANC 4910 - Rehearsal and Performance

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Preparation and rehearsal of dance composition to be presented in concert. Prerequisite: consent of instructor. May be repeated for an unlimited number of credit hours. May be repeated for credit, but use toward Major/Minor must be approved by program advisor.

DANC 4920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Typically taught:
(Offered as needed)

Consult the semester class schedule for the current offering under this number. The specific title and credit

authorized will appear on the student transcript. In individual cases, this course might be considered as an elective in the Dance Major. May be repeated 3 times up to 16 credit hours, but use toward Major/Minor must be approved by program advisor.

DANC 4950 - Dance Festival Participation

Credits: (1)
Typically taught:
Spring [Full Sem]

Students attend the American College Dance Festival Association's regional gathering to study a variety of dance forms with professionals from across the country. Students see the choreographies of peers and professionals. Students may be responsible for their own registration fees and transportation, lodging and meal costs. Prerequisite: Audition and permission. May be repeated 3 times up to 4 credit hours, but use toward Major/Minor must be approved by program advisor.

DENT 2201 - Concepts of Community Dental Health

Credits: (1)
Typically taught:
Fall [Full Sem]

This course will present the basic concepts of planning and implementing community dental health programs. These principles include epidemiology, sociological concepts of health and illness, health behavior, public attitudes and principles of dental health education.

DENT 2205 - Head/Neck and Dental Anatomy

Credits: (2)
Typically taught:
Fall [Full Sem]

Identification of major anatomical landmarks of the head and neck, their innervation, blood supply and function. Also includes instruction in the histology and embryology of head and neck development and tooth morphology.

DENT 2206 - Clinical Dental Hygiene/Radiology

Credits: (4)
Typically taught:
Fall [Full Sem]

Clinical application of principles of DENT 2207 and DENT 2208. Must accompany DENT 2207 and DENT 2208. Students participate in three four-hour labs each week.

DENT 2207 - Dental Hygiene I

Credits: (3)
Typically taught:

Fall [Full Sem]

Theory essential to performing clinical treatment, including, but not limited to armamentarium, client-operator positioning, aseptic technique, soft tissue exam, health history, principles of instrumentation and disease control therapies. Must accompany DENT 2206.

DENT 2208 - Radiology

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Preparatory skills for clinical dental radiology, including information on radiation safety and exposure techniques. Must accompany DENT 2206.

DENT 2211 - Oral Pathology

Credits: (3)
Typically taught:
Spring [Full Sem]

The study of manifestations and identification of disease processes in the oral cavity.

DENT 2215 - Periodontology

Credits: (2)
Typically taught:
Spring [Full Sem]

The study of basic periodontal structures and disease processes.

DENT 2216 - Clinical Dental Hygiene II

Credits: (3)
Typically taught:
Spring [Full Sem]

Clinical application of DENT 2217. Must accompany DENT 2217. Two four-hour clinic lab sessions each week. Prerequisite: DENT 2206 and DENT 2207.

DENT 2217 - Dental Hygiene II

Credits: (3)
Typically taught:
Spring [Full Sem]

Continuation of DENT 2206. Didactic instruction for intermediate skills in dental hygiene treatment. Must accompany DENT 2216. Prerequisite: DENT 2207.

DENT 2219 - Dental Materials

Credits: (1)
Typically taught:
Spring [Full Sem]

Identification of and laboratory experiences with materials used in dentistry and dental hygiene.

DENT 2230 - Oral Health Research & Statistics

Credits: (2)
Typically taught:
Fall [Online]
Spring [Online]

This course is designed to provide the student with research design and statistics principles as they apply to oral health settings and issues. Prerequisite: WSU Quantitative Literacy requirement.

DENT 2235 - Dental Medicine I

Credits: (2)
Typically taught:
Spring [Full Sem]

The study of common medical conditions and their treatment. Emphasis is placed on oral manifestations of systemic disease and related pharmacology.

DENT 2250 - Professional Ethics

Credits: (1)
Typically taught:
Fall [Full Sem]

Professional Ethics is designed to provide dental hygiene students with a foundation in the professional standards governing the dental hygiene profession and the development of ethical decision-making skills, in the context of diversity and respect for others. Throughout the course the student will be guided to explore issues of diversity, prejudices, and their responsibility to provide culturally sensitive care.

DENT 2800 - Individual Research

Credits: (1-3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Online]

Special project in a student's area of interest. May be repeated twice for a maximum of 4 credit hours.

DENT 2830 - Directed Readings, Projects and Research

Credits: (1-3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Online]

Limited to dental hygiene majors. A maximum of nine hours may be accumulated with this course.

DENT 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-3)
Typically taught:
Spring [Full Sem]

The specific title and credit authorized will appear on the student transcript. May be repeated 5 times for a maximum of 6 credit hours.

DENT 3130 - Independent Study

Credits: (1-3)
Typically taught:
Fall [Online]
Spring [Full Sem, Online]
Summer [Online]

Independent project in an area of interest; second year dental hygiene students only. Project approval by dental hygiene faculty. A maximum of nine hours may be accumulated with this course.

DENT 3301 - Community Dental Health Service Learning Lab

Credits: (1)
Typically taught:
Spring [Full Sem]

This course leads the student through on-campus and off-campus field projects with selected community agencies.

DENT 3305 - Dental Medicine II

Credits: (3)
Typically taught:
Fall [Full Sem]

The study of local anesthesia with regard to pharmacology, administration techniques, methods of pain and

apprehension control and nitrous oxide sedation. Includes laboratory experiences in the administration of local anesthesia and nitrous oxide sedation. Prerequisite: DENT 2235.

DENT 3336 - Clinical Dental Hygiene III

Credits: (4)
Typically taught:
Fall [Full Sem]

Clinical application of DENT 3337. This course must accompany DENT 3337. Three four hour clinics each week. Prerequisite: DENT 2206 and DENT 2216.

DENT 3337 - Dental Hygiene III

Credits: (3)
Typically taught:
Fall [Full Sem]

Continuation of DENT 2207, DENT 2217. Emphasis on advanced instrumentation in the care of patients with periodontal disease. Must accompany DENT 3336. Prerequisite: DENT 2207 and DENT 2217.

DENT 3346 - Clinical Dental Hygiene IV

Credits: (4)
Typically taught:
Spring [Full Sem]

Clinical lab which must accompany DENT 3347. Twelve hours of clinic each week. Prerequisite: DENT 2206, DENT 2216, DENT 3336.

DENT 3347 - Dental Hygiene IV

Credits: (2)
Typically taught:
Spring [Full Sem]

Continuation of DENT 2207, DENT 2217, DENT 3337. Emphasis on expanded client care services and with client populations with special treatment needs. Must accompany DENT 3346. Prerequisite: DENT 2207, DENT 2217, DENT 3337.

DENT 4010 - Interdisciplinary Health Care Teams

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course provides an interdisciplinary experience with the team concept as a priority. The students learn the role of

the health care team members, each with their different skills and objectives. The course teaches students to practice an interdisciplinary approach as they research, interact and learn in the interdisciplinary environment of a health care setting. Cross-listed with HTHS 4010 and NRSG 4010.

DENT 4405 - Dental Hygiene Clinical Teaching Practice

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Supervised teaching in the Weber State Dental Hygiene program as an assistant to the supervising faculty. Prerequisite: Consent of the faculty member and acceptance into the BS/DH major program.

DENT 4410 - Dental Hygiene Needs of the Geriatric Client

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An overview of dental health needs of elderly clients. Prerequisite: Consent of instructor and acceptance into the BS/DH major program.

DENT 4530 - Principles and Application of Evidence - based Dental Hygiene Practice

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Emphasis is on the critical appraisal of scientific literature, the development of clinical problem statements and hypotheses and the formulation of a research proposal. Ethical issues inherent in the research process and the identification of appropriate hypothesis testing procedures will also be discussed. Prerequisite: Acceptance into the BS/DH program and completion of WSU Quantitative Literacy requirement.

DENT 4780 - Baccalaureate Thesis

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course is designed to give dental hygiene students an opportunity to complete a thesis project in partial fulfillment of the requirements for the BS/DH major. Prerequisite: Acceptance into the BS/DH program, completion of the WSU Quantitative Literacy requirement.

DENT 4800 - Individual Research

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Special project in a student's area of interest. May be repeated twice for a maximum of 3 credit hours.

DENT 4810 - Summer Elective Clinic

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Summer intensive clinical course which allows the student to set personal achievement goals for clinical techniques and assists them through the process of skill development.

DENT 4830 - Directed Readings, Projects and Research

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Limited to dental hygiene majors. A maximum of nine hours may be accumulated with this course.

DENT 4850 - Study Abroad

Credits: (1-6)
Variable Title
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

The purpose of this course is to provide opportunities for students in health professions to experience a study abroad program that is designed to explore healthcare, culture, and clinical experience. May be repeated 5 times with a maximum of 6 credit hours.

DENT 4890 - Advanced Community or Clinical Work Experience

Credits: (2)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

This course is designed to specifically meet the interests and career goals of the Dental Hygiene Degree-completion student or the student completing the Baccalaureate degree, Dental Hygiene major prior to initial licensure as a dental hygenist. The student who is completing this course as part of their BS degree, initial entry into the profession, will participate in an advanced community or clinical work experiences under the direct supervision of program faculty. The baccalaureate degree completion student must be licensed to practice dental hygiene at the site in which the work experience will take place, have successfully completed an accredited dental hygiene program, or have a work experience site that does not have direct patient care as its community role. Prerequisite: Acceptance into the BS/DH Program and consent of the instructor.

DENT 4920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Typically taught:
Spring [Full Sem]
Summer [Full Sem]

Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated 5 times with a maximum of 6 credit hours.

DENT 4990 - Seminar

Credits: (1-2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Current concepts in dental hygiene for baccalaureate level dental hygiene students. May be repeated once for a maximum of 2 credit hours.

DET 1010 - Introduction to Engineering & Technical Design (Solidworks)

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An introductory course to explore engineering and technical design solutions using critical thinking in Science, Technology, Engineering and Mathematics (STEM). Learning modules include; The Engineering Design Process & Professions, Sketching & Documentation, Design Measuring, Introduction to CAD & Geometric Constraints, Design Visualization, Orthographic Projection & Multi-View Drawings, Fasteners, Assembly Drawings, Dimensioning, Tolerancing, Final Team Design Projects, and Final Review & Assessment.

DET 1040 - Introduction to Residential Architecture (AutoCAD)

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An introductory course in residential architecture to apply drafting standards & terminology using CAD/BIM technology to prepare plans for the construction industry. Topics include; Architectural Related Careers; Design Process, Construction Procedures & Prints; Conventions & Procedures; 2D Sketching; Architectural Symbols; Floor Plans; Foundation Plans; Wall, Stair & Cross Sections; Roof Plans; Elevation Plans; Site Plans; and Electrical Plans. (AutoCAD)

DET 1160 - Geometric Dimensioning & Tolerancing Using 3D CAD

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The use of CAD to create industrial level production working drawings. Includes the latest ASME Y14.5 standards for Geometric Dimensioning & Tolerancing. Topics of discussion will include: dimensions, fits, tolerances, surface finishes, symbols for welding, piping, machined elements/processes and sheet metal flat patterns. Prerequisite: DET 1010.

DET 1350 - Residential Architectural Design

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The study of residential and light commercial (Type IV and V buildings) architectural design and construction documents. Covers procedures used in developing residential plans using 2D CAD. Includes architectural design and drafting standards, conventions, procedures and current building code requirements of the International Residential Code (IRC) and International Energy Conservation Code (IECC). Prerequisite: DET 1040.

DET 2000 - Introduction to Commercial Architecture & BIM (Revit)

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The study of commercial architectural (Type I, II and III buildings) construction documents and an introduction to Building Information Modeling (BIM). Covers procedures used in developing commercial plans using 3D CAD to create a building information model that uses integrated design between architecture, structure, mechanical, electrical, and plumbing (MEP). Includes commercial architectural drafting standards, design procedures, and building code requirements including the latest release of the International Building Code (IBC) and Americans with Disabilities Act (ADA) guidelines. Software applications used to develop commercial architectural designs using BIM will be explored. (Revit)

DET 2460 - Product Design Fundamentals Using 3D CAD

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Product Design is the creative process of applying scientific and mathematical principles, experience, and judgment to the development of the solution of a technical product or system to meet a specific need. Turning ideas into design will incorporate problem identification, market research and brainstorming possible solutions, develop detailed part and assembly drawings, implementation, and evaluation. Sketching, gears/cams/shafts, advanced GD&T, tolerance build-up, tolerances for assemblies, introduction to rapid prototyping, and CNC design for manufacturing concepts will be presented. Advanced 3-D modeling software applications will include: library of parts, assembly constraints, motion constraints, drive constraints, and adaptive design. Three lectures per week. Three lectures per week. Prerequisite: DET 1160.

DET 2650 - Product Design & Development

Credits: (3)
Typically taught:
Spring [Full Sem]

Uses CAD to lay out advanced production drawings and design. Uses the Machinery's Handbook, ANSI standards, geometric dimensioning and tolerances and manufacturer's reference materials. Supports the design and drafting required for senior project. Prerequisite: DET 2460.

DET 2660 - Architectural Structural Design & Detailing

Credits: (3)
Typically taught:
Spring [Full Sem]

An analysis of the structural behavior of buildings and structures. A study of common construction material properties and their connections under varying load conditions including: wood, steel, and concrete. Both 2D and 3D CAD are used to create residential and commercial engineered construction documents. Prerequisite: MATH 1050 and DET 2000.

DET 2830 - Directed Readings

Credits: (1-3)
Typically taught:
~~Fall~~Spring [Full Sem]

Directed readings in Design Engineering Technology including product design and development and architectural areas. Must have department approval. May be repeated with a maximum of 6 credit hours.

DET 2890 - Cooperative Work Experience

Credits: (1-3)
Typically taught:
Fall [Full Sem]

Spring [Full Sem]

Open to all advanced students in Design Engineering Technology. Department approval required before registration. Provides academic credit for on-the-job experience. Grade and amount of credit will be determined by the department. May be repeated twice up to 3 credit hours.

DET 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
~~Faculty approval required.~~ **Typically taught:**
Spring [Full Sem]

Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated 3 times ~~up to 4 credit hours~~.

DET 3000 - Green Building Methods & Certifications

Credits: (3)
Typically taught:
Fall [Full Sem]

An analysis of sustainability in the green built environment including certifications such as LEED, Energy Star and the National Green Building Standard. Course discussions will include; What is Green Building and Why Does it Make Sense?; Structural Systems; Exterior Finishes; Interior Systems; Mechanical Systems; LEED Green Associate (United States Green Building Council) and Certified Green Professional (National Association of Home Builders) Exam preparation. Prerequisite: DET 2000.

DET 3100 - Tool Design

Credits: (3)
Typically taught:
Fall [Full Sem]

Tool design principals used for work piece control in manufacturing and production. Topics include responsibilities of a tool designer, the design process, economics of design, tooling materials, and tool drawings and specifications. Other topics will include jigs, fixtures, gages, dies and tooling required by specialized manufacturing processes. Prerequisite: MFET 1210, DET 2460, and MATH 1080 (or MATH 1050 and MATH 1060).

DET 3300 - Applied Kinematic Analysis

Credits: (3)
Typically taught:
Spring [Full Sem]

Graphical representation of the motion of bodies without reference to the forces that cause the motion. Devices will be modeled and the limits of movement of components defined so that overall machine design can be animated and analyzed. Prerequisite: MFET 2300.

DET 3400 - Rendering Basics (Photoshop/3ds Max)

Credits: (3)
Typically taught:
Fall [Full Sem]

This course introduces students to the basic tools and concepts used in Adobe Photoshop and 3ds Max. Photoshop instruction includes using layers, image editing using selection tools, filtering, and touching up a 3D render. 3ds Max instruction includes importing models, adding materials, lighting a scene, and creating a basic animation. Prerequisite: DET 2000.

DET 3460 - Parametric Design Graphics

Credits: (3)
Typically taught:
Spring [Full Sem]

An advanced design graphics course using state-of-the-art parametric modeling software. Topics include: parametric modeling fundamentals, constructive solid geometry concepts, model history, parent/child relationships, parametric constraints & relations, datum features, symmetrical features, 3D construction tools, advanced modeling tools, and assembly modeling. Prerequisite: DET 1010 and ~~NTM~~WEB 1700.

DET 3470 - Introduction to CATIA V5

Credits: (3)
Typically taught:
Fall [Full Sem]

Use of parametric 3D modeling software to prepare engineering documentation and model analysis for the automotive and aerospace manufacturing industries. Students will complete a series of laboratory assignments and term projects in an open lab environment. Prerequisite: DET 1160.

DET 4350 - Virtual Design & Construction Applications (Revit/Navisworks)

Credits: (3)
Typically taught:
Fall [Full Sem]

An advanced BIM course dealing with Virtual Design & Construction Applications. Topics Include; Integrated Project Delivery; Model Integration and Management; Identifying and Resolving Model Clashes; Scheduling and 4D Simulation; Presenting the Project Model; Modeling for Construction; 4D simulation and Construction Planning; Model-Based Estimating and Quantity Takeoff; Using BIM for Fabrication; Using BIM for Operations and Facilities Management. Prerequisite: DET 2000, DET 2660, DET 3000.

DET 4400 - Animation Basics (3ds Max)

Credits: (3)
Typically taught:
Spring [Full Sem]

This course is a continuation of DET 3400. An in-depth look into 3ds Max focusing more on photorealism and animation. Students will learn how to take models created in other programs learned throughout the DET program into 3ds Max and bring them to life. Video editing is covered to allow students to create professional animations and videos. Prerequisite: DET 3400.

DET 4470 - Advanced CATIA V5

Credits: (3)
Typically taught:
Spring [Full Sem]

An advanced 3D CAD course featuring 3-D parametric modeling using commercially available software. Studies in parametric design and design intent, applying surfaces, rendering, and creating animated presentations for the automotive and aerospace industries. Prerequisite: DET 3470.

DET 4500 - Hydraulic and Pneumatic Applications

Credits: (3)
Typically taught:
Spring [Full Sem]

Examines the components of hydraulic and pneumatic systems, including a detailed study of each type of system and the integration of all components required for machine design. The symbols used to document hydraulic and pneumatic systems and the selection of components from vendor catalogs will be included in the detailing of complete machines. Prerequisite: MET 3400.

DET 4600 - Senior Project I (Design)

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A Capstone project spanning two consecutive semesters. This semester concentrates on documenting the design solution. The project includes application of skills, knowledge, techniques and concepts to design and manufacture or construct a project. Emphasis placed on integrated project management including preparation of drawings, creation of presentations, project organization, control, and documentation. Prerequisite: Senior Project Application form, senior standing, approval of the department, and Associates Degree in DET or equivalent. (A student must apply for senior project one semester before the start of the senior project.) Co-Requisite: MFET 4610. Cross-listed with MFET 4610L.

DET 4610 - Senior Project II (Build)

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A Capstone project spanning two consecutive semesters. This semester concentrates on manufacturing or building the design solution. The project includes application of skills, knowledge, techniques and concepts to design and manufacture or construct a project. Emphasis placed on integrated project management including preparation of drawings, creation of presentations, project organization, control, and documentation. Prerequisite: DET 4600. Cross-listed with: MFET 4620L.

DET 4830 - Directed Readings

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Directed readings in Design Engineering Technology including product design and development and architectural areas. Must have department approval. May be repeated twice~~ up to 3 credit hours~~.

DET 4890 - Cooperative Work Experience

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Open to all advanced students in Design Engineering Technology. Department approval required before registration. Provides academic credit for on-the-job experience. Grade and amount of credit will be determined by the department. May be repeated twice~~ up to 3 credit hours~~.

DET 4920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
~~Faculty approval required.~~ **Typically taught:**
Summer [Full Sem]

Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated 3 times~~ up to 4 credit hours~~.

DMS 4110 - Sonography Principles & Instrumentation

Credits: (3)
Typically taught:
Spring [Full Sem]

Elementary principles, propagation through tissues, transducers, pulse echo principles and instruments, images, storage and display, Doppler, image features and artifacts, bioeffects, and safety.

DMS 4120 - Quality Assurance

Credits: (3)
Typically taught:
Summer [Full Sem]

Developing, analyzing and evaluating a quality assurance program.

DMS 4210 - Cardiac Sonography I

Credits: (3)
Typically taught:
Fall [Full Sem]

Concepts in cardiac sonographic scanning technique and protocol to produce and evaluate diagnostic images.

DMS 4220 - Cardiac Sonography II

Credits: (3)
Typically taught:
Spring [Full Sem]

Continuation of 4203.

DMS 4230 - Cardiac Sonography III

Credits: (3)
Typically taught:
Summer [Full Sem]

Continuation of DMS 4220.

DMS 4310 - Abdominal Sonography

Credits: (3)
Typically taught:
Fall [Full Sem]

Concepts in abdominal intraperitoneal and retroperitoneal sonographic scanning technique and protocol to produce and evaluate diagnostic images in the clinical setting.

DMS 4320 - Superficial Structure Sonography

Credits: (1)
Typically taught:
Fall [Full Sem]

Concepts in superficial structure sonographic scanning technique and protocol to produce and evaluate diagnostic images in the clinical setting.

DMS 4330 - Gynecologic Sonography

Credits: (1)
Typically taught:
Spring [Full Sem]

Concepts in gynecologic sonographic scanning technique and protocol to produce and evaluate diagnostic images.

DMS 4340 - Obstetric Sonography

Credits: (3)
Typically taught:
Spring [Full Sem]

Concepts in obstetric sonographic scanning technique and protocol to produce and evaluate diagnostic images.

DMS 4410 - Vascular Sonography I

Credits: (2)
Typically taught:
Fall [Full Sem]

Concepts in vascular sonographic scanning technique and protocol to produce and evaluate diagnostic images.

DMS 4420 - Vascular Sonography II

Credits: (3)
Typically taught:
Spring [Full Sem]

Continuation of DMS 4410.

DMS 4510 - Breast Sonography

Credits: (1)
Typically taught:
Spring [Full Sem]

Concepts in breast sonographic scanning technique and protocol to produce and evaluate diagnostic images.

DMS 4610 - Cardiac Laboratory

Credits: (1)
Typically taught:
Fall [Full Sem]

Patient position and instruction, transducer selection and anatomic placement, scanning protocol, and image quality are practiced and reviewed for cardiac sonographic examinations.

DMS 4620 - Medical Laboratory

Credits: (1)
Typically taught:
Fall [Full Sem]

Patient position and instruction, transducer selection and anatomic placement, scanning protocol, and image quality are practiced and reviewed for medical sonographic examinations.

DMS 4630 - Vascular Laboratory

Credits: (1)
Typically taught:
Fall [Full Sem]

Patient position and instrumentation, transducer selection and anatomic placement, scanning protocol, and image quality are practiced for vascular sonographic examinations.

DMS 4801 - Individualized Research

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Contract with faculty advisor required. May be repeated twice with a maximum of 3 credit hours.

DMS 4811 - Cardiac Clinical I

Credits: (3)
Typically taught:
Spring [Full Sem]

A minimum of 24 hours per week in an active diagnostic cardiac sonography department.

DMS 4812 - Cardiac Clinical II

Credits: (3)
Typically taught:
Summer [Full Sem]

Continuation of DMS 4811.

DMS 4813 - Cardiac Clinical III

Credits: (3)
Typically taught:
Fall [Full Sem]

Continuation of DMS 4812.

DMS 4821 - Medical Clinical I

Credits: (3)
Typically taught:
Spring [Full Sem]

A minimum of 24 hours per week in an active diagnostic medical sonography department.

DMS 4822 - Medical Clinical II

Credits: (3)
Typically taught:
Summer [Full Sem]

Continuation of DMS 4821.

DMS 4823 - Medical Clinical III

Credits: (3)
Typically taught:
Fall [Full Sem]

Continuation of DMS 4822.

DMS 4831 - Vascular Clinical I

Credits: (3)
Typically taught:
Fall [Full Sem]

A minimum of 24 hours per week in an active diagnostic vascular sonography department.

DMS 4832 - Vascular Clinical II

Credits: (3)
Typically taught:
Spring [Full Sem]

Continuation of DMS 4831.

DMS 4833 - Vascular Clinical III

Credits: (3)
Typically taught:
Summer [Full Sem]

Continuation of DMS 4832.

DMS 4841 - Breast Clinical

Credits: (3)
Typically taught:
Spring [Full Sem]

A minimum of 24 hours per week performing breast sonography examinations. Prerequisite: DMS 4510 Breast Sonography.

DMS 4911 - Cardiac Comprehensive Review

Credits: (1)
Typically taught:
Fall [Full Sem]

Review and requirements for advanced responsibilities of the cardiac sonographer.

DMS 4912 - Medical Comprehensive Review

Credits: (2)
Typically taught:
Fall [Full Sem]

Review and requirements for advanced responsibilities of the medical sonographer.

DMS 4913 - Vascular Comprehensive Review

Credits: (1)
Typically taught:
Summer [Full Sem]

Review and requirements for advanced responsibilities of the vascular sonographer.

DMS 4921 - Workshops, Conferences and Telecourses

Credits: (1-3)
May be repeated twice with a maximum of 3 credit hours.

ECE 1000 - Introduction to Electrical Engineering

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An introductory course to Electrical & Computer Engineering topics including electronic terms, numbering systems, software tools, and documentation practices. College algebra and trigonometry are strongly recommended.

-

ECE 1270 - Introduction to Electrical Circuits

Credits: (4)
Typically taught:
Fall [Full Sem]

The basics of analog circuits as an introduction to Electrical Engineering. Concepts of voltage, current, power, resistance capacitance and inductance. Circuit analysis techniques such as Kirchhoff's Laws, node voltages, and mesh currents. Thevenin's and Norton's equivalent circuits, sinusoidal steady state and phasors. Lecture and lab combination. Prerequisite: MATH 1210.

-

ECE 2260 - Fundamentals of Electrical Circuits

Credits: (4)
Typically taught:
Spring [Full Sem]

Fundamental electric-circuit techniques including: time domain transient responses for 1st and 2nd order circuits, Laplace transforms, Fourier series, and filters. Lecture and lab combination. Prerequisite: ECE 1270 and MATH 1220.

-

ECE 2700 - Digital Circuits

Credits: (4)
Typically taught:
Spring [Full Sem]

An introduction to digital electronics, integrated circuits, numbering systems, Boolean algebra, gates, flip-flops, multiplexers, sequential circuits, combinational circuits, and computer architecture. Introduction to hardware description language and programmable logic devices. Lecture and lab combination. Laboratory activities to include the design, construction, analysis, and measurement of basic digital systems. Co-Requisite: (Recommend) CS 2250 or CS 1410.

-

ECE 3000 - Engineering Seminar

Credits: (1)
Typically taught:
Fall [Full Sem]

An engineering seminar course designed to prepare the student for professional engineering employment. Topics to include resumes, hiring criteria, interviewing techniques, engineering ethics, professional and societal responsibilities, lifelong learning, diversity, creative problem solving, goals, quality, timeliness, and continuous improvement. The students will research related topics and write a paper. Prerequisite: ECE 1270.

ECE 3110 - Microelectronics I

Credits: (4)
Typically taught:
Fall [Full Sem]

Fundamental semiconductor device characteristics including diodes, MOSFETs and bipolar transistors; small and large signal characteristics and design of linear circuits. Lecture and lab combination. Laboratory activities to include the design, construction, computer simulation, and analysis of semiconductor circuits, amplifiers and power supplies. Prerequisite: CHEM 1210 and ECE 2260.

ECE 3120 - Microelectronics II

Credits: (4)
Typically taught:
Spring [Full Sem]

Intermediate topics related to microelectronics including differential and multistage amplifiers, frequency response, feedback systems, power amplifiers, filters, and signal generation. Lecture and lab combination. Laboratory activities to include the design, construction, computer simulation, and analysis of filters and advanced circuits. Prerequisite: ECE 3110.

ECE 3210 - Signals and Systems

Credits: (4)
Typically taught:
Fall [Full Sem]

Topics related to the analysis of linear time invariant continuous and discrete systems and signal transformations, convolution, frequency spectra, Laplace transforms, Z transforms, and fast Fourier transforms. Lecture and lab

combination. Laboratory activities to include the computer simulation, analysis, and numerical modeling of signals and systems. Prerequisite: ECE 2260 and MATH 2250 or MATH 2270 and MATH 2280.

ECE 3310 - Electromagnetics I

Credits: (4)
Typically taught:
Spring [Full Sem]

An introduction to electrostatics, magnetostatics and Maxwell's equations with specific applications to wave propagation and transmission line theory. Lecture and lab combination. Laboratory activities to include the design, construction, and analysis of RF radar subsystems. Prerequisite: MATH 2210, PHYS 2220, and ECE 2260.

ECE 3610 - Digital Systems

Credits: (4)
Typically taught:
Fall [Full Sem]

Introduction to microprocessor architecture, arithmetic logic units, memory systems, input/output interfaces, peripheral devices, and communication. Lecture and lab combination. Laboratory activities to include the programming and operation of microprocessor circuits. Prerequisite: ECE 2700 and CS 2250 or CS 1410.

ECE 3710 - Embedded Systems

Credits: (4)
Typically taught:
Spring [Full Sem]

Design and implementation of a microcontroller or microprocessor embedded system including assembly language programming, interfacing to peripherals, interrupt handling and debugging techniques. Lecture and Lab. Laboratory exercises build toward a final embedded systems project. Prerequisite: ECE 2700, and CS 2250 or CS 1410.

ECE 3890 - Internship

Credits: (2)
Typically taught:
Fall [Full Sem]

Spring [Full Sem]
Summer [Full Sem]

This is a core course that is required for the BS Engineering degree. ECE 3890 can be taken a maximum of three times for a total of six credits, but only two credits count toward the major. The student will need department approval before being allowed to register. Prerequisite: Permission from the department.

-

ECE 4010 - Senior Project I

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Students will be required to complete a 200-hour engineering project in a team environment. Project management and problem solving techniques will be emphasized. Topics to include goal setting, developing milestone charts, writing contracts, conducting research, project design and construction, testing and analysis, project documentation, and design review presentations. Prerequisite: Permission from the department.

-

ECE 4020 - Senior Project II

Credits: (2)
Typically taught:
Spring [Full Sem]
Fall [Full Sem]

A continuation of Senior Project I. Students will be required to complete a significant engineering project in a team environment. Project management and problem solving techniques will be emphasized. Topics to include goal setting, developing milestone charts, writing contracts, conducting research, project design and construction, testing and analysis, project documentation, and design review presentations. Prerequisite: ECE 4010.

-

ECE 4100 - Control Systems

Credits: (4)
Typically taught:
Fall [Full Sem]

Topics related to control theory, analysis, and testing of systems in the time domain, frequency domain and state space. Lecture and lab combination. Prerequisite: ECE 3120 and ECE 3210.

ECE 4210 - Digital Signal Processing

Credits: (3)
Typically taught:
Spring [Full Sem]

Theory, application, and implementation of digital signal processing (DSP) concepts, from the design and implementation perspective. Topics include: Fast Fourier transforms, adaptive filters, state-space algorithms, random signals, and spectral estimation. Prerequisite: ECE 3210.

-

ECE 4310 - Electromagnetics II

Credits: (3)
Typically taught:
Fall [Full Sem]

A study of intermediate electromagnetic issues common to circuits, systems, and communication networks. Prerequisite: ECE 3310.

ECE 4410 - Communication Circuits and Systems

Credits: (3)
Typically taught:
Spring [Full Sem]

A study of communication circuits, modulation and decoding theory, spectrum usage, networks, and protocols. Prerequisite: ECE 3210 and MATH 3410.

-

ECE 4510 - Power Systems

Credits: (4)
Typically taught:
Spring [Full Sem]

A study of AC and DC power systems and machines, including single and 3-phase power, power factor and correction, transformers, synchronous and induction machines, DC motors, power transmission lines, and analysis of power flow and faults. Lecture and Lab combination. Prerequisite: ECE 2260. Prerequisite/Co-requisite: Prerequisite/Corequisite: ECE 3310.

ECE 4710 - Real-Time Embedded Systems

Credits: (4)
Typically taught:
Fall [Full Sem]

An advanced course on real-time embedded system design. Topics include task concurrency, scheduling paradigms, synchronization, resource access control, and inter-process communication. Lecture and Lab combination. Prerequisite: ECE 3710.

ECE 4800 - Individual Studies

Credits: (1-4)
The students will receive credit for approved studies in the Electrical & Computer Engineering programs. A maximum of four credits can count as an elective course in the Electrical & Computer Engineering programs.

-

ECE 4900 - Special Topics

Credits: (1-4)
A one-time special study course designed to introduce a new relevant topic that is not covered in the Electrical & Computer Engineering programs. Lecture and lab combination. Laboratory activities support the selected course topic. A maximum of four credits can be counted for the Electrical & Computer Engineering programs.

ECE 6010 - Design Project

Credits: (2-6)
Students are required to complete a substantial engineering design project. Students must demonstrate proficiency in research, design, analysis, project planning, implementation, testing, presentation and documentation. Students receive T (temporary) grades until their final design review, after which these grades are changed retroactively. Students must be enrolled in ECE 6010 at the time of their final design review. This course may be repeated. Prerequisite: Permission from the department.

ECE 6110 - Digital VLSI Design

Credits: (3)
Introduction to Digital VLSI design. Includes the development of standard cell library of common CMOS circuits. Use of hardware description language and CAD tools for the design and simulation of custom large-scale digital systems. Students will understand the impacts and tradeoffs from speed, power consumption, and thermal properties of large-scale custom ICs. Prerequisite: ECE 3610.

ECE 6120 - Advanced VLSI Design

Credits: (3)
Design of stable asynchronous VLSI systems. Course includes design, modeling, synthesis, optimization, and verifcation of asynchronous circuits and large-scale systems. Students will develop custom asynchronous libraries and utilize them for system design utilizing CAD programs. Prerequisite: ECE 3610.

ECE 6130 - Advanced Semiconductor Devices

Credits: (3)
Introduction to advanced semiconductor physics and devices. Topics include carrier transport theory, energy band diagrams, PN junctions, metal-semiconductor junctions, BJTs and MOSFETs. Study of current semiconductor process technologies and discussion of off-roadmap technologies. Prerequisite: PHYS 2220 and ECE 3110.

ECE 6210 - Digital Signal Processing

Credits: (3)
Theory, application, and implementation of digital signal processing (DSP) concepts, from the design and implementation perspective. Topics include: Fast Fourier transforms, adaptive filters, state-space algorithms, random signals, and spectral estimation. Prerequisite: ECE 3210.

ECE 6220 - Image Processing

Credits: (3)
Advanced image processing theory and methods. Topics include digital image formation, transformation, filtering, enhancements, segmentation and morphological processing. Lectures, computer assignments and project (including term paper). Prerequisite: ECE 3210.

ECE 6410 - Communication Circuits and Systems

Credits: (3)
A study of communication circuits, modulation and decoding theory, spectrum usage, networks, and protocols. Prerequisite: ECE 3210 and MATH 3410.

ECE 6420 - Digital Communication

Credits: (3)
This course provides an in-depth coverage of the theory, analysis, and design of digital communications systems with an emphasis on advanced topics related to wired, wireless data communication and the physical networking layer. Topics include QPSK, QAM, PAM, CSMA/CD, SONET, ADSL, and/or MACAW. Spread spectrum concepts such as FHSS, DSSS, OFDM, MIMO and/or cooperative communication techniques may be included. Students will develop Matlab based models to emulate the concepts. The course will include group projects as well as individual assignments. The course would be beneficial particularly to students who are interested in doing work/research in fields related to communications, networks, and signal processing. Prerequisite: ECE 3210 and MATH 3410.

ECE 6710 - Real-Time Embedded Systems

Credits: (4)
An advanced course on real-time embedded system design. Topics include task concurrency, scheduling paradigms, synchronization, resource access control, and inter-process communication. Lecture and Lab combination. Prerequisite: ECE 3710.

ECON 1010 SS - Economics as a Social Science

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

An introduction to basic economic institutions and principles of economics for non-business and non-economics majors. The primary objective of the course is to provide a framework of economic approaches useful in the analysis of social problems. Topics include poverty, economic systems, crime, pollution, health, discrimination, unemployment, inflation, and the role of government in the economy.

ECON 1100 SS - Environmental Issues and Economic Policy

Credits: (3)
Typically taught:
Not currently being offered

An analysis of policies which affect environmental resources. Emphasis on economic analysis of renewable and nonrenewable resources, pollution, and public policy. This course demonstrates economic solutions to environmental problems, and the role economics plays in designing environmental policy.

ECON 1740 AI - Economic History of the United States

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A critical study of the history of the American Economy, significant events, fundamental principles of a market economy, interactions between government and the market economy, and the evolution of fundamental economic institutions.

ECON 2010 SS - Principles of Microeconomics

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

The application of economic concepts to the analysis of scarcity of individual, firm, and organizational behavior. Topic coverage includes the theories of how consumers and firms make choices, and how various rules guide their respective decisions. The course also explores the theory of market structures, such as perfect and imperfect competition, as well as monopoly. Prerequisite: MATH 1050 or 1080 or 1210 with a "C" or higher grade.

ECON 2020 SS - Principles of Macroeconomics

Credits: (3)
Typically taught:

Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Analyzes human behavior and choices as they relate to the entire economy, with specific focus on national income measurement, unemployment, inflation, business cycles, global trade, and economic growth. Implications of different government policies, e.g., changes in taxation, government spending, money supply or interest rates for a stable economy and steady growth are explored. Prerequisite: ECON 2010 and (MATH 1050 or 1080 or 1210 with a "C" or higher grade).

ECON 2899 - Economics Foundations and Admission Assessment

Credits: (0)
Typically taught:
Fall [Full Sem Online]
Spring [Full Sem~~,~~ Online]
Summer [Full Sem Online]

Completion of ECON 2899 is required of all non-business Economics students pursuing any major, minor, emphasis or certificate awarded by the John B. Goddard School of Business & Economics. The course objectives are: 1) assessment of ~~Business~~ Foundation knowledge, and 2) admittance to the Goddard School. Students should register for this course concurrent with (same semester as) their last required ~~Business~~ Foundation course (ECON 2010, ECON 2020 and QUAN 2600) or after the required ~~Business~~ Foundation courses have been completed. Students must have an overall GPA of 2.5 or higher and a ~~Business~~ Foundation GPA of 2.5 or higher and a minimum grade of "C-" in each of the three ~~Business~~ Foundation courses. *Credit/No credit*. Prerequisite/Co-requisite: Pre/ Co-requisite: ECON 2010, ECON 2020, QUAN 2600.

ECON 2920 - Short Courses, Workshops, Institutes, and Special Programs

Credits: (1-3)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated 5 times with a maximum of 6 credit hours with different topics.

ECON 3030 - Managerial Economics

Credits: (3)
Typically taught:
Not currently being offered

This course uses the tools of differential calculus and regression theory to analyze the managerial decisions of individual firms. Prerequisite: MATH 1050, QUAN 2600, QUAN 3610.

ECON 3090 - History of Economic Thought

Credits: (3)
Typically taught:
Not currently being offered

This course covers the major concepts and contributions of the scholars of the past in economic doctrine and interpretations. Prerequisite: ECON 2010, ECON 2020.

ECON 3110 - International Trade

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An introduction to the pure theory of trade, international trade agreements and negotiations (e.g., GATT, EU and NAFTA) and the institutions designed to encourage trade. Emphasis on the benefits of free trade as well as the reasons for the existence of trade barriers such as tariffs and quotas. Special topics include trade in agricultural products and international labor migration. Prerequisite: ECON 2010 and ECON 2020.

ECON 3120 - International Finance and Monetary Systems

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Applications of the principle of economics to the international monetary system. Special emphasis on the way in which international monetary institutions can facilitate trade. Macroeconomic models of an open economy are used to examine the effect that international trade and financial ties have on the domestic economy. Special topics include institutions such as the World Bank and the IMF, along with regional monetary unification in Europe. Prerequisite: ECON 2010, ECON 2020.

ECON 3150 - Business Studies Abroad-International Finance

Credits: (3)
This course studies the globalization of financial markets and the environment in which international finance takes place, e.g., the international monetary system. With this background, a global financial strategy design for corporations will be discussed. This course is taught at Fachhochschule Hof, Germany during each fall semester. Students enrolled in this course have to participate in the Study Abroad Program (Contact: Doris Geide-Stevenson, ext. 7634, dgsteven@weber.edu).

ECON 3200 - Money and Banking

Credits: (3)
Typically taught:
Spring [Full Sem]

This course presents a detailed description and economic analysis of the U.S. financial system which includes the banking industry, bond and stock markets, and the Federal Reserve system. This course serves as an extension to the material covered in an introductory macroeconomics course. The enhanced understanding of the workings of the financial system, including the determination of interest rates, will be used to trace out the channels of monetary policy as conducted by the Federal Reserve and the effect of monetary policy on financial markets, such as the stock market. Prerequisite: ECON 2020.

ECON 3400 - Labor Economics

Credits: (3)
Typically taught:
Spring [Full Sem]

The study of labor economics explores choices made by the two sides of the labor market, employers and workers and how these choices interact in determining wage and employment levels. Hence, an important part of the course consists of a detailed analysis of labor demand and supply. This analysis is followed by a discussion of why the labor market often does not clear, i.e., why we observe unemployment. The analysis focuses on special features of the labor market such as minimum wage, labor unions and efficiency wages. Other topics include the effect of education and training on earnings, the optimal incentive structure of an employment contract and determinants of income inequality. Prerequisite: ECON 2010.

ECON 3410 - Women in the World Economy

Credits: (3)
Typically taught:
Not currently being offered

Applications of the principles of economics to the analysis of the economic status of women in the U.S. and elsewhere. The focus is on labor markets, income differentials, the tax system and household work. Special consideration is given to women in developing economies. Prerequisite: ECON 2010.

ECON 4010 - Intermediate Microeconomic Theory

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The application of economic concepts to individual and firm behavior, consumer behavior, demand analysis, economics of the firm, and price theory. Prerequisite: ECON 2010, ECON 2020 and BSAD 2899 or ECON 2899.

ECON 4020 - Intermediate Macroeconomic Theory

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The building of standard models to test theories of long-run economic performance and short-term fluctuations in closed and open economies. Emphasis is placed on how fiscal and monetary policies encourage long-run growth while mitigating the negative effects of short-term fluctuations. Prerequisite: ECON 2010, ECON 2020, QUAN 2400, and BSAD 2899 or ECON 2899.

ECON 4170 - Economic Development

Credits: (3)
Typically taught:
Fall [Full Sem]

The application of economic principles to the challenging problems of third world and developing nations including Africa, Asia, Latin America and the newly independent states of the Former Soviet Union and Eastern Europe. Prerequisite: ECON 2010 and ECON 2020.

ECON 4320 - Industrial Organization

Credits: (3)
Typically taught:
Not currently being offered

The theory and performance of firms and industries in the context of substantial market power and market regulation. Emphasis on oligopoly, game theory, and theory of markets within the context of global market competition. Prerequisite: QUAN 2400 or ECON 3030, ECON 2010.

ECON 4520 - Public Finance

Credits: (3)
Typically taught:
~~**Fall [Full Sem]**~~**Not currently being offered**

This course covers the aspects of economic policy that arise in the operations of a public budget. Topics addressed include economic theories of bureaucracy, public expenditures, and taxation. Prerequisite: ECON 2010, ECON 2020.

ECON 4550 - Introduction to Econometrics

Credits: (3)
Typically taught:
Fall [Full Sem]

Advanced Regression Analysis. Topics include ordinary least squares, generalized least squares, nonlinear regression, dummy variables, autocorrelation, heteroskedasticity, and serial correlation. Computers used extensively. Prerequisite: ECON 2010, ECON 2020, QUAN 2400, and QUAN 3610.

ECON 4560 - Mathematical Economics

Credits: (3)
Typically taught:
Spring [Full Sem]

Advanced application of mathematical modeling techniques to selected economic issues. Prerequisite: ECON 4010, ECON 4020, QUAN 2400, QUAN 3610.

ECON 4800 - Independent Research

Credits: (1-3)
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~
~~**Summer [Full Sem]**~~

Individual work or work in small groups, by arrangement, in special topics not included in the announced course offerings. Prerequisite: QUAN 3610 and approval of instructor. May be repeated twice with a maximum of 3 credit hours.

ECON 4810 - Experimental Courses

Credits: (1-3)
Experimental or one-time courses designed to fill a need in the community or investigate interesting and unusual topics. Prerequisite: ECON 2010, ECON 2020. May be repeated 5 times with a maximum of 6 credit hours with different topics.

ECON 4850 - Economics Study Abroad

Credits: (1-3)
This course is designed for students who will study economics at one of the international partner universities of the Goddard School of Business and Economics as part of an extended study abroad visit. Students will explore the international economic institutions, business culture, and applications of economic theory to countries outside of the US. Students will study international economics as offered through a partner university (or other university with department chair approval). Prerequisite: ECON 2899 and BSAD 2899. May be repeated once up to 6 credits.

ECON 4860 - Economics Internship

Credits: (1-3)
A structured professional-level field experience. The student will be counseled and supervised as he/she applies and integrates the knowledge and skills obtained through the Business Economics or International Business Economics program courses. Prerequisite: BSAD 2899; Senior Standing; Instructor approval.

ECON 4920 - Short Courses, Workshops, Institutes, and Special Programs

Credits: (1-3)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated 5 times with a maximum of 6 credit hours with different topics.

ECON 4970 - Introduction to Research Methods

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course prepares students for ECON 4980 Research Methods. Students will study the research process and the

scientific method as it applies to economics. Students will have an opportunity to explore various fields and literature in order to design a thesis project for ECON 4980. Prerequisite: ECON 2899 or BSAD 2899.

ECON 4980 - Research Methods

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A course designed for senior economics majors which requires the completion of an extensive thesis project. This course will focus on the formulation of hypotheses, review of relevant literature, and either theoretical or empirical analysis. Prerequisite: ECON 4970, BSAD 2899 or ECON 2899, ECON 4010 or ECON 4020.

EDUC 1010 - Exploring Teaching

Credits: (3)
Students will explore the exciting world of teaching, examine what it means to be a teacher, and participate in field observations. This course is designed to introduce students to personal and professional experiences within the educational community. Prerequisite: This course or an equivalent approved course is a prerequisite to all licensure programs in the Department of Teacher Education.

EDUC 2000 - Social Studies Concepts for Elementary Teachers

Credits: (3)
Typically taught:
[not currently taught]

Fundamental concepts from the social sciences commonly found in elementary social studies curriculum.

EDUC 2010 - Human Exceptionality

Credits: (3)
Typically taught:
Spring [Full Sem]
Summer [2nd Blk]

This course will introduce students to the characteristics of exceptional children with emphasis on the educational and psychological implications of disabilities to the development of the child. ~~CEL.~~ A minimum grade of C is required in this course. CEL.

EDUC 2604 TD - Information Resources in Education

Credits: (1)
Intended for students interested in education, this one-credit hour course will assist in developing information literacy and academic research skills, and an understanding of academic integrity issues unique to the field of education. Students will develop skills in identifying, locating, retrieving, documenting, and critically evaluating both electronic and print resources that are appropriate for undergraduate research, with emphasis in education and

related disciplines. Completion of this course meets part D of the WSU Computer and Information Literacy requirement. Cross-Listed with LIBS 2604.

EDUC 2890 - Cooperative Work Experience

Credits: (1-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

For students not yet accepted to the Teacher Education Program who meet the minimum cooperative work experience requirements of the department. Provides academic credit for on-the-job experience. Amount of credit will be determined by the department. Fingerprinting/ background check must be completed prior to working in the schools. May be repeated up to 6 credit hours.

EDUC 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The specific title and credit authorized will appear on the student transcript. May be taken on a Credit/No Credit basis. May be repeated up to 6 credit hours.

EDUC 3100 - Instructional Planning & Assessment

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course introduces the basic concepts of lesson and unit design, planning and assessment based on student needs. Prerequisite: Completion of Elementary Education Level 1 courses with a grade of B- or better. This course is part of Elementary Education Level 2 and should be taken with EDUC 3210, EDUC 3240, EDUC 4345, PEP 3620.

EDUC 3110 - Instructional Technology

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course allows students to apply existing technology literacy into educational environments to promote enhanced learning. The curriculum is based on teacher skills required to teach Utah State Educational Technology Standards for students in K-8 settings. The course focuses on providing teacher licensure candidates with basic technology proficiencies for teaching with technology. Prerequisite: Completion of the computer and information literacy requirements.

EDUC 3115 - Media Integration in Elementary Education Settings

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course focuses on how to create media to support and apply research-based principles for learning into educational environments. The course content is based on Utah core curriculum skills for students in the K-8 setting. The course provides students with technology proficiencies for integrating technology into teaching. Prerequisite: Admission to Teacher Education. Verification of technology literacy training (through coursework or job experience) within the past five years. Completion of the computer and information literacy requirements and completion of Elementary Education Level 2 courses with a grade of B- or better. This is part of Elementary Education Level 3 and should be taken with EDUC 3280, EDUC 4210, EDUC 4300, EDUC 4320, and EDUC 4330.

EDUC 3120 - Reading Instruction in the Primary Grades

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course is designed to familiarize the teacher candidate with current knowledge and practices as they relate to teaching literacy (reading, writing, listening, and speaking) in the primary grades (K-2). Prerequisite: Admission to Teacher Education. This course is part of Elementary Education Level 1 and should be taken with EDUC 3140, EDUC 3205, EDUC 3270, EDUC 4550.

EDUC 3140 - Educational Psychology, Interpersonal Skills and Classroom Management

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The focus of this course is the fundamental theories and philosophies, concepts, processes, and applications related to human behavior, teaching and learning, interpersonal relationships, and classroom management. Prerequisite: Admission to Teacher Education. This course is part of Elementary Education Level 1 and should be taken with EDUC 3120, EDUC 3205, EDUC 3270, EDUC 4550.

EDUC 3205 - Culturally and Linguistically Responsive Teaching

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Rationales, concepts, practices provide a scope of understanding and awareness regarding the role of cultural and language pluralism in school and society. Foundations and theories on the role of family and community influence on student values are also explored. Experiences are provided intended to develop basic skills in personal interaction and

adaptation to teaching diverse populations. Prerequisite: Admission to Teacher Education. This course is part of Elementary Education Level 1 and should be taken with EDUC 3120, EDUC 3140, EDUC 3270, EDUC 4550.

EDUC 3210 - Elementary Level II Practicum

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The purpose of this practicum is to provide students with opportunities to design and implement integrated instruction in the elementary grades. Instruction will focus on integrating the arts, healthy lifestyles, and literacy. Students are required to spend at least 40 hours in an assigned classroom. Prerequisite: Admission to Teacher Education. Completion of Elementary Education Level 1 courses with a grade of B- or better. This course is part of Elementary Education Level 2 and should be taken with EDUC 3100, EDUC 3240, EDUC 4345, PEP 3620.

EDUC 3220 - Foundations of Diversity

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Rationales, concepts, practice provide a scope of understanding and awareness regarding the role of cultural and language pluralism in school and society. Foundations and theories on the role of family and community influence on student values. Experiences intended to develop basic skills in personal interaction and adaptation to teaching diverse populations. Prerequisite: Admission to Teacher Education. This course is part of the professional core courses and should be taken with EDUC 3265, EDUC 3315, EDUC 3900, EDUC 3910, and EDUC 3935.

EDUC 3240 - Reading Instruction in the Intermediate Grades

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course will provide methods, foundations, and assessments for developmental reading in the elementary school, Grades 3-6. Prerequisite: Admission to Teacher Education. Completion of Elementary Education Level 1 courses wil a grade of B- or better. This course is part of Elementary Education Level 2 and should be taken concurrently with EDUC 3100, EDUC 3210, EDUC 4345, PEP 3620.

EDUC 3265 - The Exceptional Student

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Students will learn about the learning and social characteristics of young people with exceptionalities-that is,

disabilities (physical, mental, learning) or giftedness-and about public policy and services available to them. As future teachers, they will learn about how such individuals are identified and served by the school system, what strategies are effective for instructing them, and roles and responsibilities of school personnel in providing appropriate educational experiences for all students in an inclusive classroom. Prerequisite: Admission to Teacher Education. This course is part of the professional core courses and should be taken with EDUC 3220, EDUC 3900, EDUC 3315, EDUC 3935, EDUC 3910.

EDUC 3270 - Differentiation and Collaboration for Inclusive Teaching

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The Individuals with Disabilities Education Improvement Act of 2004 (IDEA-04) mandates that students with disabilities be educated "to the maximum extent appropriate with children who are not disabled." The expectation is that students with disabilities will have access to, and make adequate progress in, the general curriculum. Therefore, it is essential for general educators and special educators to work collaboratively. This course is designed to provide preservice teachers with the knowledge and skills of effective inclusive teaching practices. Prerequisite: Admission to Teacher Education~~.~~ and EDUC 2010. This course is part of Elementary Education Level 1 and should be taken concurrently with EDUC 3120, EDUC 3140, EDUC 3205, EDUC 4550.

EDUC 3280 - Elementary Social Studies Methods

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course focuses on the place of social studies in the elementary school curriculum, the scope and rationale of the social studies curriculum, connections with other subject areas, teaching and assessment strategies, and building classroom community. Prerequisite: Admission to Teacher Education. Completion of Elementary Education Level 2 courses with a grade of B- or better. This course is part of Elementary Education Level 3 and should be taken with EDUC 3115, EDUC 4210, EDUC 4300, EDUC 4320, EDUC 4330.

EDUC 3315 - Media Integration in the Secondary School Setting

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course focuses on how to create media to support and apply research-based principles for learning into the educational environments. The curriculum is based on Core Curriculum skills for students in grades 9-12. The course content provides teacher licensure candidates with technology proficiencies for integrating technology into teaching. Prerequisite: Admission to Teacher Education. Verification of technology literacy training (through coursework or job experience) within the past five years. Completion of the computer and information literacy requirements. This course is part of the professional core courses and should be taken with EDUC 3220, EDUC 3265, EDUC 3900, EDUC 3910, EDUC 3935.

EDUC 3370 - Advanced Instructional Technology

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course allows students to apply existing technology literacy into educational environments to promote advanced use of educational technology in learning environments. The curriculum is based on teacher skills required to teach Utah State Educational Technology Standards for students in K-6 settings. The course focuses on providing teacher licensure candidates with advanced technology proficiencies for teaching with technology. Prerequisite: Verification of technology literacy training (through coursework or job experience) within the past five years. Completion of the computer and information literacy requirements.

EDUC 3375 - Foundations of Dual Immersion or Immersion Education

Credits: (3)
The course examines the background, underlying theory, and research foundations that support dual language and immersion education practices. Issues for teachers and administrators will be addressed. Practices and principles that inform language attentive curriculum will be a focus of the course.

EDUC 3390 - Literacy in the Primary Grades

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Analysis of developmental reading skills with emphasis on readiness for reading, phonic and structural analysis, word recognition, use of the basal reader, and reading for various purposes.

EDUC 3430 - Creative Processes in the Elementary School

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

This course focuses on the development of attitudes, methods, and skills in creative teaching, including an exploration of using music, art, dance, and drama in the elementary classroom. Graduate students will also explore philosophy, research, and theories that support arts integration, and development of teaching strategies and materials for use in the elementary classroom.

EDUC 3545 - Universal Positive Behavior Support Strategies for Teachers

Credits: (2)
Typically taught:
Spring [Full Sem]

This course is designed to teach teacher candidates validated classroom management strategies and level one behavioral intervention strategies. This course focuses on techniques and methods for preventative classroom student management. The course will assist candidates in writing effective classroom management plans. Candidates will be introduced to the process of Functional Behavior Assessments and Behavior Intervention Plans. Prerequisite: Completion of Education Level 1 courses with a grade of B- or better. Co-Requisite: EDUC 3565, EDUC 3575, EDUC 4515, EDUC 4521, EDUC 4530.

EDUC 3565 - Elementary English Language Arts: Evaluation, Remediation and Supports

Credits: (2)
Typically taught:
Spring [Full Sem]

This course is designed to teach teacher candidates validated evaluation and remediation strategies for K-5 students struggling in English Language Arts, focusing on techniques in elementary reading, writing, speaking, listening, and language. Candidates will be introduced to the process of identifying reading and writing difficulties, selecting evidence-based interventions, implementing instruction, and using the data-based instructional decision model to monitor students' ELA progress and intervention effectiveness. Prerequisite: Completion of Education Level 1 courses with a grade of B- or better. Co-Requisite: This course is part of Special Education Block 2 courses and should be taken with EDUC 3545, EDUC 3575, EDUC 4515, EDUC 4521, EDUC 4530.

EDUC 3575 - Elementary Mathematics: Evaluation, Remediation and Supports

Credits: (2)
Typically taught:
Spring [Full Sem]

This course is designed to teach teacher candidates validated evaluation and remediation strategies for K-5 students struggling in mathematics. This course focuses on techniques in elementary mathematics. Candidates will be introduced to the process of identifying math difficulties, selecting evidence based interventions, implementing instruction, and using the data-based instructional decision model to monitor students' math progress and intervention effectiveness. Prerequisite: Completion of Education Level 1 courses with a grade of B- or better. Co-Requisite: This course is part of Special Education Block 2 courses and should be taken with EDUC 3545, EDUC 3565, EDUC 4515, EDUC 4521, EDUC 4530.

EDUC 3900 - Preparing, Teaching, and Assessing Instruction

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This integrated course will focus on lesson planning, teaching, and assessment through the application of the Teacher Work Sample (TWS) using lesson plan formats taught in the content areas. A variety of instructional strategies effective for use at the secondary level will be taught and modeled. Prerequisite: Admission to Teacher Education. This course is part of the professional core courses and should be taken with EDUC 3220, EDUC 3315, EDUC 3265, EDUC 3910, and EDUC 3935.

EDUC 3910 - Secondary Education Practicum

Credits: (2)
The purpose of this practicum is to provide students with opportunities to design and implement content-specific instruction at the secondary level. Students are required to spend at least 40 hours in an assigned classroom. Prerequisite: Admission to Teacher Education. This course is part of the professional core courses and should be taken with EDUC 3220, EDUC 3265, EDUC 3315, EDUC 3900, EDUC 3935.

EDUC 3935 - Reading and Writing Across the Secondary Curriculum

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course will focus on assessment of reading comprehension of students, and decisions teachers make concerning methods, materials and procedures based on those assessments. Teacher candidates will integrate literacy skills (vocabulary, study skills, comprehension development and writing) within their respective content areas and teach sample lessons to secondary students. Prerequisite: Admission to Teacher Education. This course is part of the professional core courses and should be taken with EDUC 3220, EDUC 3265, EDUC 3315, EDUC 3900, EDUC 3910.

EDUC 4210 - Elementary Level III Practicum

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The purpose of this practicum is to provide students with opportunities to design and implement integrated instruction in the elementary grades. Instruction will focus on instruction of core subjects including language arts, mathematics, science, and social studies. Students are required to spend at least 60 hours in an assigned classroom. Prerequisite: Admission to Teacher Education. Completion of Elementary Education Level 2 courses with a grade of B- or better. This course is part of Elementary Education Level 3 and should be taken with EDUC 3115, EDUC 3280, EDUC 4300, EDUC 4320, EDUC 4330.

EDUC 4250 - Second Language Acquisition: Theories and Implementation

Credits: (3)
Typically taught:
Fall [Full Sem]

This course explores second language acquisition processes, current theories, and effective strategies as a knowledge base in planning appropriate curriculum and instruction for English language learners.

EDUC 4270 - Literacy Strategies for Teaching English Language Learners

Credits: (3)
Typically taught:
Spring [Full Sem]

This course will examine literacy strategies for English Language Learners. Teacher candidates will learn how to apply literacy strategies to teach reading, writing, listening and speaking skills, while including culture, to scaffold language development in both the second language and mainstream classrooms.

EDUC 4300 - Elementary Mathematics Methods

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course includes the study of mathematics methods appropriate for elementary school curriculum with specific emphasis on developmental strategies including the concrete-representational-abstract instructional model. Connections to other subject areas, problem solving, critical thinking skills and real-life situations are stressed. Prerequisite: Completion of Elementary Education Level 2 courses with a grade of B- or better. This course is part of Elementary Education Level 3 and should be taken with EDUC 3115, EDUC 3280, EDUC 4210, EDUC 4320, EDUC 4330.

EDUC 4310 - Foundations of Cooperative Learning

Credits: (2)
This course examines the rational, principles, skills and interaction strategies necessary before implementing Cooperative Learning in the classroom. Emphasis will be upon the basic components of Cooperative Learning, team building, and simple teamwork. Methods and strategies will be demonstrated and will involve active student group participation.

EDUC 4320 - Elementary Language Arts Methods

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course focuses on methods for language arts instruction in the elementary setting with specific emphasis on writing strategies. Particular emphasis is given to models of research-based instruction of core curriculum in language art. Prerequisite: Completion of Elementary Education Level 2 courses with a grade of B- or better. This course is part of Elementary Education Level 3 and should be taken with EDUC 3115, EDUC 3280, EDUC 4210, EDUC 4300, EDUC 4330.

EDUC 4330 - Elementary Science Methods

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course focuses on methods and materials for teaching hands-on guided discovery science with an emphasis on concepts included in the Utah core curriculum. Prerequisite: Completion of Elementary Education Level 2

courses with a grade of B- or better. This course is part of Elementary Education Level 3 and should be taken with EDUC 3115, EDUC 3280, EDUC 4210, EDUC 4300, EDUC 4320.

EDUC 4345 - Elementary Integrated Arts Methods

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course is designed to prepare students to successfully teach art and music in the elementary classroom. Students are expected to design, prepare and teach lessons to engage elementary students in art and music activities. Prerequisite: Admission to Teacher Education. Completion of Elementary Education Level 1 courses with a grade of B- or better. This course is part of Elementary Education Level 2 and should be taken with EDUC 3100, EDUC 3210, EDUC 3240, PEP 3620.

EDUC 4380 - Student Teaching in Elementary Education

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Student teaching experience in elementary public school setting plus weekly seminar on campus. Offered CR/NC only. Prerequisite: EDUC Level 3 (EDUC 3115, EDUC 3280, EDUC 4210, EDUC 4300, EDUC 4320, EDUC 4330) and permission of Field Experience Director. Can be repeated one time. Should be taken concurrently with EDUC 4950 the first time.

EDUC 4415 - Content-Based Second Language Curriculum, Instruction and Assessment

Credits: (3)
Participants in this course learn to plan curriculum and instruction for dual language and immersion classrooms that combine language and content goals using standards-based and backwards design approaches. They also learn a range of classroom-based strategies for assessing language and content.

EDUC 4420 - Foundations of Education of the Gifted

Credits: (2)
Typically taught:
(not currently taught)

An overview of education for the gifted and talented; historical and philosophical background; characteristics, needs, and developmental patterns of the gifted; issues in identification, differentiating curriculum, and educational program options; special populations of gifted students.

EDUC 4450 - Creativity and Applied Imagination in the K-12 Classroom

Credits: (2)
Typically taught:
(not currently taught)

Exploration and development of readily available personal and community resources to encourage creative thinking, classroom involvement, and transfer of learning.

EDUC 4470 - Teaching for Thinking

Credits: (2)
Typically taught:
(not currently taught)

Theory and practice for teaching thinking skills in elementary, middle, and high school classrooms. Prerequisite: Admission to Teacher Education and EDUC 3140 or equivalent.

EDUC 4480 - Differentiated Curriculum for the Gifted and Talented

Credits: (3)
Typically taught:
(not currently taught)

Curriculum theories and educational strategies for educating gifted and talented students. A practical course, with special attention to the development of instructional materials appropriate for use by gifted students in special programs as well as in the regular classroom.

EDUC 4490 - Assessment and Evaluation in Education of the Gifted

Credits: (3)
Typically taught:
(not currently taught)

Principles of assessment applied to: identification of gifted and talented students including identification of gifted in minority populations, diagnosis of student learning needs, learning styles, evaluation of student progress, and evaluation of program effectiveness.

EDUC 4510 - Foundations in Special Education Practice and Law

Credits: (3)
Typically taught:
Fall [Full Sem]

This course will introduce students to the philosophical, historical, legal and ethical foundations of special education. Students will examine in depth the characteristics of exceptional learners. Prerequisite: Admission to Teacher Education, EDUC 2010.

EDUC 4515 - Special Education Law and Practice

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course provides students with a broad knowledge and understanding of a wide range of legal issues concerning the provision of special education services to students with disabilities. A review of pertinent legislation concerning human and constitutional rights related to persons with disabilities will be addressed. Teachers' specific responsibilities and liabilities are described and related to current requirements for development of appropriate educational programs. Prerequisite: Admission to Teacher Education. Co-Requisite: This course is part of Special Education Block 2 courses and should be taken with EDUC 3545, EDUC 3565, EDUC 3575, EDUC 4521, EDUC 4530.

EDUC 4520 - Collaboration, Consultation, and IEP Development

Credits: (3)
Typically taught:
Fall [Full Sem]

Roles of the special educator and families. IEP development, Least Restrictive environment, managing multidisciplinary team activities and techniques of collaboration and consultation. Prerequisite: Admission to Teacher Education.

EDUC 4521 - Practicum in Special Education

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This Practicum experience will focus on a) assessment, b) behavior management, and c) mathematics instruction in a field-based experience. Students will be introduced to the IEP process and will practice developing collaborative relationships within school settings. Prerequisite: Completion of Special Education Block 1 Foundation courses with a grade of B- or better. Co-Requisite: This course is part of Special Education Block 2 courses and should be taken with EDUC 3545, EDUC 3565, EDUC 3575, EDUC 4515, EDUC 4530.

EDUC 4530 - Principles and Applications of Special Education Assessment

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Administer, score, and interpret norm-referenced assessments instruments, analyze in combination with data from other assessment processes, and use to determine eligibility and develop educational programs. Requires passing Block 1 with a B- or better. This course is part of Special Education Block 3 courses and should be taken with EDUC 4545, EDUC 4565, EDUC 4575, EDUC 4580.

EDUC 4540 - Managing Student Behavior

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Current issues, practices, and application of a variety of approaches for behavior change, discipline and management of the classroom environment, and the teaching of appropriate social skills. This course is part of Special Education Block 1 courses and should be taken with EDUC 4521, EDUC 4530, EDUC 4550, EDUC 4560.

EDUC 4545 - Individualized Behavioral Strategies using Applied Behavior Analysis

Credits: (2)
Typically taught:
Fall [Full Sem]

This course is designed to teach teacher candidates validated individual behavioral intervention strategies, particularly those designed to meet the needs of students with severe behavioral and social skill deficits. This course will address the needs of those candidates using Applied Behavior Analysis. Candidates will conduct functional assessments and write and implement a function-based behavior intervention plan. Prerequisite: Completion of Education Level 2 courses with a grade of B- or better. Co-Requisite: This course is part of Special Education Block 3 Advanced Methods and should be taken with EDUC 4565, EDUC 4575, EDUC 4580, EDUC 4582.

EDUC 4550 - Instructional Planning and Learning Environments for Special Education Students

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Instructional programming and modification of curriculum for students with disabilities served by teachers with Mild/Moderate Endorsements. Prerequisite: Admission to Teacher Education. This course is part of Special Education Block 2 Integrated Methods courses and should be taken with EDUC 3545, EDUC 3565, EDUC 3575, EDUC 4515, EDUC 4521.

EDUC 4555 - Validated Instructional Methods: Reading

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course is designed to introduce principles and validated strategies for teaching reading to students with mild/moderate disabilities. The course will cover student characteristics and school setting demands that contribute to lack of success in reading. Prerequisite: Completion of Special Education Block 2 Integrated Methods courses with a grade of B- or better. This course is part of Special Education Block 3 Advanced Methods courses and should be taken with EDUC 4570, EDUC 4580, EDUC 4581.

EDUC 4560 - Validated Instructional Methods: Mathematics

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course is designed to introduce principles and techniques for diagnosis and remediation of mathematics problems. The course will cover student characteristics and school setting demands that contribute to lack of success in mathematics classrooms. Prerequisite: Completion of Special Education Block 1 Foundation courses with a grade of B- or better. This course is part of Special Education Block 2 Integrated Methods courses and should be taken with EDUC 4521, EDUC 4530, EDUC 4540, EDUC 4550.

EDUC 4565 - Secondary English Language Arts: Evaluation, Remediation and Supports

Credits: (2)
Typically taught:
Fall [Full Sem]

This course is designed to teach teacher candidates validated evaluation and remediation strategies for 6-12 students struggling in English Language Arts, focusing on techniques in secondary reading, writing, speaking, listening, and language. Candidates will be introduced to the process of identifying reading and writing difficulties, selecting evidence-based interventions, implementing instruction, and using the data-based instructional decision model to monitor students' ELA progress and intervention effectiveness. Prerequisite: Completion of Education Level 2 courses with a grade of B- or better. Co-Requisite: This course is part of Special Education Block 3 Advanced Methods and should be taken with EDUC 4545, EDUC 4575, EDUC 4580, EDUC 4582.

EDUC 4570 - Validated Instructional Methods: Written Expression

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course is designed to introduce principles and validated strategies for teaching written expression to students with mild/moderate disabilities. The course will cover student characteristics and school setting demands that contribute to lack of success in written expression. Prerequisite: EDUC 4530. Co-Requisite: EDUC 4581. This course is part of Special Education Block 3 Advanced Methods courses and should be taken with EDUC 4555, EDUC 4580, EDUC 4581.

EDUC 4575 - Secondary Mathematics: Evaluation, Remediation and Supports

Credits: (2)
Typically taught:
Fall [Full Sem]

This course is designed to teach teacher candidates validated evaluation and remediation strategies for students in grades 6-12 struggling in mathematics. This course focuses on techniques in secondary mathematics. Candidates will be introduced to the process of identifying math difficulties, selecting evidence based interventions, implementing instruction, and using the data-based instructional decision model to monitor students' math progress and intervention effectiveness. Prerequisite: Completion of Education Level 2 courses with a grade of B- or better. Co-Requisite: This course is part of Special Education Block 3 Advanced Methods and should be taken with EDUC 4545, EDUC 4565, EDUC 4580, EDUC 4582.

EDUC 4580 - Learning Strategies and Transition for Special Education Students

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Instructional programming and modification of curriculum for students with disabilities served by teachers with Mild/Moderate Endorsements. Prerequisite: Completion of Special Education Block 2 Integrated Methods courses with a grade of B- or better. This course is part of Special Education Block 3 Advanced Methods and should be taken with EDUC 4545, EDUC 4565, EDUC 4575, EDUC 4582.

EDUC 4581 - Pre-Student Teaching in Special Education: Assessment, Behavior Management, Instruction

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The purpose of Pre-Student Teaching is to continue field experience in a supportive and professional manner. The student will have the opportunity to experience teaching and the responsibilities that it entails under the direct guidance of the Cooperating Teacher and the Course Instructor. This course is designed to provide students with practical experiences in the areas of: a) literacy curriculum and instruction for students K-12, and (b) planning and developing post secondary transition plans. Practical experience in assessment and behavior management are continued. Prerequisite: Completion of Special Education Block 2 Integrated Methods courses with a grade of B- or better. This course is part of Special Education Block 3 Advanced Methods courses and should be taken with EDUC 4555, EDUC 4570, EDUC 4580.

EDUC 4582 - Special Education Level III Practicum

Credits: (3)
Typically taught:
Fall [Full Sem]

The purpose of this practicum is to provide teacher candidates with opportunities to implement content-specific instruction and demonstrate quality instruction while working in secondary special education classrooms. Prerequisite: Completion of Education Level 2 courses with a grade of B- or better. Co-Requisite: This course is part of Special Education Block 3 Advanced Methods and should be taken with EDUC 4545, EDUC 4565, EDUC 4575, EDUC 4580.

EDUC 4640 - Validated Instructional Methods: Mathematics

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course is designed to introduce principles and techniques for diagnosis and remediation of mathematics problems. The course will cover student characteristics and school setting demands that contribute to lack of success in mathematics classrooms.

EDUC 4650 - Validated Instructional Methods: Reading

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course is designed to introduce principles and validated strategies for teaching reading to students with mild/moderate disabilities. The course will cover student characteristics and school setting demands that contribute to lack of success in reading.

EDUC 4660 - Validated Instructional Methods: Written Expression

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course is designed to introduce principles and validated strategies for teaching written expression to students with mild/moderate disabilities. The course will cover student characteristics and school setting demands that contribute to lack of success in written expression.

EDUC 4670 - Special Education Student Teaching

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Supervised teaching in selected special education programs in an elementary or secondary school. Available on a CR/NC basis only. Prerequisite: successful completion of mild/moderate licensure course work and permission of the Field Experience Director. Can be repeated one time. Should be taken concurrently with EDUC 4686 the first time.

EDUC 4680 - Special Education Student Teaching

Credits: (8)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Supervised clinical practice in an elementary or secondary school at which candidates teach pupils with mild/moderate disabilities. Available on a CR/NC basis only. Prerequisite: Successful completion of Special Education major requirements, EDUC 4581, EDUC 4570 with B- or above. Must be taken concurrently with EDUC 4686.

EDUC 4685 - Special Education Student Teaching Seminar and Synthesis

Credits: (1)
Typically taught:
Non-majors

The Seminar and Synthesis will support student teaching through regular meetings. Prerequisite: Successful completion of Special Education Licensure requirements. Must be taken concurrently with EDUC 4670.

EDUC 4686 - Special Education Student Teaching Seminar & Synthesis for Special Education Majors

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The Seminar and Synthesis will support student teaching through regular meetings on campus. Co-Requisite: EDUC 4680.

EDUC 4700 - Learning in the Schools

Credits: (2)
Principles of learning and management and their application to the school situation. Prerequisite: Student teaching.

EDUC 4740 - Building School Partnerships with ESL/Bilingual Families

Credits: (1)
Typically taught:
Spring [Full Sem]
Summer [Full Sem]

This course prepares students to be advocates and practitioners of family involvement in education. Goals and benefits of family involvement will be explored along with specific strategies for developing a partnership within the education system. Components of family structure, economics, cultural diversity, second-language learners, communication skills and resources are integrated into the student experience.

EDUC 4820E - Managing Diverse Classrooms

Credits: (3)
Typically taught:
(not currently taught)

Current issues, methodology and application of a variety of approaches for behavioral change, discipline and management of diverse learners in the context of classroom environments. Prerequisite: Teacher Education Level 3 Elementary (EDUC 4300, EDUC 4320 or EDUC 4350 if previously taken, EDUC 4330, EDUC 4345). Should be taken concurrently with the other courses in Teacher Education Level 4 Elementary (EDUC 4840, EDUC 4860).

EDUC 4820S - Managing Diverse Classrooms

Credits: (3)
Typically taught:
(not currently taught)

Current issues, methodology and application of a variety of approaches for behavioral change, discipline and management of diverse learners in the context of classroom environments. Prerequisite: Secondary Teacher Education Core (EDUC 3220, EDUC 3900, and EDUC 3935).

EDUC 4830 - Individually Prescribed Program

Credits: (1-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Designed primarily for individual needs. May be repeated up to 6 credit hours.

EDUC 4840 - Student Teaching in Elementary Education

Credits: (8)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Student teaching experience in a public school to synthesize theory and practice. Support seminars held on campus. Available on a CR/NC basis only. Prerequisite: EDUC Level 3 (EDUC 3115, EDUC 3280, EDUC 4210, EDUC 4300, EDUC 4320, EDUC 4330) and permission of the Field Experience Directror. Should be taken concurrently with EDUC 4850.

EDUC 4850 - Integrated Elementary Education Student Teaching Seminar and Synthesis

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course will help prepare teacher candidates for student teaching and ultimately licensure with two different types of activities. First, are weekly, 3-hour collaboration and topical seminars emphasizing on-going discussions and support on classroom management, preparing the TWS and INTASC portfolio, creating your career file, and other education issues. Second, is a two-day workshop to synthesize the semester and have your INTASC portfolio assessed. Prerequisite: EDUC 4300, EDUC 4320, EDUC 4330, and EDUC 4345. (Should be taken concurrently with EDUC 4840.)

EDUC 4860 - Elementary Senior Synthesis Seminar

Credits: (1)
Typically taught:
(not currently taught)

Synthesis of the TREC model for elementary programs with specific emphasis on beginning a professional career in teaching. Senior project is required. To be taken for CR/NC only. Prerequisite: Teacher Education Level 3 Elementary (EDUC 4300, EDUC 4320 or EDUC 4350 if previously taken, EDUC 4330, EDUC 4345). Should be taken concurrently with the other courses in Teacher Education Level 4 Elementary (EDUC 4820E , EDUC 4840).

EDUC 4870 - Directed Experiences with Students

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Directed experiences with elementary and secondary school students in cooperating schools. Students may register for one unit of credit per semester for a maximum of three semester hours.

EDUC 4890 - Cooperative Work Experience

Credits: (1-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

For students accepted to the Teacher Education Program who meet the minimum cooperative work experience requirements of the department. Provides academic credit for on-the-job experience. Amount of credit will be determined by the department. Fingerprinting/background check must be completed prior to working in the schools. May be repeated up to 6 credit hours.

EDUC 4920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-6)
Typically taught:
Consult the semester class schedule for the current offering under this number.

The specific title and credit authorized will appear on the student transcript. Available on CR/NC basis. May be repeated up to 6 credit hours.

EDUC 4930 - Student Teaching in Secondary Education

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Student teaching experience in secondary public school setting plus weekly seminar on campus. Offered CR/NC only. Prerequisite: Secondary Teacher Education Core (EDUC 3220, EDUC 3265, EDUC 3315, EDUC 3900, EDUC 3910, EDUC 3935) and permission of the Field Experience Director. Can be repeated one time. Should be taken concurrently with EDUC 4950 the first time.

EDUC 4940 - Student Teaching in Secondary Education

Credits: (8)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Student teaching experience in a public school to synthesize theory and practice. Support seminars held on campus. Available on a CR/NC basis only. Prerequisite: Secondary Teacher Education Core (EDUC 3220, EDUC 3265, EDUC 3315, EDUC 3900, EDUC 3910, EDUC 3935). Should be taken concurrently with EDUC 4950 Integrated Secondary Student Teaching Seminar.

EDUC 4950 - Integrated Secondary Student Teaching Seminar

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Preparation and support for secondary clinical practice. Collaborative and topical seminars will emphasize on-going discussions and support on classroom management, ethics, preparing the TWS and INTASC portfolio, creating a career file, and secondary school issues. Prerequisite: Completion of Secondary Teacher Education Core (EDUC 3220, EDUC 3265, EDUC 3315, EDUC 3900, EDUC 3910, EDUC 3935). Should be taken concurrently with Student Teaching in Secondary Education (EDUC 4930 or EDUC 4940).

EDUC 4960 - Secondary Senior Synthesis Seminar

Credits: (1)
Typically taught:
(not currently taught)

Synthesis of the TREC Model for elementary and secondary programs with specific emphasis on beginning a professional career in teaching. Senior Project is required. Should be taken concurrently with EDUC 4820S and EDUC 4840.

EDUC 5050 - Action Research in the Classroom

Credits: (2)
Typically taught:
(TBA, as needed)

Students will explore effective classroom-based research techniques, complete a classroom-based case study, and promote the ongoing application of research to the improvement of teaching practice. This course is designed for cooperating teachers in the site-based teacher education program, and is graded CR/NC.

EDUC 5060 - Effective Mentoring in the Classroom

Credits: (2)
Typically taught:

(TBA, as needed)

Course covers strategies for effectively mentoring student teachers and novice teachers by expert teachers. Expectations for the course include journal keeping, writing assignments, and mentoring project.

EDUC 5110 - Advanced Multicultural/Bilingual Education

Credits: (3)
Provides a knowledge base concerning the curricular issues and need for multicultural education, and explores various curriculum models and approaches for successful implementation of multicultural education across the curriculum.

EDUC 5120 - Culture and Language

Credits: (3)
Examines the effects and impact of historical, political, social, and economic issues which affect teaching and learning for students from diverse cultural and ethnic groups.

EDUC 5320 - Reading in the Content Areas

Credits: (3)
Use of reading as an effective means to help students comprehend their course material. Explores how to incorporate these skills into the curriculum of the content areas.

EDUC 5330 - Using Children's Literature in the Classroom

Credits: (2)
This course will provide a broad basis for using children's literature for instructional purposes in elementary classrooms to enhance literacy development.

EDUC 5340 - Assessment and Corrective Procedures in Reading

Credits: (3)
Assessment of reading problems and corrective procedures for remediation in elementary classrooms.

EDUC 5360 - Literacy in the Elementary School

Credits: (3)
An exploration of current reading, oral and written language theories, and their applications for the improvement of literacy practices in schools.

EDUC 5770 - Field Experience in ESL/Bilingual Education

Credits: (2)
Typically taught:

Fall [Full Sem]
Spring [Full Sem]

Students will gain experience in teaching and working with ESL/bilingual students and apply what they have learned from relevant courses.

EDUC 5920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-3)
Typically taught:
Consult the semester class schedule for the current offering under this number.

The specific title and credit authorized will appear on the student transcript. Available on CR/NC basis. May be repeated up to 18 credit hours.

~~**EE 1000 - Introduction to Electrical Engineering**~~

~~**Credits: (2)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~

~~An introductory course to Electrical Engineering topics including electronic terms, numbering systems, software tools, and documentation practices. College algebra and trigonometry are strongly recommended.~~

~~**EE 1270 - Introduction to Electrical Circuits**~~

~~**Credits: (4)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~

~~The basics of analog circuits as an introduction to Electrical Engineering. Concepts of voltage, current, power, resistance capacitance and inductance. Circuit analysis techniques such as Kirchhoff's Laws, node voltages, and mesh currents. Thevenin's and Norton's equivalent circuits, sinusoidal steady state and phasors. Lecture and lab combination. Prerequisite: MATH 1210.~~

~~**EE 2260 - Fundamentals of Electrical Circuits**~~

~~**Credits: (4)**~~
~~**Typically taught:**~~
~~**Spring [Full Sem]**~~

~~Fundamental electric-circuit techniques including: time-domain transient responses for 1st and 2nd order circuits, Laplace transforms, Fourier series, and filters. Lecture and lab combination. Prerequisite: EE 1270 and MATH 1220.~~

-

~~EE 2700 - Digital Circuits~~

~~Credits: (4)~~
~~Typically taught:~~
~~Spring [Full Sem]~~

~~An introduction to digital electronics, integrated circuits, numbering systems, Boolean algebra, gates, flip-flops, multiplexers, sequential circuits, combinational circuits, and computer architecture. Introduction to hardware description language and programmable logic devices. Lecture and lab combination. Laboratory activities to include the design, construction, analysis, and measurement of basic digital systems. Co-Requisite: (Recommend) CS 2250 or CS 1410.~~

-

~~EE 3000 - Engineering Seminar~~

~~Credits: (1)~~
~~Typically taught:~~
~~Fall [Full Sem]~~

~~An engineering seminar course designed to prepare the student for professional engineering employment. Topics to include resumes, hiring criteria, interviewing techniques, engineering ethics, professional and societal responsibilities, lifelong learning, diversity, creative problem solving, goals, quality, timeliness, and continuous improvement. The students will research related topics and write a paper. Prerequisite: EE 1270.~~

-

~~EE 3110 - Microelectronics I~~

~~Credits: (4)~~
~~Typically taught:~~
~~Fall [Full Sem]~~

~~Fundamental semiconductor device characteristics including diodes, MOSFETs and bipolar transistors; small and large signal characteristics and design of linear circuits. Lecture and lab combination. Laboratory activities to include the design, construction, computer simulation, and analysis of semiconductor circuits, amplifiers and power supplies. Prerequisite: CHEM 1210 and EE 2260.~~

-

~~EE 3120 - Microelectronics II~~

~~Credits: (4)~~
~~Typically taught:~~

~~**Spring [Full Sem]**~~

~~Intermediate topics related to microelectronics including differential and multistage amplifiers, frequency response, feedback systems, power amplifiers, filters, and signal generation. Lecture and lab combination. Laboratory activities to include the design, construction, computer simulation, and analysis of filters and advanced circuits. Prerequisite: EE 3110.~~

-

~~**EE 3210 - Signals and Systems**~~

~~**Credits: (4)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~

~~Topics related to the analysis of linear time invariant continuous and discrete systems and signal transformations, convolution, frequency spectra, Laplace transforms, Z transforms, and fast Fourier transforms. Lecture and lab combination. Laboratory activities to include the computer simulation, analysis, and numerical modeling of signals and systems. Prerequisite: EE 2260 and MATH 2250 or MATH 2270 and MATH 2280.~~

-

~~**EE 3310 - Electromagnetics I**~~

~~**Credits: (4)**~~
~~**Typically taught:**~~
~~**Spring [Full Sem]**~~

~~An introduction to electrostatics, magnetostatics and Maxwell's equations with specific applications to wave propagation and transmission line theory. Lecture and lab combination. Laboratory activities to include the design, construction, and analysis of RF radar subsystems. Prerequisite: MATH 2210, PHYS 2220, and EE 2260.~~

-

~~**EE 3610 - Digital Systems**~~

~~**Credits: (4)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~

~~Introduction to microprocessor architecture, arithmetic logic units, memory systems, input/output interfaces, peripheral devices, and communication. Lecture and lab combination. Laboratory activities to include the programming and operation of microprocessor circuits. Prerequisite: EE 2700 and CS 2250 or CS 1410.~~

-

~~**EE 3710 - Embedded Systems**~~

~~**Credits: (4)**~~
~~**Typically taught:**~~
~~**Spring [Full Sem]**~~

~~Design and implementation of a microcontroller or microprocessor embedded system including assembly language programming, interfacing to peripherals, interrupt handling and debugging techniques. Lecture and Lab. Laboratory exercises build toward a final embedded systems project. Prerequisite: EE 2700, and CS 2250 or CS 1410.~~

-

~~**EE 3890 - Internship**~~

~~**Credits: (2)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~
~~**Summer [Full Sem]**~~

~~This is a core course that is required for the BS Engineering degree. EE 3890 can be taken a maximum of three times for a total of six credits, but only two credits count toward the major. The student will need department approval before being allowed to register. Prerequisite: Permission from the department.~~

-

~~**EE 4010 - Senior Project I**~~

~~**Credits: (2)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~

~~Students will be required to complete a 200-hour engineering project in a team environment. Project management and problem solving techniques will be emphasized. Topics to include goal setting, developing milestone charts, writing contracts, conducting research, project design and construction, testing and analysis, project documentation, and design review presentations. Prerequisite: Permission from the department.~~

-

~~**EE 4020 - Senior Project II**~~

~~**Credits: (2)**~~
~~**Typically taught:**~~
~~**Spring [Full Sem]**~~
~~**Fall [Full Sem]**~~

~~A continuation of Senior Project I. Students will be required to complete a significant engineering project in a team environment. Project management and problem solving techniques will be emphasized. Topics to include goal setting,~~

~~developing milestone charts, writing contracts, conducting research, project design and construction, testing and analysis, project documentation, and design review presentations. Prerequisite: EE 4010.~~

~~EE 4100 - Control Systems~~

~~Credits: (4)~~
~~Typically taught:~~
~~Fall [Full Sem]~~

~~Topics related to control theory, analysis, and testing of systems in the time domain, frequency domain and state space. Lecture and lab combination. Prerequisite: EE 3120 and EE 3210.~~

~~EE 4210 - Digital Signal Processing~~

~~Credits: (3)~~
~~Typically taught:~~
~~Summer [Full Sem]~~

~~Theory, application, and implementation of digital signal processing (DSP) concepts, from the design and implementation perspective. Topics include: Fast Fourier transforms, adaptive filters, state-space algorithms, random signals, and spectral estimation. Prerequisite: EE 3210.~~

~~EE 4310 - Electromagnetics II~~

~~Credits: (3)~~
~~Typically taught:~~
~~Spring [Full Sem]~~

~~A study of intermediate electromagnetic issues common to circuits, systems, and communication networks. Prerequisite: EE 3310.~~

~~EE 4410 - Communication Circuits and Systems~~

~~Credits: (3)~~
~~Typically taught:~~
~~Fall [Full Sem]~~

~~A study of communication circuits, modulation and decoding theory, spectrum usage, networks, and protocols. Prerequisite: EE 3210 and MATH 3410.~~

~~EE 4510 - Power Systems~~

~~Credits: (4)~~
~~Typically taught:~~
~~Spring [Full Sem]~~

~~A study of AC and DC power systems and machines, including single and 3-phase power, power factor and correction, transformers, synchronous and induction machines, DC motors, power transmission lines, and analysis of power flow and faults. Lecture and Lab combination. Prerequisite: EE 2260. Prerequisite/Corequisite: EE 3310.~~

~~EE 4710 - Real-Time Embedded Systems~~

~~Credits: (4)~~
~~Typically taught:~~
~~Fall [Full Sem]~~

~~An advanced course on real-time embedded system design. Topics include task concurrency, scheduling paradigms, synchronization, resource access control, and inter-process communication. Lecture and Lab combination. Prerequisite: EE 3710.~~

~~EE 4800 - Individual Studies~~

~~Credits: (1-4)~~
~~The students will receive credit for approved studies in the Electrical & Computer Engineering programs. A maximum of four credits can count as an elective course in the Electrical & Computer Engineering programs.~~

-

~~EE 4900 - Special Topics~~

~~Credits: (1-4)~~
~~A one-time special study course designed to introduce a new relevant topic that is not covered in the Electrical & Computer Engineering programs. Lecture and lab combination. Laboratory activities support the selected course topic. A maximum of four credits can be counted for the Electrical & Computer Engineering programs.~~

~~EE 6010 - Design Project~~

~~Credits: (2-6)~~
~~Students are required to complete a substantial engineering design project. Students must demonstrate proficiency in research, design, analysis, project planning, implementation, testing, presentation and documentation. Students must be enrolled when defending their project and documentation in a final design review. Prerequisite: Permission from the department. May be repeated up to 6 credit hours.~~

~~EE 6110 - Digital VLSI Design~~

~~Credits: (3)~~
~~Introduction to Digital VLSI design. Includes the development of standard cell library of common CMOS~~

~~circuits. Use of hardware description language and CAD tools for the design and simulation of custom large-scale digital systems. Students will understand the impacts and tradeoffs from speed, power consumption, and thermal properties of large-scale custom ICs. Prerequisite: EE 3610.~~

~~EE 6120 - Advanced VLSI Design~~

~~Credits: (3)~~
~~Design of stable asynchronous VLSI systems. Course includes design, modeling, synthesis, optimization, and verification of asynchronous circuits and large-scale systems. Students will develop custom asynchronous libraries and utilize them for system design utilizing CAD programs. Prerequisite: EE 3610.~~

~~EE 6130 - Advanced Semiconductor Devices~~

~~Credits: (3)~~
~~Introduction to advanced semiconductor physics and devices. Topics include carrier transport theory, energy band diagrams, PN junctions, metal-semiconductor junctions, BJTs and MOSFETs. Study of current semiconductor process technologies and discussion of off-roadmap technologies. Prerequisite: PHYS 2220 and EE 3110.~~

~~EE 6210 - Digital Signal Processing~~

~~Credits: (3)~~
~~Theory, application, and implementation of digital signal processing (DSP) concepts, from the design and implementation perspective. Topics include: Fast Fourier transforms, adaptive filters, state-space algorithms, random signals, and spectral estimation. Prerequisite: EE 3210.~~

~~EE 6220 - Image Processing~~

~~Credits: (3)~~
~~Advanced image processing theory and methods. Topics include digital image formation, transformation, filtering, enhancements, segmentation and morphological processing. Lectures, computer assignments and project (including term paper). Prerequisite: EE 3210.~~

~~EE 6410 - Communication Circuits and Systems~~

~~Credits: (3)~~
~~A study of communication circuits, modulation and decoding theory, spectrum usage, networks, and protocols. Prerequisite: EE 3210 and MATH 3410.~~

~~EE 6420 - Digital Communication~~

~~Credits: (3)~~
~~This course provides an in-depth coverage of the theory, analysis, and design of digital communications systems with an emphasis on advanced topics related to wired, wireless data communication and the physical networking layer. Topics include QPSK, QAM, PAM, CSMA/CD, SONET, ADSL, and/or MACAW. Spread spectrum concepts such as FHSS, DSSS, OFDM, MIMO and/or cooperative communication techniques may be included. Students will develop Matlab based models to emulate the concepts. The course will include group projects as well as individual~~

~~assignments. The course would be beneficial particularly to students who are interested in doing work/research in fields related to communications, networks, and signal processing. Prerequisite: EE 3210 and MATH 3410.~~

~~EE 6710 - Real-Time Embedded Systems~~

~~Credits: (4)~~
~~An advanced course on real-time embedded system design. Topics include task concurrency, scheduling paradigms, synchronization, resource access control, and inter-process communication. Lecture and Lab combination. Prerequisite: EE 3710.~~

EET 1110 - Basic Electronics

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Introduction to the concepts and fundamentals of electronic devices, circuits and systems. An electronics overview course for technology majors. Topics include direct current electricity, alternating current electricity, transistors and integrated circuits, amplifiers and oscillators, transmitters and receivers, digital logic circuits, electronic memory, and computers. Prerequisite: Credit for or concurrent enrollment in MATH 1010 or higher.

EET 1130 - Digital Systems

Credits: (4)
Typically taught:
Fall [Full Sem]

Introduction to digital electronics, integrated circuits, numbering systems, Boolean algebra, gates, flip-flops, multiplexers, sequential circuits, combinational circuits, programmable logic devices, and computer architecture. Lecture and lab combination. Laboratory activities to include the design, construction, analysis, and measurement of basic digital systems. Prerequisite/Co-requisite: Prerequisite: Credit for or concurrent enrollment in MATH 1010 or equivalent or any higher math.

EET 1140 - DC Circuits

Credits: (3)
Typically taught:
Spring [Full Sem]

Introduction to DC circuit fundamentals, analysis, theorems, laws, components, measuring devices, and equipment. The introduction and use of measuring instruments and power supplies. Lecture and lab combination. Laboratory activities to include circuit design, construction, and analysis of DC circuits. Prerequisite/Co-requisite: Prerequisite: EET 1110 and credit for or concurrent enrollment in MATH 1060 or MATH 1080 or any higher math.

EET 1850 - Industrial Electronics

Credits: (4)
Typically taught:
Spring [Full Sem]

Industrial electronics course for Mechanical and Manufacturing Engineering Technology majors. Introduction to DC and AC circuits, machines, and power systems. Lecture and lab combination. Laboratory activities to include the design, construction, and analysis of DC/AC circuits and machinery. Prerequisite: MATH 1010 or equivalent or any higher math.

EET 2010 - AC Circuits

Credits: (3)
The course serves as an extension of circuit analysis methods taught in EET 1140 to AC networks. The introduction of complex numbers and phasor notation at the beginning of the course is followed by AC circuit analysis techniques and the determination of the frequency response for passive AC networks. The course is a combination of lecture and laboratory formats. Laboratory activities will include the design, computer simulation, validation and analysis of passive AC networks. Prerequisite: EET 1140 and credit for MATH 1060 or MATH 1080.

EET 2110 - Semiconductor Circuits

Credits: (4)
Typically taught:
Fall [Full Sem]

Introduction to the design and analysis of semiconductor circuits using diodes, transistors, op-amps, field effect devices, thyristors, and regulators. Lecture and lab combination. Laboratory activities to include the design, construction, computer simulation, and analysis of semiconductor circuits, amplifiers and power supplies. Prerequisite: EET 1130 , EET 1140, MATH 1060 or higher.

EET 2120 - Power and Motors

Credits: (4)
Typically taught:
Fall [Full Sem]

Introduction to AC and DC motors, relays, transformers, power measurements, National Electrical Code, ladder logic, wiring, and programmable logic controllers (PLCs). Lecture and lab combination. Laboratory activities to include the design, construction, and analysis of basic power circuits and machinery configurations. Prerequisite: EET 1140, MATH 1060 or higher.

EET 2130 - PC Board Design

Credits: (3)
Typically taught:
Spring [Full Sem]

An introduction to the design of printed circuit boards and packaging with emphasis on the design, simulation, analysis and packaging of circuits. Lecture and lab combination. Laboratory activities include the design,

construction, and testing of prototype circuit boards. CAD programs will be used for the design and layout of circuit boards. Prerequisite: EET 2110.

EET 2140 - Communications Systems

Credits: (4)
Typically taught:
Spring [Full Sem]

Introduction to digital and wireless communication circuits. Topics to include radio frequency circuits, modulation, detection, transmitters, receivers, transmission lines, antennas, and measurement instruments. Digital communications topics to include parallel and serial data transmission. Lecture and lab combination. Laboratory activities to include the design, construction, computer simulation, and analysis of communication circuits. Prerequisite: EET 2110.

EET 2150 - Embedded Controllers

Credits: (4)
Typically taught:
Spring [Full Sem]

A study of microprocessors, embedded controllers, operational characteristics, computer architecture, machine code programming, memory devices, and interfacing. Lecture and lab combination. Laboratory activities include the design, construction, and analysis of microprocessor based systems. Analysis techniques include the use of assemblers, cross-assemblers, and emulators. Prerequisite: Credit for or Current Enrollment in EET 2110.

EET 2160 - Troubleshooting

Credits: (3)
Typically taught:
Spring [Full Sem]

An introduction to troubleshooting techniques and skills. Topics include the use of diagnostic electronic test equipment such as multi-meters, power supplies, signal generators, digital storage oscilloscopes, and spectrum analyzers. Students will diagnose and repair electronic circuits and systems. Lecture and laboratory combination. Prerequisite: EET 2110, EET 2120, EET 2170.

EET 2170 - Industrial Controls

Credits: (3)
Typically taught:
Fall [Full Sem]

Introduction to industrial control systems for manufacturing and automated test applications. The course will focus on LabVIEW control systems and Programmable Logic Controllers (PLCs). Students will configure, program, and troubleshoot industrial control systems. Lecture and lab combination. Prerequisite: EET 1130, EET 1140.

EET 2180 - Solar PV Systems

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The purpose of this course is for each student to learn the fundamental knowledge and technology of solar PV (Photovoltaic) systems. This course discusses the limitation and the impacts of using fossil fuel energy and its possible impact on global climate change. Solar energy can provide a long term solution and minimize climate change. This course will enable students to build an essential foundation towards how to design the solar PV systems for various applications. The topics in this course include PV markets and applications, electricity basics, safety basics, the fundamentals of solar PV energy, PV system components, grid-tied and battery-based systems, load analysis and PV system sizing, PV system electrical and mechanical designs, National Electric Code (NEC) applied to PV systems, commissioning and decommissioning, performance analysis, maintenance and troubleshooting. Incentives, rebates and policies from federal, state and local power company will also be addressed in the class. The students will learn how to acquire professional certifications if they are interested in developing a career in solar PV industry. Prerequisite: EET 1140 or EET 1850.

EET 2190 - Solar PV Technical Assessments

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The purpose of this course is to educate each student how to be a solar electric professional with demonstrated expertise in the siting, design, analysis and performance of PV systems from site specific information, analyzes customer needs and energy usage for the purpose of advising and providing customers with the most appropriate solution for their situation. Each student will also learn the fundamental knowledge and technology of solar PV (Photovoltaic) systems. The topics in this course include PV markets and applications, electricity basics, safety basics, the fundamentals of solar PV energy, PV system components and configurations, grid-tied and battery-based systems, load analysis, qualifying the customer, site analysis, conceptual PV system design, financial costs, incentives and savings, financial benefit analysis and financing, non-financial benefit analysis, performance analysis, prepare proposals, and professional sales skills. The students will learn how to acquire professional certifications if they are interested in developing a career in solar PV industry. Prerequisite: EET 1140 or EET 1850.

EET 3010 - Circuit Analysis

Credits: (4)
Typically taught:
Fall [Full Sem]

Advanced calculus-based topics related to electronic circuit analysis, Laplace transforms, differential equations, Fourier series, Fourier transforms, and applications. Lecture and lab combination. Laboratory activities include circuit design, construction, computer simulation, and analysis. Prerequisite: EET 2110, EET 2140, Credit for or Current Enrollment in in MATH 1210.

EET 3020 - Active Filters

Credits: (4)
Continuation of Circuit Analysis, EET 3010. Topics include active and passive filters, Pole-zero analysis, stability,

Bode diagrams, frequency response, and applications. Lecture and lab combination. Laboratory activities include circuit design, construction, computer simulation, and analysis. Prerequisite: EET 3010.

EET 3030 - FPGA and ASIC Design

Credits: (4)
Typically taught:
Spring [Full Sem]

Introduction to field programmable gate arrays (FPGA) and application specific integrated circuit (ASIC) design. Lecture and lab combination. Laboratory activities to include the use of computer design tools to design, model, simulate, and program gate arrays and application specific integrated circuits. Prerequisite: EET 2150.

EET 3040 - Instrumentation and Measurements

Credits: (4)
Typically taught:
Fall [Full Sem]

Introduction to electronic data acquisition, data analysis, error analysis, signal measurement, and automatic testing techniques. Lecture and lab combination. Laboratory activities to include the design, construction, and analysis of measurement circuits, data acquisition circuits, instrumentation devices, and automatic testing. Prerequisite: EET 2110, EET 2170.

EET 3050 - Assembly Language & Device Drivers

Credits: (4)
Typically taught:
Spring [Full Sem]

Small computer architecture, computer I/O, graphics, assembly language fundamentals, BIOS, device drivers, advanced assembly language techniques. Lecture and lab combination. Laboratory activities to include design, simulation, computer programming, analysis, and troubleshooting. Prerequisite: EET 2150.

EET 3060 - Real-Time Embedded Controllers

Credits: (4)
Typically taught:
Fall [Full Sem]

An introduction to real-time kernals and operating systems. Priority-based pre-emptive scheduling, intertask communication, and intertask sychronization will be studied. Other topics include priority inversions, semaphores, mutexes, context switches, rate monotonic analysis (RMA), various kernal services, finite state machines, and nested state machines. Prerequisite: EET 2150.

EET 3070 - Engineering Technology Research

Credits: (3)
Engineering problem solving using the Internet, professional journals, and human networking. Three styles of writing emphasized; technical descriptions, historical perspectives of technology, and technical defensible arguments. Prerequisite: AAS degree in CET or EET.

EET 3080 - Embedded Networks

Credits: (4)
Typically taught:
Spring [Full Sem]

This course provides an in-depth study of several serial communication standards and how to implement them in embedded systems. The standards addressed in this class include RS232, RS485, Controller Area Network (CAN), and Ethernet. Emphasis will be placed on utilizing the stacks and protocols for each standard. The channel bandwidth, noise, and data error rate will be addressed. Wireless methods of serial communication will be surveyed. Prerequisite: EET 2150.

EET 3090 - Project Management

Credits: (2)
Typically taught:
Spring [Full Sem]

An introduction to project management. The course prepares students for Senior Projects. Course will include the writing of contracts, goal setting, project leadership and team building principles of engineering economics, team work, quality, statistics, and continuous improvement will be discussed. Other topics include project life cycles, organization, and risk management. Project scheduling and performance will be discussed. Prerequisite: EET 3010, EET 3040.

EET 3100 - Renewable Energy

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The purpose of the EET 3100 Renewable Energy course is for each student to learn the fundamental knowledge and technology of various types of renewable energy including solar energy, wind power, hydroelectric, geothermal energy, biomass and ocean energy. This course discusses the limitations and the impacts of using fossil fuel energy and its possible impact on global climate change. This course will enable students to build an essential foundation towards the specific applications of renewable energy such as solar PV (Photovoltaic) systems, wind turbine systems and micro-hydro systems. Incentives, rebates and policies from federal, state and local power companies will also be addressed in the class. The students will learn how to acquire professional certifications if they are interested in developing a career in the area of renewable energy. Prerequisite: EET 1110 or EET 1850.

EET 3180 - Advanced Solar PV Systems

Credits: (4)
Typically taught:

Fall [Full Sem]
Spring [Full Sem]

The purpose of this course is for each student to learn the advanced knowledge and technology of solar PV (Photovoltaic) systems. This course will enable students to verify system design, manage project, install electrical and mechanical components, complete system installation, and conduct maintenance and troubleshooting. The topics in this course includes PV markets and applications, safety requirements, the advanced technology of solar PV systems, PV system components, grid-tied and battery-based systems, load analysis and PV system sizing, PV system electrical and mechanical designs, National Electric Code (NEC) applied to PV systems, commissioning and decommissioning, performance analysis, maintenance and troubleshooting, and CAD software for PV system design. Incentives, rebates and policies from federal, state and local power company will also be addressed in the class. The students will learn how to acquire professional certifications if they are interested in developing a career in solar PV industry. Prerequisite: EET 2180.

EET 4010 - Senior Project I

Credits: (2)
Typically taught:
Fall [Full Sem]

Students will work on teams to design, construct, test, and install a significant engineering project. The course includes selecting a team, selecting a project, writing a contract, maintaining a logbook, creating and following project milestones, setting and completing weekly goals, writing a manual, and making a final presentation to students, faculty, and industry advisers. Prerequisite: EET 3090.

EET 4020 - Senior Project II

Credits: (2)
Typically taught:
Spring [Full Sem]

A continuation of EET 4010 Senior Project I. Students will work on teams to design, construct, test, and install a significant engineering project. The course includes selecting a team, selecting a project, writing a contract, maintaining a logbook, creating and following project milestones, setting and completing weekly goals, writing a manual, and making a final presentation to students, faculty, and industry advisers. Prerequisite: EET 4010.

EET 4030 - Controls & Systems

Credits: (4)
Typically taught:
Fall [Full Sem]

Introduction to automatic control theory, analysis, and testing, pole, zero, Bode plots, and frequency response. The design and application of programmable controllers using ladder logic, sequential functions charts, PID, and data highway. Lecture and lab combination. Laboratory activities to include computer simulation, servo-system construction, and analysis. Prerequisite: EET 3010, MATH 1210.

EET 4040 - Signals and Systems

Credits: (4)
Typically taught:
Spring [Full Sem]

An introduction to digital signal processing, digital filters, discrete and fast Fourier transforms, quantization, introduction to adaptive filters, industrial applications, and DSP hardware. Lecture and lab combination. Laboratory activities include the design, construction, computer simulation, and analysis of digital signal processing circuits. Prerequisite: EET 3010, MATH 1210.

EET 4060 - Advanced Communications

Credits: (4)
Introduction to satellite communications, spread spectrum techniques, digital satellite communications, antennas, small signal amplifiers, Smith charts, and "S" parameter analysis. Lecture and lab combination. Laboratory activities to include the design, construction, computer simulation and analysis of wireless communications circuits and systems. Prerequisite: EET 3010.

EET 4090 - Systems Design and Integration

Credits: (3)
An introduction to the fundamentals of large-scale systems. The first part deals with systems analysis, design and integration with emphasis on input/output models, transfer functions, and interface issues. The second part discusses a variety of systems design and management approaches, particularly those concerned with system requirements, interface control, evaluation, quality assurance through configuration management, audits and reviews, and the human role in systems. Prerequisite: EET 3090.

EET 4800 - Individual Studies

Credits: (1-4)
Typically taught:
Spring [Full Sem]

The student will receive credit for approved studies in an area not covered in the EET program. A maximum of four credits can be counted as electives for EET majors.

EET 4890 - Cooperative Work Experience

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The student will receive credit for approved electronics industrial experience. Professional development activities will include resume writing, goal setting, progress reports, and a supervisor's evaluation. The course can be taken a maximum of three times for a total of 6 credits. Prerequisite: EET 3090.

EET 4900 - Special Topics

Credits: (1-4)
Typically taught:
Fall [Full Sem]

A one-time special study course designed to introduce a new relevant topic that is not covered in the EET program. Lecture and lab combination. Laboratory activities to support the selected course topic. A maximum of four credits can be counted for EET majors.

ENGL 0900 ND - Fundamentals of College Reading and Writing

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A course designed to help students develop fundamental reading, writing, and thinking skills. Students in this course work closely with Skills Enhancement Center tutors in both group and one-to-one settings. Students with ACT scores in either English or Reading of 12 and below are required to take ENGL ND0900. Students without ACT scores are also placed in this course unless they are otherwise placed by Accuplacer. Students must complete this course with a grade of C or better before enrolling in ENGL 0955. ND (non-degree) do not count toward hours required for graduation.

ENGL 0955 ND - Developmental College Reading and Writing

Credits: (6)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem, Full Sem Online]

A course to help students develop reading, writing, and critical thinking skills prerequisite for entry-level college courses. Students in this course are supported by the Skills Enhancement Center. Students who pass ENGL 0900 with a grade of C or better, whose ACT scores in English or Reading run from 13 to 16, or who are placed by Accuplacer are placed in ENGL ND0955. Students must complete ENGL ND0955 with a grade of C or better before enrolling in ENGL 1010. ND (non-degree) do not count toward hours required for graduation.

ENGL 0960 ND - Developmental College Writing

Credits: (3)
Typically taught:
Not currently offered

Developing fundamental reading, thinking, and writing skills. Focuses on sentence structure and essay development. ND (non-degree) do not count toward hours required for graduation.

ENGL 1000 - College Reading

Credits: (1-3)
Typically taught:

Not currently offered

The English department recommends this course as an excellent entry-level college course. Students in this course can expect to improve their reading comprehension, their critical thinking skills, their breadth and depth of knowledge, and their aptitude for learning. May be repeated 4 times up to 6 credit hours.

ENGL 1010 EN - Introductory College Writing

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [1st Blk, 2nd Blk, Online]

Students will learn practices of successful academic writing. Students will focus on the writing process, writing for specific audiences, collaboration with peers, and on the interrelationship between reading and writing. To enter 1010 the student must have 17 or higher on the ACT English portion, or equivalent. ~~Student~~Students must complete ENGL 1010 satisfactorily (a grade of "C" or better) before enrolling in ENGL 2010.

ENGL 2010 EN - Intermediate College Writing

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [1st Blk, 2nd Blk, Online]

This course will focus on writing arguments, conducting research, and documenting sources. Students will continue to learn practices of successful academic writing including the writing process, writing for specific audiences, and collaboration with peers. Prerequisite: ENGL 1010 with "C" grade or better, AP Language and Composition or Literature and Composition examination with a score of 3 or better, ACT English and Reading score of 29 or better, CLEP with essay test with a score of 50 or better, or articulated transfer credit from another regionally accredited college or university.

ENGL 2100 - Technical Writing

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [~~Online~~Check with Department]

This course prepares students for on-the-job writing and emphasizes the importance of audience analysis, graphics, and document design. Students study and practice writing and designing a variety of technical documents as they learn to write clearly, concisely, and persuasively to a specific audience for a specific purpose. Prerequisite: ENGL 1010 or 2010.

ENGL 2200 HU/DV - Introduction to Literature

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]

An introduction to three major literary genres, fiction, poetry, and drama, drawn from a diverse range of authors from various cultures and historical periods. Students will learn how to read literary texts closely and critically, and how literature--reading more generally--can have a meaningful part of their daily lives. Course includes relevant practice in the principles of successful writing, including drafting, revising, and editing. ~~Prerequisite: ENGL 1010 or 2010 with a "C" grade or better or equivalent.~~

ENGL 2220 HU/DV - Introduction to Fiction

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An introduction to short stories, novellas, and novels, selected from a diverse range of authors from various cultures and historical periods. Students will learn how to read fiction carefully and critically, and how fiction can have a meaningful part in their daily lives. Course includes relevant practice in the principles of successful writing, including drafting, revising, and editing. ~~Prerequisite: ENGL 1010 or 2010 with a "C" grade or better or equivalent.~~

ENGL 2240 HU/DV - Introduction to Poetry

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An introduction to poetry written in English, selected from a diverse range of authors from various cultures and historical periods. Students will develop the critical and interpretive skills necessary to appreciate the craft of poetry as a valid and important way of talking about human experiences. Course includes relevant practice in the principles of successful writing, including drafting, revising, and editing. ~~Prerequisite: ENGL 1010 or 2010 with a "C" grade or better or equivalent.~~

ENGL 2250 CA - Creative Writing

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Check with Department]

In this Gen Ed course students will learn in a workshop setting to write original pieces in three genres that may include the following: short stories, poetry, creative non-fiction, and plays. As models for their own writing, students will read exemplary pieces from each genre taught from different eras and cultures, in order to build a vocabulary base. Thus, students will become familiar with aspects of storytelling such as story arc, characterization, and dialogue; and aspects of poetry such as rhyme, rhythm, and figurative language, for use in their own writing. Through regular exercises, students will generate ideas for creating original writing such as stories, poems, plays, and creative essays, and will refine oral and communicative skills. Students will critique and be critiqued by the entire class in order to

revise early drafts, will analyze selected texts, and will evaluate their own and others' work. Prerequisite: ENGL 1010 or 2010 with a "C" grade or better or equivalent.

ENGL 2260 CA - Introduction to Writing Short Fiction

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Check with Department]

This course introduces students to writing original short fiction in a workshop setting. Students will read as models a judicious sampling of stories by authors such as Edgar Allen Poe, William Faulkner, Toni Morrison, Truman Capote, and others as selected by the professor in order to build a vocabulary for analyzing aspects of storytelling such as plot, story arc, characterization, dialogue, meaningful detail, and story pacing. Using guided writing exercises and journaling, students will develop ideas from these sources to create original fiction for a series of in-class workshops. Students will critique, and be critiqued by, the entire class, in order to revise their stories. Prerequisite: ENGL 1010 or 2010 with a "C" grade or better or equivalent.

ENGL 2270 CA - Introduction to Writing Poetry

~~**Credits: (3)**~~**Credits: (3)**
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Check with Department]

This course introduces students to writing original poetry. Students will read as models a judicious sampling of poems by contemporary poets as selected by the professor in order to build a vocabulary for analyzing aspects of poetic craft, such as form, line, prosody, image, sound, narrative, and lyric. Using guided writing exercises and journaling, students will develop their ideas into original poems for a series of in-class writing workshops. Students will critique and be critiqued by their peers in order to revise their poems. Prerequisite: ENGL 1010 or 2010 with a "C" or better or equivalent.

ENGL 2290 HU/DV - Introduction to Drama

Credits: (3)
Typically taught:
Fall [~~Full Sem]~~
~~**Spring [Full Sem**~~**Check with Department]**

An introduction to drama from around the globe, selected from a diverse range of authors from various cultures and historical periods. Students will develop the critical and interpretive skills necessary to analyze and appreciate plays and to recognize their contemporary relevance. Course includes relevant practice in the principles of successful writing, including drafting, revising, and editing.~~ Prerequisite: ENGL 1010 or 2010 with a "C" grade or better or equivalent.~~

ENGL 2510 HU/DV - Masterpieces of Literature

Credits: (3)
Typically taught:
Fall [~~Full Sem~~Check with Department]

An introduction to select masterworks, selected from a diverse range of authors from various cultures and historical periods. Students will develop the critical and interpretive skills necessary to analyze various genres (fiction, drama, and poetry) and to reflect on the nature of literary excellence. Course includes relevant practice in the principles of successful writing, including, drafting, revising, and editing. Prerequisite: ENGL 1010 or 2010 with a "C" grade or better or equivalent.

ENGL 2710 HU /DV - Perspectives on Women's Literature

Credits: (3)
Typically taught:
Fall [~~Full Sem~~Check with Department]
Spring [~~Full Sem~~Check with Department]

The purpose of this class is to introduce students to the rich contributions of women to the field of literature. The course will cover a variety of women writers that may range from the medieval period to the present and will feature literary genres such as fiction, poetry, drama, non-fiction, and journals/diaries. In discussing and writing about these works, students will consider why women were excluded or marginalized in the canon for such a large part of literary history and how society, family, and politics impacted the way these women wrote. Prerequisite: ENGL 1010 or 2010 with a "C" grade or better or equivalent.

ENGL 2830 - Directed Readings

Credits: (1-3)
Prerequisite: ENGL 2010 or equivalent. May be repeated twice up to 3 credit hours.

ENGL 2890 - Cooperative Work Experience

Credits: (1-6)
Open to all students in the English Department who meet the minimum Cooperative Work Experience requirements of the department. Provides academic credit for on-the-job experience. Grade and amount of credit will be determined by the department. Prerequisite: ENGL 2010 or equivalent. May be repeated 5 times up to 6 credit hours.

ENGL 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. Prerequisite: ENGL 1010 with a "C" grade or better or equivalent. May be repeated 3 times up to 4 credit hours with different topics.

ENGL 2920S - Community Service

Credits: (3)
Students will receive an overview of community service and explore opportunities for service learning in the

community. A weekly seminar with required readings and writings as necessary and 50 hours of community service. Prerequisite: ENGL 2010 or equivalent.

ENGL 3010 - Introduction to Linguistics

Credits: (3)
Typically taught:
Fall [~~Full Sem~~Check with Department]
Spring [Full Sem]
Summer [Check with Department]

This course introduces students to the scientific study of language. It looks across languages to explore what they have in common, as well as what distinguishes them from one another. Students learn basic analytic techniques in articulatory phonetics, phonology, morphology, syntax, and semantics and apply them to data drawn from various languages. These core concepts may be applied to other areas, such as language acquisition, language history, language and culture, language and society, language and thought, or language and literary expression. Prerequisite: ENGL 2010 or equivalent. Students in English, foreign languages, anthropology, philosophy, psychology, and history are encouraged to take this course.

ENGL 3020 - Introduction to the Study of Language for Teachers

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course is designed for English teaching majors and minors. It introduces students to the nature of language and linguistics. It also reviews the elements of traditional grammar. This course surveys prescribed applications for prospective secondary school English teachers, including language variation, contemporary alternatives to traditional grammar, and linguistics and composition. This class is required of English teaching majors and minors and must be taken concurrently with ENGL 3400, 3410, and 3420. Prerequisite: ENGL 2010 or equivalent.

ENGL 3030 - Structure of English

~~Credits: (3)~~Credits: (3)
Typically taught:
Fall [Check with Department]
Spring [Full Sem]
Summer [Check with Department]

This course presents the major parts of speech, grammatical functions, and constructions of Standard English. Its purpose is to show that English, like any human language, is an intricate and rule-governed system. To this end, it draws on the terminology of traditional grammar and the analytical techniques of structural and transformational grammar, including contextual definitions and tree diagramming. The course is directed toward departmental English majors, teaching majors, advanced ESL students, and students majoring in foreign language teaching. Prerequisite: ENGL 2010 or equivalent.

ENGL 3040 - History of the English Language

Credits: (3)
Typically taught:
Fall [Full Sem]

This course begins by introducing the elementary vocabulary and concepts of linguistic theory as these pertain to historical linguistics. It then traces the prehistory of English from its beginnings in Indo-European, through its place in the Germanic branch, to its historical phases of Old, Middle, and Early Modern English. Attention may also be given to national varieties of English and the development of English as a world language. Prerequisite: ENGL 2010 or equivalent.

ENGL 3050 - Grammar, Style, and Usage for Advanced Writing

~~Credits: (3)~~Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Check with Department]

This course presents the concepts and nomenclature of traditional grammar as a context for students wishing to increase their control of punctuation, style, and usage in order to become more proficient writers. Its purpose is to offer practical guidance in how grammatical concepts can be applied to revising and editing one's own or others' writing to more effectively express one's intended meaning. The course is offered to all English majors and minors as a means of fulfilling the language requirement for the major, especially those in technical writing, as well as students in communication, pre-law, and criminal justice. Prerequisite: ENGL 2010 or equivalent.

ENGL 3080 - Critical Approaches to Literature

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [~~1st Blk, 2nd Blk~~Check with Department]

Students will study and practice critical approaches to literature. The course will begin with New Criticism and proceed to study more resistant reading strategies such as feminism, Marxism, and deconstruction. Students will not only learn the theoretical premises behind these theories, but also practice explicating various texts from a particular critical perspective. Primarily for English majors and minors. Recommended to take early in major. Prerequisite: ENGL 2010 or equivalent. Recommended prerequisites: ENGL 2220, ENGL 2240, or ENGL 2290.

ENGL 3100 - Professional and Technical Writing

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online, Check with Department]

This course introduces students to the basic theories and practices of technical communication. Using audience, purpose, and context as their guides, students create various professional and technical documents, such as formal and informal reports, instructions, proposals, job application materials, brochures, web media, and presentations. Working both individually, and in collaboration, students analyze their rhetorical situation as they create usable and

appropriate professional documents. This course provides the practical and theoretical basis for the minor and emphasis in Professional and Technical Writing. Prerequisite: ENGL 2010 or equivalent.

ENGL 3140 - Professional and Technical Editing

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Building on the knowledge of technical writing genres and the writing strengths developed in ENGL 3100, this course introduces students to copyediting, comprehensive editing, and the basics of collaborative editing and document management. Technical editing is designed to strengthen students' writing, editing, and visual design skills through attention to detail and application of style, grammar, and usage principles. Additionally, this course focuses on hard copy and soft copy editing principles. Co-Requisite: ENGL 3100.

ENGL 3190 - Document Design

Credits: (3)
Typically taught:
Fall [Full Sem]

This course teaches a rhetorical approach to document design. Using the rhetorical principles of audience, purpose, and context, students will discuss sample documents, analyze the layout of documents (both professional documents and ones students create in class), and articulate what makes an effective layout and design (regarding arrangement, emphasis, clarity, conciseness, tone, and ethos). Throughout the course, students will create (both individually and collaboratively) documents that meet client specifications thereby providing practical experience and generating material for their professional portfolios. Prerequisite: ENGL 3100.

ENGL 3210 - Advanced College Writing

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Basic expository techniques combined with other forms of discourse. Emphasis on originality, clarity and practical application for other courses as well as vocation. Prerequisite: ENGL 2010 or equivalent.

ENGL 3250 - Advanced Fiction Writing

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Short story and novel writing with emphasis upon free lancing and publication. Begins with a review of basic elements of literature and effective creative writing and offers extensive feedback on each assignment from both professor and

peers. Class lectures are combined with extensive student discussion. Prior experience in creative writing and other areas of literature is recommended. Prerequisite: ENGL 2010 or equivalent.

ENGL 3260 - Poetry Writing

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [~~Full Sem~~Check with Department]

Using "workshop" methodology, this course identifies and practices a variety of techniques and devices for generating, writing, and revising poems. It is intended for the serious student interested in writing poetry for publication and public reading. The course requires a substantial commitment to reading and evaluating original poetry. Prerequisite: ENGL 2010 or equivalent.

ENGL 3270 - Magazine Article Writing

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Check with Department]

Emphasis on writing for publication and study of the current market. Extensive feedback is provided on each assignment by teacher and class. Lecture is combined with lively class discussion. Any additional background in imaginative writing, other areas of literature, or communications such as news reporting not essential but helpful. Lecture is combined with lively class discussion. Prerequisite: ENGL 2010 or equivalent.

ENGL 3280 - Biographical Writing

Credits: (3)
Typically taught:
Fall [~~Full Sem~~Check with Department]
Spring [Full Sem]

Includes autobiographical writing and is oriented strongly toward personal and familial interests. Written assignments include the personal narrative, character sketch, as told to, and conclude with a chapter or two on a projected book-length project. Extensive written and oral input on each assignment from professor and class. Strong emphasis is placed on techniques of research including interviewing, effective characterization, narration and description. Prior experience in imaginative writing and other areas of literature is recommended. Prerequisite: ENGL 2010 or equivalent.

ENGL 3300 - Children's Literature

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Check with Department]

Students will study the principles of literature for children with special emphasis on evaluation and selection, classroom and library use, ethnic and cultural diversity, and the development of literacy. Designed to meet the needs of teachers, those preparing to teach and those who work with children in various settings. Prerequisite: ENGL 2010 or equivalent.

ENGL 3310 - Young Adult Literature

Credits: (3)
Typically taught:
~~**Fall [Full Sem]**~~
Spring [Full Sem]

Students will study the characteristics of literature for young adults and connections to adolescent development. Selection and evaluation, ethnic and culturally diverse authors, the history of young adult literature, and book-to-film comparisons will receive special emphasis. This course is designed for non-teaching English majors, students interested in adolescent psychology or in acquiring a breadth of exposure to literature that appeals to young adult readers. Prerequisite: ENGL 2010 or equivalent.

ENGL 3350 - Studies in Literary Genres

Credits: (3)
Variable Title Course
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Check with Department]

This variable topics course introduces students to the historical and cultural origins of literary genres, their distinguishing features, and the dynamics of literary development. Genres may include the novel, drama, poetry, creative non-fiction, bildungsroman, the diary, biography, autobiography, satire, and others. It may be taken more than once with different designations. Prerequisite: ENGL 2010 or equivalent.

ENGL 3400 - The Teaching of Literature

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Students will develop their own philosophies for teaching literature and language to middle, junior high, and high school students by exploring current research findings, theoretical approaches and practical strategies. This class is required of English teaching majors and minors and must be taken concurrently with ENGL 3020, 3410, and 3420. Prerequisite: ENGL 2010 or equivalent. Prerequisite/Co-requisite: Any student not admitted to the Teacher Education Program must have instructor approval prior to registering for this course.

ENGL 3410 - The Teaching of Writing

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Students will develop their own philosophies for teaching writing to middle, junior high, and high school students by exploring current research findings, theoretical approaches and practical strategies. This class is required of English teaching majors and minors and must be taken concurrently with ENGL 3020, 3400, and 3420. Prerequisite: ENGL 2010 or equivalent. Prerequisite/Co-requisite: Any student not admitted to the Teacher Education Program must have instructor approval prior to registering for this course.

ENGL 3420 - Teaching With Young Adult Literature

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course introduces prospective teachers, librarians, and other educators to the use of contemporary adolescent literature across the curriculum. Multicultural and global selection, critical evaluation of the literature, issues of censorship, reader response theory, media connections, and reading/writing strategies for teaching young adult readers will receive major emphasis. The course includes a practicum or service-learning experience in planning, sharing, and using young adult literature in public school classrooms. Prerequisite: ENGL 2010 or equivalent. This course is required of English teaching majors and minors and must be taken concurrently with ENGL 3020, ENGL 3400, and ENGL 3410.

ENGL 3500 HU - Introduction to Shakespeare

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This class is an introduction designed to foster a critical appreciation of the plays of Shakespeare. The class is intended for students who are fulfilling General Education credit, studying theater, or planning to teach. Students can expect to study at least one comedy, one tragedy, and one history play in this course. Prerequisite: ENGL 2010 or equivalent.

ENGL 3510 HU/DV - World Literature

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Check with Department]

This is a selection of masterworks from a variety of authors, regions, and eras - expressly to introduce diverse literatures other than British and American. The required readings may vary considerably from semester to semester, according to the instructors' expertise. Prerequisite: ENGL 2010 or equivalent.

ENGL 3520 HU - Literature of the Natural World

Credits: (3)
Typically taught:
Fall [~~Full Sem~~Check with Department]
Spring [Full Sem Online]
Summer [Check with Department]

This course engages literary texts that focus on humans in relation to their natural environment. Conceived as a survey course, it attempts to delineate the various traditions of environmental concern, from the ancient past to the present, and to draw attention to the ongoing relevance of such texts. Students will learn how to read closely and carefully, and how to make such literature meaningful for their own daily lives. Prerequisite: ENGL 2010 or equivalent.

ENGL 3550 - Multicultural and Ethnic Literature in America

Credits: (3)
Typically taught:
Fall [~~Full Sem~~Check with Department]
Spring [~~Full Sem~~Check with Department]

A survey of intercultural literature which reflects the rich diversity inherent in the American experience. The course includes works by Native, Hispanic, Asian, and African American authors. Prerequisite: ENGL 2010 or equivalent.

ENGL 3580 - Regional Literature in America

Credits: (3)
Variable Title Course
Typically taught:
Fall [~~Full Sem~~Check with Department]
Spring [~~Full Sem~~Check with Department]

This variable topics course treats characteristic literature in various genres and themes from a designated region of the United States such as the West, South, New England, and so on. It may be taken more than once with different designations. Prerequisite: ENGL 2010 or equivalent.

ENGL 3730 - Literatures of Cultures and Places

Credits: (3)
Variable Title Course
Typically taught:
Fall [Full Sem]
Spring [~~Full Sem~~Check with Department]

This variable topics course examines literature, cultures, and nations beyond England and America. Students will be introduced to the ways in which texts are closely tied to the geographical and cultural space as well as the historical movement from which they emerge. The course may focus on a single national culture or, alternately, offer representative works from various cultures. Prerequisite: ENGL 2010 or equivalent. It may be repeated 3 times with different designations.

ENGL 3740 - The Literature of the Sacred

Credits: (3)
Variable Title Course
Typically taught:
Fall [~~Full Sem~~Check with Department]
Spring [~~Full Sem~~Check with Department]

This variable topics course studies one or more spiritual, religious, or ethical books of world-wide fame. Texts such as the Bible, the Koran, and the Bhagavad-Gita will be considered as works of literature. It may be taken more than once with different designations. Prerequisite: ENGL 2010 or equivalent.

ENGL 3750 HU - Topics and Ideas in Literature

Credits: (3)
Variable Title Course
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This variable topics course focuses on the various social, philosophical, and political themes emerging in literary texts. Students will learn the critical skills necessary to identify the intellectual currents in the texts under consideration, to engage in focused discussion, and to probe the various intentions of any act of writing. Prerequisite: ENGL 2010 or equivalent. It may be repeated 3 times with different designations.

ENGL 3820 - History of Literary Criticism

~~Credits: (3)~~Credits: (3)
Typically taught:
Fall [Check with Department]
Spring [Check with Department]

Starting with the works of Plato and Aristotle, students will explore rhetorical strategies and philosophical ideas that have influenced the reading of literary texts from classical times to the present. Prerequisite: ENGL 2010 or equivalent.

ENGL 3840 - Methods and Practice in Tutoring Writers

Credits: (1-3)
Typically taught:
Fall [Full Sem]

Controlled experience in tutoring student writers in all disciplines. This course is only for people who are actually employed as a tutor. Prerequisite: ENGL 2010 or equivalent.

ENGL 3850 - Methods and Practice in Tutoring and Mentoring ESL Students

Credits: (1-3)
Typically taught:

Fall [Check with Department]
Spring [Check with Department]

This course trains students who are native speakers of English or who are second language learners of English at native or near native levels of proficiency to work or volunteer in the ESL Program as tutors, classroom aides, mentors, and as language informants leading conversation groups. Prerequisite: ENGL 2010 or equivalent.

ENGL 3880 - Philosophy and Literature

Credits: (3)
Typically taught:
Spring [Full Sem]

A study of the interrelationships between ideas that shape the course of history and the poetry, prose, and/or drama of the periods that produce these ideas. Prerequisite: ENGL 2010 or equivalent.

ENGL 4010 - Topics in Language Study

Credits: (3)
Variable Title Course
Typically taught:
Fall [~~Full Sem~~Check with Department]
Spring [~~Full Sem~~Check with Department]

This variable topics course explores areas of study such as advanced grammar, sociolinguistics, language and the law, linguistics and composition, linguistics and language acquisition, or linguistics and literature, among others, as determined by the instructor. A previous language course or consultation with the instructor is recommended before enrolling. It may be taken more than once with different designations. Prerequisite: ENGL 2010 or equivalent.

ENGL 4100 - Issues in Professional and Technical Writing

Credits: (3)
Variable Title Course
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This variable topics course focuses on specific issues in the ever-evolving field of professional and technical writing. Recent issues include indexing, professionalization, theoretical approaches, and discipline-specific emphases such as writing in the sciences and writing for the Web. It may be taken up to four times (for a total of 12 credit hours) with different designations to fulfill electives and must be pre-approved by an advisor. Prerequisite: ENGL 3100.

ENGL 4110 - Content Management

Credits: (3)
Typically taught:
Spring [Full Sem]

This class teaches the theory and application of content management. Students will learn how to evaluate content,

divide content into reusable elements, label these elements, and then re-configure them into usable structures. Using the principles of single sourcing, modular writing, and structured authoring, students will map content for reuse, evaluate available authoring tools, implement state-of-the-art technologies, and develop project strategies. Prerequisite: ENGL 3100.

ENGL 4120 - Seminar and Practicum in Professional and Technical Writing

Credits: (3)
Typically taught:
Fall [Full Sem Online]
Spring [Full Sem Online]

This course serves as a capstone for the minor and emphasis, preparing students for immediate job placement. In the seminar, students review issues and strategies of professional and technical writing and prepare portfolios for job interviews. The practicum is based on an internship or cooperative work experience in the community, with industry, or with an on-campus organization. The internship is the most time-intensive aspect of the course. Prerequisite: ENGL 3100.

ENGL 4400 - Multicultural Perspectives on Literature for Young People

Credits: (3)
Typically taught:
Fall [~~Full Sem~~Check with Department]
Spring [~~Full Sem~~Check with Department]

Students will study the principles of literature for young people in combination with the theories of multi-cultural education. Designed for teachers or those preparing to teach, it will address issues connected to schools, teaching strategies and pedagogy, and the selection and evaluation of materials for diverse populations. May be substituted for either ENGL 3300 or ENGL 3310 upon approval. Prerequisite: ENGL 2010 or equivalent.

ENGL 4410 - Strategies and Methodology of Teaching ESL/Bilingual

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course emphasizes practical strategies and methods of teaching ESL/Bilingual in the public school systems of this country. Prerequisite: ENGL 2010 or equivalent.

ENGL 4420 - English Phonology and Syntax for ESL/Bilingual Teachers

Credits: (3)
Typically taught:
Fall [Full Sem]
~~Spring [Full Sem~~Summer [Check with Department]

This course provides the essential foundation for ESL/Bilingual teachers in the workings of the English language:

pronunciation and spelling systems, word-forming strategies and sentence structure patterns. Prerequisite: ENGL 2010 or equivalent.

ENGL 4450 - ESL/Bilingual Assessment: Theory, Methods, and Practices

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course explores how to effectively evaluate and implement assessment processes for ESL/Bilingual pupils in public schools. Students will gain experience with both standardized tests and authentic assessment. Prerequisite: ENGL 2010 or equivalent.

ENGL 4520 - American Literature: Early and Romantic

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This historical survey follows waves of European immigration and chronicles the effects of those on the American natives. The class then moves through the Revolutionary War and finishes with the relatively short but intense age of American Romanticism, which occurred in the decades just before the Civil War. The diverse writers in this period include such figures as Columbus, William Bradford, Anne Bradstreet, Benjamin Franklin, Washington Irving, Nathaniel Hawthorne, Edgar Allan Poe, Harriet Beecher Stowe, Henry David Thoreau, Frederick Douglass, Herman Melville, and Walt Whitman. Prerequisite: ENGL 3080.

ENGL 4530 - American Literature: Realism and Naturalism

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Check with Department]

This historical survey typically runs from the Civil War to WWI - emphasizing reconstruction, laissez-faire economics, growing imperialism, and universal suffrage. The diverse writers in this survey include such figures as Mark Twain, W. D. Howells, Sarah Orne Jewett, Henry James, Kate Chopin, Booker T. Washington, W. E. B. Du Bois, Stephen Crane, Jack London, Frank Norris, Theodore Dreiser, Mary Austin, and Henry Adams. Prerequisite: ENGL 3080.

ENGL 4540 - American Literature: Modern

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Check with Department]

This historical survey focuses on the first half of the 20th century, when the United States went through a series of profound political and social changes, such as its entry into World War I and II, Prohibition, The Red Scare, Suffrage, the advent of the mass media, and Progressivism. Drawing on a variety of genres and media (including painting and film), the course will study developments in the New Negro Renaissance, Greenwich Village bohemianism, the Provincetown Players, "high" modernism, and the Lost Generation. Representative writers of the period include: Langston Hughes, Zora Neale Hurston, Nella Larsen, Edna St. Vincent Millay, Mina Loy, Eugene O'Neill, Susan Glaspell, Ezra Pound, John Dos Passos, Amy Lowell, William Carlos Williams, Gertrude Stein, Ernest Hemingway, and e.e. cummings. Prerequisite: ENGL 3080.

ENGL 4550 - American Literature: Contemporary

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course focuses on American literature from the 1950s to the present within the context of the dramatic political and cultural changes that have shaped contemporary American culture, such as the Cold War, Vietnam, the Civil Rights movement, feminism and multiculturalism. Like its modernist predecessor, it ranges across genres and media to survey various emergent traditions and tendencies in contemporary and postmodern US letters. Representative writers of this period include: Arthur Miller, Flannery O'Connor, Elizabeth Bishop, Tillie Lerner Olsen, Ralph Ellison, James Baldwin, Allen Ginsberg, Cynthia Ozick, Amiri Baraka, Maxine Hong Kingston, Rita Dove, Toni Morrison, Thomas Pynchon, E. L. Doctorow. Prerequisite: ENGL 3080.

ENGL 4610 - British Literature: Medieval

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This historical survey runs from the eighth century to the end of the fifteenth century - roughly from the reign of Alfred the Great to Henry VII. Some of the more recognizable works include Beowulf, The Wanderer, Geoffrey Chaucer's Canterbury Tales, early histories of King Arthur, Thomas Malory's Le Morte D'Arthur, Julian of Norwich's Showings, Everyman, and Gawain and the Green Knight. Works written in Anglo-Saxon English and northern medieval dialects will be read in modern translations. Prerequisite: ENGL 3080.

ENGL 4620 - British Literature: Renaissance

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Check with Department]

This historical survey runs from just before the middle of the sixteenth century to just after the middle of the seventeenth - roughly from the reign of Henry VIII, through the reign of Elizabeth Tudor, to the restoration of Charles II. Some of the more recognizable figures of this study are Christopher Marlowe, John Donne, Ben Jonson, John Milton, Anne Askew, Aemilia Lanyer, Mary Wroth, and Robert Herrick. Prerequisite: ENGL 3080. (Note: this survey does not typically try to do justice to its largest figure, Shakespeare - for whom the department has established ENGL 4730: ~~Shakespeare's Tragedies, Comedies & Histories~~Studies in Shakespeare.)

ENGL 4630 - British Literature: Neoclassical and Romantic

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This historical survey links two periods: the first has frequently been referred to as the Enlightenment of the Eighteenth Century and includes such figures as Alexander Pope, Anne Finch, Mary Montagu, Jonathan Swift, and Samuel Johnson. The second period covers the relatively short but intense age of English Romanticism - popular because of such writers as William Blake, William Wordsworth, Samuel Coleridge, Lord Byron, Mary Shelley, Percy Bysshe Shelley, Mary Wollstonecraft, Sir Walter Scott, Thomas De Quincey, and John Keats. Prerequisite: ENGL 3080.

ENGL 4640 - British Literature: Victorian

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This historical survey follows the long span of Queen Victoria's life: from about 1837 when she came to the throne to 1901 when her funeral widely symbolized the passing of the age. Not merely a placid time of Victorian propriety, this era was marked by such philosophical upheavals as that which followed Darwin's Origin of Species. Some of the notable writers are Elizabeth Gaskell, George Eliot, Lord Alfred Tennyson, Robert Browning, Emily Bronte, Charles Dickens, Matthew Arnold, and Thomas Carlyle. This era is marked by the Industrial Revolution, Utilitarianism (Mill), the rise of science and evolution theory (Darwin), socialism (Marx and Engels); Psychology (Freud), resurgence of art (the Pre-Raphaelites), and imperialism (Kipling). Notable writers include: Carlyle, Tennyson, the Brownings, Arnold, Wilde, Dickens, the Brontes, Eliot, and Hardy. Prerequisite: ENGL 3080.

ENGL 4650 - British Literature: Modern

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [~~Full Sem~~Check with Department]
Summer [Check with Department]

This historical survey focuses on the first half of the twentieth century, a time of great social change for Great Britain and Ireland that led to a rich outpouring of traditional and experimental writing. A variety of writers will be studied in this course in connection with such key developments as the critique of Empire (Joseph Conrad, E.M. Forster); the Abbey Theatre and the Irish Literary Renaissance (Lady Gregory, W.B. Yeats); World War I (Siegfried Sassoon, Vera Brittain); High Modernism (T.S. Eliot, James Joyce, D.H. Lawrence, Virginia Woolf, Katherine Mansfield); divergent poetic world-views (W.H. Auden, Dylan Thomas); and World War II, the collapse of Empire, and dystopian visions (Evelyn Waugh and George Orwell). Prerequisite: ENGL 3080.

ENGL 4660 - British Literature: Contemporary

Credits: (3)
Typically taught:
Fall [~~Full Sem~~Check with Department]
Spring [Full Sem]
Summer [Check with Department]

This historical survey examines British and Anglo-Irish literature since 1950 as Britain metamorphoses from world power to an integral member of the European Community. The course asks what it means to be a "British" writer in the second half of a century increasingly multicultural in outlook. Possible focuses include post-war disillusion (William Golding); Absurdism and Postmodernism (Samuel Beckett, Tom Stoppard); neo-Romanticism (Ted Hughes, Seamus Heaney, Nuala Ni Dhomnhaill); experimentalism and magic realism (Doris Lessing, Salman Rushdie, Angela Carter); innovative historical fiction (John Fowles, A.S. Byatt); and legacies of Empire in a postcolonial world (Jean Rhys, V.S. Naipaul, Kazuo Ishiguro, Anita Desai). Prerequisite: ENGL 3080.

ENGL 4710 - Eminent Authors

Credits: (3)
Variable Title Course
Typically taught:
Fall [Full Sem Online]
Spring [~~Full Sem~~Check with Department]

This variable topics course features a single author or several authors. Students may study authors such as Sir Arthur Conan Doyle, Ralph Waldo Emerson, Emily Dickinson, Walt Whitman, Virginia Woolf, or Toni Morrison, in order to gain a greater understanding of the social, cultural, and aesthetic significance of their work. Prerequisite: ENGL 3080. May be taken up to 3 times with different designations.

ENGL 4720 - Chaucer

~~Credits: (3)~~Credits: (3)
Typically taught:
Fall [Check with Department]
Spring [Check with Department]

A study of Chaucer's best loved works, using mainly close reading to investigate selections from The Canterbury Tales and minor poems. The works will be considered in the context of theories of the Middle Ages and on the nature of love, of God, of persons, and of the universe. Prerequisite: ENGL 3080.

ENGL 4730 - Studies in Shakespeare

Credits: (3)
Typically taught:
Fall [~~Full Sem~~Check with Department]
Spring [~~Full Sem~~Check with Department]
Summer [Check with Department]

This class is intended for English majors and minors seeking a deeper understanding of Shakespeare's work. Students can expect to do close readings of at least five plays and to study such secondary materials as literary criticism and historical background. Prerequisite: ENGL 3080.

ENGL 4740 - Milton: Major Prose and Poetry

~~Credits: (3)~~**Credits: (3)**
Typically taught:
Fall [Check with Department]
Spring [Check with Department]

A comprehensive survey of the major prose and poetic works of John Milton, culminating in Paradise Lost and Samson Agonistes. Prerequisite: ENGL 3080.

ENGL 4750 - Classical Literature

~~Credits: (3)~~**Credits: (3)**
Typically taught:
Fall [Check with Department]
Spring [Check with Department]

A survey of 3,000 years of intellectual and cultural advancement paralleled with the ascent of civilization from Crete to the Roman empire. The course explores the significance of myths in the process of literary development. Prerequisite: ENGL 3080.

ENGL 4760 - Irish Literature

~~Credits: (3)~~**Credits: (3)**
Typically taught:
Fall [Check with Department]
Spring [Check with Department]

This course examines the distinctive temperament and outlook of both the Gaelic and Anglo-Irish traditions in such writers as Aogán Ó Rathaille, Eibhlín Dubh Ní Chonaill, Jonathan Swift, Lady Gregory, Oscar Wilde, John Millington Synge, William Butler Yeats, James Joyce, George Bernard Shaw, Samuel Beckett, Seamus Heaney, Eavan Boland, and Nuala Ni Dhomhnaill. The first portion of the course studies the body of literature from the sixth century through 1900; the remainder of the course focuses on modern and contemporary texts. Key themes to be examined, always in the larger context of Irish history as a whole, include the Irish use of words as weapons, the place of gender in Irish writing, and the intriguing nature of Irish - particularly as opposed to English - identity. Prerequisite: ENGL 3080.

ENGL 4801 - A&H Leadership Lecture Series

Credits: (1)
Typically taught:
Spring [Full Sem]

This one-credit elective course will give arts and humanities' majors the opportunity to interact with successful guest lecturers whose undergraduate backgrounds are in the arts and humanities. Lecturers will clarify how the talents and skills associated with their degrees have contributed to their pursuit of successful careers and lives.

ENGL 4830 - Directed Readings

Credits: (1-3)
Prerequisite: ENGL 2010 or equivalent. May be repeated twice with a maximum of 6 credit hours.

ENGL 4890 - Cooperative Work Experience

Credits: (1-6)
A continuation of ENGL 2890 Cooperative Work Experience. Open to all students. Prerequisite: ENGL ~~2010or~~2010 or equivalent. May be repeated 5 times with a maximum of 6 credit hours.

ENGL 4900 - Internships in Literary and Textual Studies

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

This course allows students to receive academic credit for on-the-job learning in approved work environments and for approved projects. May be repeated for up to 6 credit hours. A maximum of 3 credit hours may be counted toward the major. Credit/No-Credit only. Prerequisite: English major with a Junior or Senior standing; ENGL 2010, ENGL 3080.

ENGL 4920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Typically taught:
Fall [Check with Department]
Spring [Check with Department]

Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. Prerequisite: ENGL 1010 with a "C" grade or better or eqivalent. May be repeated 3 times with a maximum of 4 credit hours.

ENGL 4940 - CW: Senior Project

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course offers an opportunity for students to choose a writing project and workshop it with their peers under the direction of the instructor. Writing skills will be developed and honed through intensive writing projects which could include a variety of genres: nonfiction, creative nonfiction, fiction, (short story collection, novel), biography, autobiography, poetry, etc. The course is designed for students with a strong writing background. Prerequisite: any of the following: ENGL 3250, ENGL 3260, ENGL 3270, ENGL 3280, ENGL 3350.

ENGL 4960 - Metaphor: Editing the Student Literary Journal

Credits: (3)
Typically taught:
Spring [Full Sem]

Designed for students selected as staff for Weber State's Literary Journal, Metaphor. Therefore, it is a hands-on workshop centering on all aspects of journal production: creating an editorial policy, advertisement, selection, layout, copy editing, preparing for print, marketing, distribution, etc. The journal itself is the final product. The staff supports writing and visual arts across campus through participation in several ancillary projects. Prerequisite: ENGL 2010 or equivalent. May be repeated twice with a maximum of 6 credit hours.

ENGL 5010 - Introduction to Linguistics

Credits: (3)
This course introduces students to the scientific study of language. It looks across languages to explore what they have in common, as well as what distinguishes them. Students learn basic analytic techniques in articulatory phonetics, phonology, morphology, syntax, and semantics and apply them to data drawn from various languages. These core concepts may be expanded and applied to other areas, such as language acquisition, language history, language and culture, language and thought, and language and literary expression. This course is designed for students with bachelor's degrees who have been admitted to Weber State University's MA program in English but have no upper-division undergraduate coursework in linguistics.

ENGL 5020 - Introduction to the Study of Language for Teachers

Credits: (3)
This course is designed for English teaching majors and minors. It introduces students to the nature of language and linguistics. It also reviews the elements of traditional grammar. This course surveys prescribed applications for prospective secondary school English teachers, including language variation, contemporary alternatives to traditional grammar, the history of English, and linguistics and composition. This course is designed for students who have been admitted to WSU's MA program in English but have no upper-division undergraduate coursework in linguistics.

ENGL 5050 - Grammar, Style, and Usage for Advanced Writing

Credits: (3)
This course presents the concepts and nomenclature of traditional grammar as a context for students wishing to increase their control of punctuation, style, and usage to become more proficient writers. Its purpose is to offer practical guidance in how grammatical concepts can be applied to revising and editing one's own or others' writing to more effectively express one's intended meaning. The course is designed for students with bachelor's degrees who have been admitted to Weber State University's MA program but do not have upper-division undergraduate coursework in linguistics.

ENGL 5110 - Writing for Teachers

Credits: (3)
Designed primarily for teachers already in service, this course explores the most current research and theory concerning the teaching of writing and applies it to real problems they face in the secondary classroom.

ENGR 1000 - Introduction to Engineering

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Introduction to engineering for students in the pre-engineering program. Engineering as a profession and career opportunities. Fundamentals of engineering design and analysis using the computer. Prerequisite/Co-requisite: MATH 1060 or MATH 1080 or equivalent.

ENGR 2010 - Statics

Credits: (3)
Typically taught:
Fall [Full Sem]

Vector mechanics, force and moment systems, equilibrium of particles and rigid bodies, friction and moments of inertia. Prerequisite: MATH 1210 and PHYS 2210.

ENGR 2080 - Dynamics

Credits: (4)
Typically taught:
Spring [Full Sem]

Fundamentals of position, velocity and acceleration. Kinematics and kinetics of particles. Newton's laws, conservation of momentum and energy. Dynamics of rigid bodies. Prerequisite: ENGR 2010 with a grade of "C" or higher.

ENGR 2140 - Strength of Materials

Credits: (3)
Typically taught:
Spring [Full Sem]

Fundamentals of stress and strain, Hooke's law, torsion, bending of beams, combined stresses and design of members. Prerequisite: ENGR 2010 with a grade of "C" or higher.

ENGR 2160 - Materials Science and Engineering

Credits: (3)
Typically taught:
Spring [Full Sem]

Combined lecture/laboratory course that introduces the fundamentals of atomic and microscopic structure of metals, polymers, ceramics and composite materials, and how these structures affect mechanical, thermal, electrical and optical properties. Prerequisite: CHEM 1210. Co-Requisite: ENGR 2140.

ENGR 2210 - Electrical Engineering for Non-majors

Credits: (4)
Typically taught:
Spring [Full Sem]

Combined lecture/laboratory course as an introduction to electrical engineering for non-electrical engineers. Fundamentals of DC and AC circuits, digital circuits, and power circuits. Prerequisite: MATH 1210.

ENGR 2300 - Thermodynamics I

Credits: (3)
Typically taught:
Fall [Full Sem]

Thermodynamic properties, equations of state, first and second laws of thermodynamics. Analysis of open and closed systems, availability and irreversibility, power and refrigeration cycles. Prerequisite: MATH 1210 and PHYS 2210.

ENGR 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Consult the class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated 5 times with a maximum of 6 credit hours.

ENTR 1001 - Principles of Entrepreneurship

Credits: (1)
Typically taught:
Not currently being offered

This course explores the process and theory designed to help ideation become customer needs driven to buffer against startup failure. By the end of the course, students will have created, tested and updated a business model based entirely upon customer feedback and customer development methodologies as described in Business Model Generation and Start-up Owner's Manual textbooks.

ENTR 1002 - Introduction to Entrepreneurship

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course will present a broad overview of entrepreneurship and teach students how to identify and create valuable entrepreneurial opportunities. This is accomplished via proven process and theory designed to help ideation become customer needs driven instead of based on the instincts of the entrepreneur. Students will create, test and update a business model based entirely upon customer feedback and customer development methodologies as described in Business Model Generation and Startup Owners Manual textbooks. This class will also have students spending time 'out of the classroom' - learning about what customers want and will pay for through in-person prototype testing, iteration and feedback. Prerequisite/Co-requisite: Prerequisite/Corequisite: BSAD 1010 or ACTG 2010 or ENTR 1001.

ENTR 1003 - Ideation and Customer Development: Testing Ideas with Customers

Credits: (1.5)
Typically taught:
Not currently being offered

This course explores the process and theory designed to help ideation become customer needs driven to buffer against startup failure. By the end of the course, students will have created, tested and updated a business model based entirely upon customer feedback and customer development methodologies as described in Business Model Generation and Start-up Owner's Manual textbooks. Prerequisite: ENTR 1001, BSAD 2899 or ECON 2899.

ENTR 1004 - Entrepreneurial Finance: Bootstrapping, Accounting & Survival Tactics

Credits: (3)
Typically taught:
Fall [1st Blk]
Spring [1st Blk]

This course presents traditional and non-traditional financing techniques appropriate for the entrepreneurial business start-up. Students will explore the application of corporate finance tools to new venture and private equity transactions including forecast simulations and the application of real options. The course will view finance from the entrepreneur, lender and investor's perspectives. By the end of the course students will be able to evaluate and apply a range of financial techniques for business start-up purposes. Prerequisite: ENTR 1002.

ENTR 2001 - Sales and Marketing: Scaling a Successful Business Model

Credits: (3)
Typically taught:
Fall [2nd Blk]
Spring [2nd Blk]

This course takes students who have successfully identified a start-up and teaches them the process of customer development, product development, business models and selling ideas to investors and customers. This includes examining a range of marketing techniques that are available for low to no cost. This course will look at alternatives to

these traditional methods and students will, through hands on efforts, test these methods with real customers. By the end of the course students will be able to analyze business ideas for commercial viability. Prerequisite: ENTR 1004.

ENTR 3002 - Starting the Business

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The aim of this course is for students to develop a business model that they will validate and iterate via paying and participating customers including managing budgets and spending plans designed to launch a business using actual dollars. Student teams will present their company at the beginning of the course as teams and will then use student start-up funds to launch their business. By the end of the course students will have launched a real start up business. Prerequisite: ENTR 2001.

ENTR 3003 - Growing the Business

Credits: (3)
Typically taught:
Not currently being offered

This course helps students take their start-ups business to the next level and accelerate the pace of customer validation and acquisition. This course will focus on launching the business from a student run start-up in a university setting, to a standalone company that can operate outside the confines of a college campus. Prerequisite: ENTR 3002.

ESL 0010 - Language Foundations I

Credits: (2)
Students receive instruction and practice writing English on the letter, word and phrase level. Writing by hand using the Roman alphabet is practiced. Students gain an understanding of elementary grammatical structures through practical application in conversation, reading and writing. Basic vocabulary development is stressed.

ESL 0015 - Language Foundations II

Credits: (2)
Students continue to receive instruction and practice writing English on the letter, word and phrase level, and simple sentences are introduced. Handwriting is reinforced and practiced. Students expand their understanding of elementary grammatical structures through practical application in conversation, reading, and writing. Vocabulary development is stressed.

ESL 0020 - Beginning Reading I

Credits: (2)
This course enables students to interpret language written in the Roman alphabetic system and build a foundation of basic vocabulary through reading simple text.

ESL 0025 - Beginning Reading II

Credits: (2)
Students in this course expand their vocabulary and interpretation skills by reading short paragraphs of simple text.

ESL 0030 - Basic Conversation I

Credits: (2)
Students in this course learn to understand and produce short spoken utterances referring to basic personal information and the immediate environment. Vocabulary-building of essential terms is strongly emphasized.

ESL 0035 - Basic Conversation II

Credits: (2)
This course facilitates students' abilities to engage in basic communicative exchanges involving familiar topics such as personal background and needs, social conventions and routine tasks. There is a strong emphasis on vocabulary building.

ESL 0040 - Beginning Grammar I

Credits: 2
This course introduces entry-level students with no or almost no English to elementary grammar structures using an integrated communicative approach.

ESL 0045 - Beginning Grammar II

Credits: 2
This course continues to build an understanding of elementary grammar structures for students with minimal English using an integrated communicative approach.

ESL 0050 - Beginning Pronunciation I

Credits: 1
Students learn the English sound system through spoken, written and reading exercises incorporating consonants, vowels, and consonant clusters in their most common pronunciations. Concurrent vocabulary-building is emphasized.

ESL 0055 - Beginning Pronunciation II

Credits: 1
Students continue to learn the English language sound system through spoken, written and reading exercises incorporating consonants, vowels and consonant clusters in their most common pronunciations. Concurrent vocabulary-building is emphasized.

ESL 0060 - Reading Enrichment

Credits: (1)
This reading course offers additional reading pracice for Novice-low English language learners. The course focuses on enlarging vocabulary and reinforcing basic sentence structures in English. Credit/no credit.

ESL 0065 - Reading Enrichment

Credits: (1)
This course offers additional reading practice for Novice-mid English language learners. Students expand their vocabulary and reading skills with high interest books adapted for this level. Credit/no credit.

ESL 0110 - Written Communication I

Credits: (2)
Students are introduced to writing simple paragraphs on familiar topics with instruction in basic punctuation as well as basic verb tense. Instruction includes joining sentences and making comparisons. Students continue to develop vocabulary and skills in basic grammar.

ESL 0120 - Topics in English

Credits: (2)
While focusing on reading and vocabulary, this course enables students to apply basic reading strategies to short texts about non-academic topics to help novice level students increase their English proficiency.

ESL 0130 - Basic English Communication

Credits: (2)
The course is designed for the student to develop the ability to sustain basic conversations about common topics and exchanges encountered in and out of class. Course work includes introductory work in speaking, listening, and pronunciation.

ESL 0141 - Grammar Foundations I

Credits: (2)
This course is a basic English grammar course structured around the simple present, present progressive, expressions of past time, nouns and pronouns. Basic sentence patterns using the verb "to be" and "to have" are emphasized. Grammar is integrated into writing exercises and speaking practice.

ESL 0150 - Pronunciation I

Credits: (1)
This course familiarizes students with the consonant and vowel sounds used in spoken English.

ESL 0160 - Reading Enrichment

Credits: (1)
This course offers additional reading practice for Novice-high/Intermediate-low English language learners. Students expand their vocabulary and reading skills with high interest books adapted for this level. Credit/no credit.

ESL 1210 - Written Communication II

Credits: (2)
Paragraph writing is introduced with topic sentences, supporting details, and concluding sentences. Students expand paragraph length with a variety of non-academic topics and methods of development such as narration and description. Sentence writing and vocabulary building are also emphasized. Students continue to develop their keyboarding skills as well as grammatical skills and usage.

ESL 1220 - Topics in Learning English

Credits: (2)
While focusing on reading and vocabulary, this course enables students to further develop their ability to apply reading strategies to semi-academic topics.

ESL 1230 - Interpersonal Communication

Credits: (2)
This course is designed for students of English who are increasing the use of their new language to work, study, socialize, and overcome communication barriers. At this level, students gain facility in oral communication over a greater variety of personal and academic topics.

ESL 1241 - Grammar Foundations II

Credits: (2)
This course builds on skills learned in Grammar Foundations I (ESL 0141). Present perfect and present perfect progressive tenses are introduced. Students begin to work with adjective clauses and the use of modals is expanded. Students are challenged to develop skills in recognizing and correcting grammar errors in written material.

ESL 1250 - Pronunciation II

Credits: (1)
This course familiarizes students with rhythm, intonation, emphasis, and phrasing in spoken English.

ESL 1260 - Reading Enrichment

Credits: (1)
This course offers additional reading practice for Intermediate-mid English language learners. Students expand their vocabulary and reading skills with high interest books adapted for this level. Credit/no credit.

ESL 2310 - Written Communication III

Credits: (2)
Paragraph writing is reviewed. The five paragraph essay model is introduced with simple introduction and conclusion paragraphs and adequately developed body paragraphs. Topics are generally experiential. Students continue to develop their language skills with grammar, punctuation, and vocabulary as they progress to becoming independent writers.

ESL 2320 - Topics for Academic Purposes I

Credits: (2)
This course will help students increase their English proficiency and vocabulary through application of reading skills and strategies to modified academic texts.

ESL 2330 - Academic Communication I

Credits: (2)
This course is for more advanced learners of English to develop abilities in speaking about a variety of topics for an extended period of time, and understanding and participating in classroom lectures and small-group discussions. Course work includes effective note-taking, vocabulary, and discussion strategies.

ESL 2341 - Advanced Grammar I

Credits: (2)
This course is an in-depth study of the usage and meaning of more advanced English grammar structures including the past and future perfect, active and passive verbs, and noun clauses.

ESL 2351 - Community I

Credits: (1)
Students will expand their communication skills in English and increase their understanding of American Culture. Students will meet 1 hour per week in class with an instructor and spend 3 hours per week volunteering for a community organization. Students will receive Community Engaged Learning credit for their volunteer activity in this class.

ESL 2360 - Reading Enrichment

Credits: (1)
This course offers additional reading practice for Intermediate-high English language learners. Students expand their vocabulary and reading skills with high interest books adapted for this level. Credit/no credit.

ESL 2410 - Written Communication IV

Credits: (2)
Students write two-and-a half page essays on academic topics and continue to develop paragraph writing.

Paraphrasing, summarizing, and analyzing are important skills that students practice. Students continue to develop their language skills. Students learn to use teacher conferencing and writing center tutoring to help them in editing and revising their written work. Students are introduced to writing responses and opinions and expressing their insights into the topics.

ESL 2420 - Topics for Academic Purposes II

Credits: (2)
This course focuses on academic topics. Students increase their English proficiency and vocabulary through an integrated skills approach. Reading texts are only slightly ESL adapted.

ESL 2430 - Academic Communication II

Credits: (2)
This course focuses on English language learners' abilities in expressing, supporting, and defending opinions. A variety of semi-academic and academic topics are presented at an increasingly authentic, unsimplified language level.

ESL 2441 - Advanced Grammar II

Credits: (2)
This course is an in-depth study of the usage and meaning of advanced English grammar structures including usage and meaning of infinitives and gerunds, conditionals, and adverb clauses.

ESL 2451 - Community II

Credits: (1)
Students continue to expand their communication skills in English and increase their understanding of American Culture. Students will meet 1 hour per week in class with an instructor and spend 3 hours per week volunteering for a community organization. Students will receive Community Engaged Learning credit for their volunteer activity in this class.

ESL 2460 - Reading Enrichment

Credits: (1)
This course offers additional reading practice for Advanced English language learners. Students expand their vocabulary and reading skills with high interest books adapted for this level. Credit/no credit.

ESL 2750 - Special Projects and Activities for Language Learning

Credits: (1-3)
Variable Title.
Special projects are designed to offer a variety of language and cultural experiences for the ESL student. Activities offered may include trips, special interest seminars, independent study or workshops. Contact the LEAP Department for programs offered.

ESS 2200 - Exploring Exercise Science Professions

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Designed to orient and acquaint students with the goals, objectives, scope, professional preparation, career opportunities, and trends in human performance management professions.

ESS 2300 - Health/Fitness Evaluation and Exercise Prescription

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Skills and competencies for prospective health fitness instructors, personal fitness trainers, and nutrition educators to deliver preventive exercise programs. Prerequisite: HLTH 1030 and NUTR 1020.

ESS 2890 - Cooperative Work Experience

Credits: (1-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Open to all students in Human Performance Management and Physical Education who meet the minimum Cooperative Work Experience requirements of the department. Provides academic credit for on-the-job experience. Grade and amount of credit will be determined by the department. May be repeated 5 times up to 6 credit hours.

ESS 3450 - Structural Kinesiology

Credits: (3)
This course is a detailed study of muscles, nerves, bones, and joints as they are involved in the science of movement. It is designed for students to experience theoretical concepts and apply functional anatomy knowledge to the execution and improvement of human performance. Prerequisite: HTHS 1110, Co-requisite: HTHS 1111, or Prerequisite: ZOOL 2100.

ESS 3500 - Biomechanics

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A study of the musculomechanical bases of human movement and experience in applying that knowledge to the

execution and evaluation of human performance. Prerequisite: ESS 3450; and Quantitative Literacy, MATH 1050 or MATH 1060.

ESS 3510 - Exercise Physiology

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A study of various physiological and environmental factors which affect performance of exercise and sport during acute exercise and physiological adaptations to chronic exercise. Prerequisite: HTHS 1110 or ZOOL 1020 or ZOOL 2200.

ESS 3540 - Physiological Aspects of Human Performance

Credits: (2)
Examine, evaluate, and apply the latest physiological concepts and ideas in conditioning practices for improving human performance. Prerequisite: PEP 2000 or ESS 2200 and 3 hours of General Education Life Science (LS).

ESS 3600 - Measurement and Statistics in Exercise Science

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The selection, administration, and interpretation of measurement techniques and statistical procedures for the purpose of evaluation and research as related to exercise science and health promotion. Prerequisite: Meet WSU Quantitative Literacy requirement and complete WEB 1700.

ESS 4370 - Clinical Exercise Physiology

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course provides a comprehensive look at the clinical aspects of exercise physiology by thoroughly examining the relationship between exercise and chronic disease. It provides students with fundamental knowledge of disease-specific pathology and treatment guidelines. Overview of each condition's unique physiology, effects of the condition on the exercise response, effects of exercise training on the condition, and recommendations for exercise testing and programming are presented in a selected topics format. Prerequisite: ESS 2300 and ESS 3510.

ESS 4620 - Leadership Concepts for Human Performance Management

Credits: (3)
Typically taught:

Fall [Full Sem]
Spring [Full Sem]

Students will study the current philosophical leadership concepts and the principles, practices, and issues of administration. Prerequisite: ESS 2200.

ESS 4890 - Cooperative Work Experience

Credits: (1-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

A continuation of ESS 2890. May be repeated 5 times up to 6 credit hours.

ESS 4990 - Senior Seminar

Credits: (1)
For Seniors only. Structured seminar focuses on synthesis of ideas and portfolio preparation.

ESS 6300 - Advanced Biomechanics

Credits: (3)
Typically taught:
Check with Department

Designed to expose the graduate student to appropriate research in sports biomechanics and to be involved in the analysis of movement based on selected mechanical principles such as balance, buoyancy, leverage, force, angles of rebound, projection and motion.

ESS 6400 - Advanced Exercise Physiology

Credits: (3)
Typically taught:
Check with Department

Understanding the physiological changes associated with exercise and training and the reasons for change are the paramount directives of this course. Concurrent with the lecture component is the practicum laboratory experience of equipment operation and individual assessment of physiological parameters.

ESS 6540 - Physiological Aspects of Human Performance

Credits: (2)
Typically taught:
Check with Department

Examine, evaluate, and apply the latest physiological concepts and ideas in conditioning practices for improving human performance. Prerequisite: PEP 2000 or ESS 2200 and 3 hours of General Education Life Science (LS).

ETC 2001 SS - Engineering Culture

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Engineering Culture describes the culture of engineering and the social and scientific practices as well as beliefs that engineers ascribe to in pursuing their profession. It also describes how culture is shaped by engineering and by the technologies that engineers make and maintain. This course examines the professional cultures that engineers inhabit as well as the way that a wider culture is shaped by engineering.

ETM 5913 - Six Sigma Tools I

Credits: (3)
This distance learning course provides an introduction to the six sigma body of knowledge as defined by the American Society of Quality (ASQ). The course will examine the foundations of six sigma and the statistical tools used in the initial stages of the DMAIC problem solving methodology. Prerequisite: BS with three years relevant experience & an engineering statistics undergraduate course or equivalent such as MATH 3410 is required, or instructor's approval. Students also must be able to work on an approved six sigma project at a firm.

ETM 5923 - Six Sigma Tools II

Credits: (3)
This distance learning course is a follow-on to the initial six sigma course and provides additional detail on the analyze, improve and control portions of the DMAIC problem solving methodology. This course is required for the Institutional Certificate in Quality and Lean Manufacturing, and can be used as a technical elective for the Oklahoma State University Engineering Technology Management Master's Degree. Prerequisite: ETM 5913, Six Sigma Tools I.

ETM 5933 - Lean Tools

Credits: (3)
This course teaches students lean manufacturing tools for continuous improvement in a manufacturing environment. Prerequisite: BS with three years relevant experience & an engineering statistics undergraduate course or equivalent such as Math 3410 is required, or instructor's approval. Students also must be able to work on an approved six sigma project at a firm. This distance learning course is required for the Institutional Certificate in Quality and Lean Manufacturing, and can be used as a technical elective for the Oklahoma State University Engineering Technology Management Master's Degree.

ETM 5943 - Lean-Sigma Implementation

Credits: (3)
This course introduces students to the implementation skills necessary to successfully combine and apply lean manufacturing and six sigma concepts in small to mid-sized manufacturing facilities. This course is required for the

Institutional Certificate in Quality and Lean Manufacturing, and can be used as a technical elective for the Oklahoma State University Engineering Technology Management Master's Degree. Prerequisite: ETM 5923, ETM 5933.

FIN 1010 - Personal Finance

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

Personal and family budgeting, installment buying, borrowing money, buying a home, life and property insurance, personal investment, and retirement and estate planning.

FIN 2300 - Introduction to Investments

Credits: (3)
Typically taught:
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~**Not currently being offered**

A study of investment opportunities, mechanics, analysis, risk, and risk management at the introductory level. This course is designed for non-finance majors and will not be accepted as a substitute for FIN 3300.

FIN 3200 - Financial Management

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [1st Blk]

Financial analysis, planning and control, working capital management, capital budgeting, and short-term and long-term financing. Student use of computers is required for the preparation of case study material used to enhance the presentation of selected topics presented in the course. Prerequisite: ~~Business Foundations;~~ BSAD 2899~~;~~, QUAN 3610.

FIN 3300 - Investments

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem~~]~~
~~**Summer [2nd Blk**~~**]**

An in-depth study of principles, concepts, and tools used in the investment field as they relate to investment opportunities, mechanics, financial statement analysis, risk, and portfolio management. Computer use is required to access the Dow-Jones market analyzer investment software and in the preparation and analysis of investment portfolios. Prerequisite: ~~Business Foundations;~~ BSAD 2899~~;~~, FIN 3200.

FIN 3350 - Financial Institutions

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [1st Blk]

A study of the functions and significance of the major financial institutions, such as commercial savings institutions, with an emphasis on management problems, regulations, credit appraisal, and loan types. Prerequisite: ~~Business Foundations;~~ BSAD 2899~~;~~, FIN 3200.

FIN 3400 - Real Estate Principles and Practices

Credits: (3)
Typically taught:
Not currently being offered

Fundamental economic aspects of real estate with emphasis on realty as a commodity of trade. The subject matter in this course is of general interest to both those desiring to enter the real estate profession and those who only intend to own real estate.

FIN 3500 - Capital Budgeting

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Capital investment decision-making procedures relative to make/ buy, lease/buy, working capital, replacements, and new investment decisions. Involves use of the computer in the analysis of cash flows and capital acquisition alternatives. Prerequisite: ~~Business Foundations;~~ BSAD 2899~~;~~, FIN 3200.

FIN 4400 - Financial Problems - Corporate Finance

Credits: (3)
Typically taught:
Fall [Full Sem]

Problems in financial management with an emphasis on corporate finance. Use of financial software and computers is an integral part of problem solutions. Prerequisite: ~~Business Foundations;~~ BSAD 2899~~;~~, FIN 3200~~. May be repeated 3 times for credit~~.

FIN 4410 - Financial Problems - Investments

Credits: (3)
Typically taught:

Spring [Full Sem]

Problems in financial management with an emphasis on investments. Use of financial software and computers is an integral part of problem solutions. Prerequisite: ~~Business Foundations;~~ BSAD 2899~~;~~, FIN 3300~~. May be repeated 3 times for credit~~.

FIN 4800 - Independent Research

Credits: (1-3)
Directed research and study on an individual basis. May be repeated until a total of 4 hours credit is accumulated. Prerequisite:~~ Business Foundations;~~ BSAD 2899; Senior Standing; Written Instructor Approval.

FIN 4850 - Finance Study Abroad

Credits: (1-3)
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~
~~**Summer [Full Sem]**~~

This course is designed for students who wish to explore financial theory and practice in countries other than the U.S. Students will study international finance as offered through a partner university (or other university with department chair approval). Prerequisite: BSAD 2899. May be repeated once up to 6 credits.

FIN 4860 - Finance Internship

Credits: (3)
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~
~~**Summer [Full Sem]**~~

A structured professional-level field experience. The student will be counseled and supervised as he/she applies and integrates the knowledge and skills obtained through finance courses. Prerequisite:~~ Business Foundations;~~ BSAD 2899; Senior Standing; Instructor approval.

FIN 4900 - Special Topics in Finance

Credits: (4)
Special treatment of current topics in Finance. This course will involve primary and/or secondary research by class participants. Prerequisite: ~~Business Foundations;~~ BSAD 2899~~;~~, FIN 3200; Instructor approval.

FL 1000 - Proficiency Development

Credits: (1-2)
Typically taught:
~~**(N)**~~

Not currently offered

(N=Novice) (Cr/NCr) Non-graded courses for entry-level students to augment foreign language instruction in stress-free activities such as reading children's literature, learning and performing skits, folk dancing, singing, cooking, etc. May be repeated for credit under different titles.

FL 1010 - First Semester

Credits: (3)
Typically taught:
ASL Fall, Summer [Full Sem]
CHNS, FRCH, GRMN, ITLN, JPNS Fall [Full Sem]
SPAN Fall [Full Sem]

(N~~)~~

=Novice) Introductory course assuming no significant previous experience with the language. Beginners and students with less than two years of high school language should register for this class. Emphasis on everyday conversation and exposure to cultural perspectives.

FL 1020 - Second Semester

Credits: (3)
Typically taught:
ASL Spring, Summer [Full Sem]
CHNS, FRCH, GRMN, ITLN, JPNS Fall, Spring, Summer [Full Sem]

(N~~)~~

=Novice) Continuation of FL 1010. Basic language skills including listening, speaking, reading, writing and culture.

FL 1700 - Conversational Skills for Specific Purposes

Credits: (1-3)
Typically taught:
~~**(N)**~~

Not currently offered

(N=Novice) Specific vocabulary and speaking skills in one semester (e.g., nursing, law enforcement, medical, tourism, family language courses, etc.). May be repeated for credit under different titles.

FL 1851 - Study Abroad

Credits: (3)
Typically taught:
~~**(N)**~~

Check with department

(N=Novice) Language and culture studies for students with no previous experience in the target language and culture. Most assignments are performed in English. Prior travel experience does not apply.

FL 1852 - Study Abroad

Credits: (1-3)
Typically taught:
~~**(N)**~~

Check with department

(N=Novice) Language and culture studies for students with no previous experience in the target language and culture. Most assignments are performed in English. Prior travel experience does not apply. May be repeated twice with a maximum of 3 credit hours.

FL 2000 - Proficiency Development

Credits: (1-2)
Typically taught:
Not currently offered

(NH~~)~~

=Novice High) (CR/NC) Non-graded courses for second-year students to augment foreign language instruction in stress-free activities appropriate to the linguistic level of second-year students. May be repeated under different titles.

FL 2010 - Third Semester

Credits: (3)
Typically taught:
ASL Fall, Summer [Full Sem]
CHNS, FRCH, GRMN, ITLN, JPNS Fall [Full Sem]
SPAN Fall, Spring, Summer [Full Sem]

(NH~~)~~

=Novice High) Continuation of FL 1020. Assumes completion of first-year or equivalent experience. Students learn to understand and express ideas about their community and the world. Includes listening, speaking, reading, writing and culture.

FL 2020 HU - Fourth Semester

Credits: (3)
Typically taught:
ASL Spring, Summer [Full Sem]
CHNS, FRCH, GRMN, ITLN, JPNS Spring [Full Sem]
SPAN Fall, Spring, Summer [Full Sem]

(NH~~)~~

=Novice High) Continuation of FL 2010. The learning and application of strategies for acquiring a foreign language. Students also learn how cultural products and practices reflect a culture's attitudes, values, ideas and meaning. The process of language acquisition and the seeking of cross-cultural understanding provide insights into the commonalities of how the human family learns, thinks and communicates.

FL 2021 - Second Year II

Credits: (3)
Typically taught:
Only available through testing

(NH~~)~~

=Novice High) Continuation of FL 2010 without General Education Humanities credit. Offered through examination only.

FL 2030 - Second Year Language Review

Credits: (3)
Typically taught:
~~**Fall [Full Sem]**~~ **Check with department**

(NH~~)~~

=Novice High) This course will prepare students who wish to continue language study. Emphasis on conversational skills and a review of language structure and usage.

FL 2550 - Cultural Heritage in Translation

Credits: (3)
Variable Title
Typically taught:
Check with department

Studies in culture, history, geography, social customs, fine arts and civilization for students with no or very limited proficiency. This course will be taught in English. May be repeated once for other non- English speaking cultures.

FL 2600 HU - Introduction to Cultural and Literary Studies in Translation

Credits: (3)
Variable Title
Typically taught:
Check with department

May be offered under any of the languages taught in the department. All Foreign Language HU2600 courses are taught in English and all texts are read in English translation in order to make some of the literature we normally would teach in a foreign language accessible to all students. These courses may introduce students to specific literary

periods, literary themes or some prominent authors in specific areas of the world where languages other than English are spoken. May be repeated up to 10 times for credit under different titles.

FL 2851 HU - Study Abroad

Credits: (3)
Typically taught:
Check with department

(NH)

=Novice High) Language and culture studies for students whose minimal proficiency is Novice High. Language assignments at the Novice or Intermediate-Low levels are performed in the target language. All other assignments are performed in English. Prior travel experience does not apply.

FL 2852 - Study Abroad

Credits: (1-3)
Typically taught:
Check with department

(NH)

=Novice High) Language and culture studies for students whose minimal proficiency is at Novice High. Language assignments at the Novice or Intermediate-Low levels are performed in the target language. All other assignments are performed in English. Prior travel experience does not apply. May be repeated twice with a maximum of 3 credit hours.

FL 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-6)
Consult the class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript.

FL 2920S - Community Service

Credits: (2)
Typically taught:
Not currently offered

(NH)

=Novice High) Students will receive an overview of community service and explore opportunities for service learning in the community. Five preparatory workshops (first week only) followed by 55 hours of approved community service.

FL 3000 - Proficiency Development

Credits: (3)
Typically taught:
ASL, CHNS, FRCH, GRMN, JPNS Check with department
SPAN Fall, Spring [Full Sem]

(IL~~)~~

=Intermediate Low) This is a transition course to upper division. The course focuses on oral proficiency development. Students will learn a variety of techniques and strategies to increase their oral proficiency in a variety of social, educational and cultural settings. Native-speaking students or those who have acquired proficiency through residence in the target language community are not eligible to take this class.

FL 3060 - Grammar & Composition

Credits: (3)
Typically taught:
FRCH, GRMN, JPNS, PTGS Check with department
SPAN Fall, Spring, Summer [Full Sem]

(IL~~)~~
~~**[Refer to the Class Schedule for information on specific languages]**~~

=Intermediate Low) Required of all majors and minors. Readings to develop conversation, composition and grammar skills. One sheltered section may be offered to students who have not had extensive in-country experience.

FL 3160 - Introduction to Literature

Credits: (3)
Typically taught:
FRCH, GRMN, JPNS, PTGS Check with department
SPAN Fall, Spring, Summer [Full Sem]

(IL~~)~~
~~**[Refer to the Class Schedule for information on specific languages]**~~

=Intermediate Low) Required of all majors and minors. 3160 may be taken concurrently with other literature courses. One sheltered section may be offered to students who have not had extensive in-country experience.

FL 3190 - Foreign Language Journal

Credits: (1)
Typically taught:
Not currently offered

(IM~~)~~

=Intermediate Mid) For foreign language students in the third year who work on publishing the foreign literary journal. Includes selecting articles, editing and preparing journal layout.

FL 3220 - Phonetics and Phonology

Credits: (3)
Typically taught:
FRCH, GRMN, JPNS, PTGS Check with department
SPAN Fall, Spring [Full Sem]

(IL)

=Intermediate Low) Analysis of the sounds of language and word formation: practice of native like speech patterns. Required of all teaching majors and minors.

FL 3320 - Applied Language Studies

Credits: (1-3)
Variable Title
Typically taught:
FRCH, GRMN, JPNS, PTGS Check with department
SPAN Fall, Spring [Full Sem]

(Minimal proficiency level varies with content). May be repeated up to 10 times under different titles.

FL 3360 - Advanced Grammar

Credits: (3)
Typically taught:
FRCH, GRMN, JPNS, PTGS Check with department
SPAN Fall, Spring [Full Sem]

(IL)

=Intermediate Low) Analysis and application of syntactic principles and discourse structure.

FL 3540 - Latin American Environment and Cultures

Credits: (3)
In order to provide an interdisciplinary introduction to Latin America, this course presents the region's history, its peoples, their culture and their political and natural environments. Other content to be discussed includes issues of migration, US Latinos and the region's relationship with the US.

FL 3550 - Cultural Heritage I

Credits: (3)
Variable Title
Typically taught:
Fall [Full Sem]

(IM)

=Intermediate Med) Studies in culture, history, geography, social customs, fine arts and civilization. May be repeated for other non-English-speaking cultures.

FL 3560 - Cultural Heritage II

Credits: (3)
Variable Title
Typically taught:
~~**Spring [Full Sem] (IM)**~~

Check with department

(IM=Intermediate Med) Studies in culture, history, geography, social customs, fine arts, and civilization. May be repeated 3 times for other non-English speaking cultures.

FL 3570 - Special Topics in Culture

Credits: (3)
Variable Title
Typically taught:
~~**Spring [Full Sem] (IM)**~~

Check with department

(Intermediate Mid) In-depth studies in culture, history, geography, social customs, fine arts and civilization. May be repeated up to 7 times for credit and for other non-English speaking cultures.

FL 3610 - Literature Survey I

Credits: (3)
Variable Title
Typically taught:
~~**Fall [Full Sem] (IH)**~~

Check with department

(IH=Intermediate High) A survey of the authors and works of a particular period or place. May be repeated under different titles.

FL 3620 - Literature Survey II

Credits: (3)
Variable Title
Typically taught:
~~**Spring [Full Sem] (IH)**~~

Check with department

(IH=Intermediate High) A survey of the authors and works of a particular period or place. May be repeated under different titles.

FL 3630 - Literature Genres

Credits: (3)
Variable Title
Typically taught:
~~**(IM)**~~

Check with department

(IM= Intermediate Mid) May be repeated under different titles. One literature course is required for regular and teaching majors. May be taken concurrently with FL 3160.

FL 3650 - Literature Periods

Credits: (3)
Variable Title
Typically taught:
~~**(IM)**~~

Check with department

(IM=Intermediate Mid) May be repeated under different titles. One literature course is required for regular and teaching majors. May be taken concurrently with FL 3160.

FL 3670 - Literature Authors

Credits: (3)
Variable Title
Typically taught:
~~**(IM)**~~

Check with department

(IN=Intermediate Mid) May be repeated under different titles. One literature course is required for regular and teaching majors. May be taken concurrently with FL 3160.

FL 3690 - Literature Special Topics in Literature

Credits: (1-3)
Variable Title
Typically taught:
~~**(IM)**~~

Check with department

(IM=Intermediate Mid) May be repeated under different titles. One literature course is required for regular and teaching majors. May be taken concurrently with FL 3160.

FL 3710 - Business Language I

Credits: (3)
Typically taught:
FRCH, GRMN, JPNS, PTGS Check with department
SPAN Fall [Full Sem]

(IM~~)~~

=Intermediate Mid) Business Language and Practices. Required of all commercial majors.

FL 3720 - Language for Specific Purposes I

Credits: (3)
Variable Title
Typically taught:
FRCH, GRMN, JPNS, PTGS Check with department
SPAN Fall [Full Sem]

(IM~~)~~

=Intermediate Mid) This course is content, vocabulary and culture-based. The course focuses on practical vocabulary, idiomatic expressions, professional terminology and cultural interactions on a variety of topics such as language for the medical professions, social workers, law enforcement or tourism.

FL 3730 - Language for Specific Purposes II

Credits: (3)
Variable Title
Typically taught:
FRCH, GRMN, JPNS, PTGS Check with department
SPAN Spring [Full Sem]

(IM~~)~~

=Intermediate Mid) This course is content, vocabulary and culture-based. The course focuses on practical vocabulary, idiomatic expressions, professional terminology and cultural interactions on a variety of topics, such as language for medical professions, social work, law enforcement or tourism.

FL 3740 - Translation~~/Interpreting~~ I

Credits: (3)
Typically taught:
FRCH, GRMN, JPNS, PTGS Check with department
SPAN Fall [Full Sem]

(IM~~)~~

=Intermediate Mid) Introduction to basic techniques and ~~procedures used in~~skills needed for bilingual translation of non-fiction texts. ~~Written and oral translation of scientific and technical texts.~~ Emphasis will be on the translation into English, and on the stylistic, syntactic, cultural, lexical, and terminological problems. Students are given ample opportunity to apply these techniques through a series of written translation assignments, which form the basis for class discussion.

FL 3750 - Introduction to Interpreting

Credits: (3)
Typically taught:
Fall [Full Sem]

Introduction to basic techniques and skills needed for bilingual interpretation in a variety of professional settings. The course includes an overview and history of the interpreting industry and work of interpreters, certification and licensure, and the variety of consumers and modalities with which interpreters work. Ethical decision-making models and the Code of Ethics for interpreters are explored.

FL 3850 - Study Abroad

Credits: (1-6)
Typically taught:
Check with department

(IM~~)~~

=Intermediate Mid) Language and culture studies for students whose language proficiency is Intermediate Low to Intermediate High. All Intermediate and Advanced tasks will be performed in the target language. All Superior tasks may be performed in English. Prior travel experience does not apply. May be repeated up to 10 times for credit.

FL 4190 - Foreign Language Journal

Credits: (1)
Typically taught:
Check with department

(IM~~)~~

=Intermediate Mid) For foreign language students in the fourth year who work on publishing the foreign language literary journal. Includes selecting articles, editing and preparing journal layout.

FL 4220 - Special Topics in Linguistics

Credits: (3)
Typically taught:
Check with department

(IM~~)~~

=Intermediate Mid) An introduction to linguistic structures and semantic elements. The course provides useful information and practice in the language, its structures and usage. The sub-disciplines of linguistics, other than phonetics and phonology (covered in FL 3220), will be studied. These may include lexical analysis, semantics, morphology, syntax, linguistic change and dialectal variation.

FL 4340 - Foreign Language Acquisition and Teaching for Proficiency

Credits: (3)
Typically taught:
Fall [Full Sem]

(IH~~)~~

=Intermediate High) Theories of Second Language Acquisition, particularly as they apply to the teaching of foreign languages. This course will also review various assessment techniques, the ACTFL Proficiency Guidelines and the National Standards for Foreign Language Learning. Offered fall semester only.

FL 4400 - Methods of Teaching a Foreign Language

Credits: (3)
Typically taught:
Spring [Full Sem]

(AL~~)~~

=Advanced Low) Practical Methods, techniques and strategies in teaching foreign languages. Emphasis is on planning, teaching and assessment. Offered spring semester only. Prerequisite/Co-requisite: FL 3220, FL 4340, the ACTFL Oral Proficiency Interview is required; the department standard is Advanced-Low. Students must complete FL 4400 and complete the Praxis II Content Knowledge Exam in French, German or Spanish prior to student teaching.

FL 4500 - Methods of Teaching a Foreign Language

~~Credits: (4)~~Credits: (4)
Typically taught:
Fall [Full Sem Online]
Spring [Full Sem Online]
Summer [Full Sem Online]

This course presents theoretical premises and research on foreign language acquisition. It uses the standards for foreign language learning as the organizing principle for instructional methods; students design classroom lessons, projects and assessments based upon standards. FL 4500 is designed for students who are working toward a foreign language teaching degree or for teachers not desiring post-graduate credit. FL 6500 is designed for teachers who are seeking to recertify or to become endorsed at the graduate level.

FL 4620 - Survey of Literature I

Credits: (3)
Variable Title

Typically taught:
Check with department

(IH~~)~~

=Intermediate High) One literature course is required of regular and teaching majors. Prerequisite: FL 3160

FL 4630 - Survey of Literature II

Credits: (3)
Variable Title
Typically taught:
~~(IH)~~

Check with department

(IH=Intermediate High) One literature course is required of regular and teaching majors. Prerequisite: FL 3160

FL 4690 - Special Topics in Literature

Credits: (3)
Variable Title
Typically taught:
~~(IH)~~

Check with department

(IH=Intermediate High) Detailed analysis of a particular body of literature. For students whose proficiency in the target language is at least Intermediate High. May be repeated up to 10 times under different titles. Prerequisite: FL 3160

FL 4710 - Business Language II

Credits: (3)
Typically taught:
FRCH, GRMN, JPNS, PTGS Check with department
SPAN Spring [Full Sem]

(IM~~)~~

=Intermediate High) Advanced Business Language and Practices. Required of all commercial majors.

FL 4740 - Translation~~/Interpreting~~ II

~~Credits: (3)~~
~~Typically taught:~~
~~(IH)~~

~~Advanced translation and practice in oral (simultaneous) interpreting of non-fiction texts. Emphasis will be on the stylistic, syntactic, cultural, lexical, and terminological problems.~~

Credits: (3)
Typically taught:
FRCH, GRMN, JPNS, PTGS Check with department
SPAN Spring [Full Sem]

(IH=Intermediate High) Development of techniques and skills needed for bilingual translation of non-fiction texts. Emphasis will be on the translation into the target language. Methods of contrastive linguistics to analyze pertinent aspects of language structure, involving syntax, vocabulary and style, as well as basic theoretical-historical concepts are employed. Students are given ample opportunity to apply these techniques and concepts through a series of written translation assignments, which form the basis for class discussion. Prerequisite/Co-requisite: FL 3740 is strongly advised, but not required.

FL 4801 - A&H Leadership Lecture Series

Credits: (1)
Typically taught:
Spring [Full Sem]

This one-credit elective course will give arts and humanities' majors the opportunity to interact with successful guest lecturers whose undergraduate backgrounds are in the arts and humanities. Lecturers will clarify how the talents and skills associated with their degrees have contributed to their pursuit of successful careers and lives.

FL 4830 - Directed Readings

Credits: (1-3)
Typically taught:
Check with department

(IH~~)~~

=Intermediate High) May be repeated up to 10 times.

FL 4850 - Study Abroad

Credits: (1-6)
Typically taught:
~~(A)~~

Check with department

(A=Advanced) Language and culture studies for students whose language proficiency is Advanced or Superior. All tasks are performed in the target language. Prior travel experience does not apply.

FL 4920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Typically taught:

Not currently offered

(minimal proficiency level varies with content) Consult the class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated 5 times with a maximum of 6 credit hours.

FL 4960 - Senior Project

Credits: (1-3)
Typically taught:
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~ **Check with department**

(IH~~)~~

=Intermediate High) For students completing a major with Departmental Honors. Before registration in this course, students must work with a faculty advisor to define the project, create a contract and schedule, and determine the appropriate number of credit hours.

FL 4990 - Senior Assessment

Credits: (.5)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Required of all majors during their senior year. Students will assemble a portfolio with a representation of their work in the foreign language. Speaking skills will also be evaluated. Must be completed before graduation clearance.

FL 6500 - Methods of Teaching a Foreign Language

~~**Credits: (4)**~~**Credits: (4)**
Typically taught:
Fall [Full Sem Online]
Spring [Full Sem Online]
Summer [Full Sem Online]

This course presents theoretical premises and research on foreign language acquisition. It uses the standards for foreign language learning as the organizing principle for instructional methods; students design classroom lessons, projects and assessments based upon standards. FL 4500 is designed for students who are working toward a foreign language teaching degree or for teachers not desiring post-graduate credit. FL 6500 is designed for teachers who are seeking to recertify or to become endorsed at the graduate level.

GEO 1020 - Dinosaurs and the Fossil Record

Credits: (3)
Typically taught:
Not currently being offered

An introduction to the nature of the fossil record and a review of the major events in the history of life, including the rise of dinosaurs and mass extinctions. A writing intensive course requiring a term paper using library resources. Three lectures per week.

GEO 1030 PS - Earthquakes and Volcanoes

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [2nd Blk, Full Sem Online]

The causes, distribution, and effects of earthquakes and volcanoes within the framework of global plate tectonics. Development of problem solving and analytical thinking skills are emphasized through homework assignments related to geologic processes. Three lectures per week.

GEO 1060 PS - Environmental Geosciences

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

The scientific study of the interaction of humans and earth systems including topics of natural hazards; soil, water, energy and mineral resources; and issues of global change. Three lectures per week.

GEO 1065 - Environmental Geosciences Lab

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Laboratory and field exercises involving analysis of geologic data related to environmental issues or problems. Application of the scientific method and development of basic computational and map interpretation skills will be stressed. One three-hour lab per week. Prerequisite: GEO 1060, or concurrent enrollment.

GEO 1110 PS - Dynamic Earth: Physical Geology

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

Fundamental principles of geology emphasizing physical aspects of the Earth including earth materials, plate tectonics, and the effects of water, wind and ice on the Earth's surface. Useful for all students, and recommended as

the first geology course for students with majors/minors in geosciences, science teaching, archaeology, and pre-engineering. Three lectures per week. Optional field trip to observe local geologic features.

GEO 1115 - Physical Geology Lab

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The study of minerals and rocks in hand specimens, as well as surficial processes of the Earth revealed by topographic maps and air photos. One three-hour lab per week. Prerequisite: GEO 1110 or GEOG 1000, or concurrent enrollment in either class.

GEO 1130 PS - Introduction to Meteorology

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem~~]~~
~~Summer [1st Blk~~]

Survey of atmospheric processes that create weather. Topics include solar radiation, temperature, moisture, pressure, wind, storm systems, weather forecasting, and air pollution. Problem solving skills and use of satellite imagery included. Three lectures per week.

GEO 1220 - Historical Geology

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The history of the Earth and the methods used to interpret this history. Short field trips required. Three lectures and one three-hour lab per week. Prerequisite: GEO 1110 and GEO 1115.

GEO 1350 PS - Principles of Earth Science

Credits: (3)
Typically taught:
Spring [Full Sem]

Overview of Earth's systems, including weather, climate, seasons, rocks and minerals, processes that change Earth's surface, earthquakes, volcanoes, and plate tectonics. Data collection and analysis are included. Two lectures and one three-hour lab per week. Designed for Elementary Education majors.

GEO 2050 - Earth Materials

Credits: (4)
Typically taught:
Fall [Full Sem]

An introduction to the origin, classification, and identification of minerals and rocks including topics related to crystallography, mineral chemistry, petrology, and the importance of mineral and rock resources to our society. Three lectures and one three-hour laboratory per week. Prerequisite: GEO 1115 or permission of instructor.

GEO 2600 - Laboratory Safety

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An interdisciplinary, team-taught course that will be an overview of the major chemical, biological and physical safety issues related to science laboratories and field work. Class will meet once per week and will be taught in a lecture/demonstration format.

GEO 2890 - Cooperative Work Experience

Credits: (1-6)
Typically taught:
Offered as needed

Open to all students in Geosciences who meet the minimum Cooperative Work Experience requirements of the department. Provides academic credit for on-the-job experience. Grade and amount of credit will be determined by the department. May be repeated 5 times with a maximum of 6 credit hours.

GEO 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Typically taught:
(offered as needed)

Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript.

GEO 2950 - Geoscience Fieldtrips

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Application of basic Geoscience field methods during fieldtrips. Readings, written and oral reports, and/or examinations may be required. Prerequisite: consent of instructor. May be repeated for a maximum of 6 credit hours.

GEO 3010 - Oceanography and Earth Systems

Credits: (3)
Typically taught:
Spring [Full Sem] taught even years

Study of the world's oceans as a framework for examining the major issues in Earth system science. Topics include plate tectonics and the origin of ocean basins, atmosphere-ocean linkages and feedbacks, El Nino events, the ocean's role in biogeochemical cycles, structure and organization of marine ecosystems, and the scientific basis for understanding human impacts on marine systems. Three lectures per week. Prerequisite: GEO 1110 or GEO 1130 or GEOG 1000.

GEO 3060 - Structural Geology

Credits: (4)
Typically taught:
Fall [Full Sem]

Origin and characteristics of structural features in deformed rock. Topics include basic principles of stress, strain, and rock deformation; analysis of faults and folds; and relations to major tectonic features of Earth. Field trips required. Three lectures and one three-hour lab per week. Prerequisite: GEO 2050 and either MATH 1050 or MATH 1080; or consent of instructor.

GEO 3080 - Water Resources

Credits: (3)
Typically taught:
Fall [Full Sem]

A detailed examination of the water cycle, including, precipitation, surface water, groundwater, glaciers, water conservation, water management, and water pollution with special emphasis on the water resources of Utah and neighboring areas. Three lectures per week. Prerequisite: GEO 1115.

GEO 3150 - Geomorphology

Credits: (4)
Typically taught:
Fall [Full Sem]

A study of landforms, surficial deposits, and geomorphic processes operating in fluvial, coastal, eolian, and glacial environments. Laboratory exercises employ maps, aerial photographs, and field analysis to understand the interactive nature of geomorphic processes and landform development. Three lectures and one three-hour lab per week. Prerequisite: GEO 1220 and MATH 1050 or MATH 1080.

GEO 3180 - Paleontology

Credits: (4)
Typically taught:
~~Fall [Full Sem]~~Not currently being offered

Characteristics of important fossil groups and their geologic distribution and paleoecology. Emphasis on the invertebrate record with some treatment of vertebrates and plants. Three lectures and one three-hour lab per week. Prerequisite: GEO 1220 or ZOOL 1110 or consent of instructor.

GEO 3210 - Quaternary Environmental Change

Credits: (3)
Typically taught:
~~Spring [Full Sem]~~Not currently being offered

Overview of the geologic and paleoclimatic history of the Earth during the last 2 million years (the "Ice Age"), focusing on the interactions between geological, climatological, and biological processes and systems. Topics include the methods used to date Quaternary deposits, nature of Quaternary glaciations, use of proxy data to model past climates, causes of Quaternary climatic oscillations, history of Pleistocene Lake Bonneville, and the increasing role of humans as agents of environmental change. Three lectures per week. Prerequisite: GEO 1220 or GEOG 1000 or ANTH 2030.

GEO 3250 - Geology of Utah

Credits: (3)
Typically taught:
Fall [Full Sem] taught even years

The study of Utah's geologic history, rocks, minerals, fossils, and landforms and their relationship to regional and global events. Field trips required. Three lectures per week. Prerequisite: GEO 1220.

GEO 3400 - Remote Sensing I

Credits: (4)
Typically taught:
Fall [Full Sem]

An introduction to traditional photographic analysis and digital image processing of remotely sensed imagery (satellite and low-altitude aerial platforms) for earth scientists. An assessment of the electromagnetic spectrum with regard to spectral ranges of reflected and emitted energy as a means of identifying, interpreting, and analyzing earth surface phenomena. Image processing techniques are introduced through ERDAS Imagine software. Three lectures and one three-hour lab per week. Prerequisite: MATH 1040 or consent of instructor.

GEO 3550 - Sedimentology and Stratigraphy

Credits: (4)
Typically taught:
Spring [Full Sem]

The processes, origin, classification, identification, and basic petrology of sedimentary rocks and the principles, concepts, and applications of stratigraphy. Field trips required. Three lectures and one three-hour lab per week. Prerequisite: GEO 1220 and GEO 2050; or consent of instructor.

GEO 3570 - Foundations of Science Education

Credits: (3)
Typically taught:
Spring [Full Sem]

A thorough investigation of research in science learning and curricular standards at the state and national levels. Foundations of the philosophy of science and scientific inquiry as applicable to science teaching at the secondary level. This course serves as a foundation to a preservice science teacher's education coursework.

GEO 3753 - Geomicrobiology

Credits: (3)
Typically taught:
Fall [Full Sem] taught even years

Geomicrobiology is the study of the interactions between microorganisms and minerals. This course will explore 1. geological change mediated by microorganisms, 2. microbial evolution driven by geologically diverse habitats, and 3. applications of geomicrobiology, including understanding the evolution of life on earth, the study of life in extreme environments, and industrial applications of geomicrobiology. This team-taught course includes classroom discussion, laboratories, and field trips. Prerequisite: CHEM 1210 or approval of the instructor. Cross-listed with MICR 3753.

GEO 3880 - Groundwater

Credits: (4)
Typically taught:
Spring [Full Sem]

Origin, occurrence, behavior, and use of groundwater, with special emphasis on practical applications in Utah. Three lectures and one three hour lab per week. Prerequisite: GEO 1115 and either MATH 1050 or MATH 1080; or consent of instructor.

GEO 4010 - Ancient Environments and Paleoecology

Credits: (3)
Typically taught:
~~Fall [Full Sem]~~Not currently being offered

A multi disciplinary seminar course that will explore both physical and biological methods of interpreting ancient environments and ecology. Three lectures per week. Prerequisite: GEO 3180, or GEO 3550, or ZOOL 3450, or BTNY 3454, or CHEM 3070, or consent of instructor.

GEO 4060 - Geoscience Field Methods

Credits: (3)
Typically taught:
Fall [Full Sem]

A capstone course in the collection and analysis of field data for various Geoscience applications. Topics include introductory surveying, geologic mapping of bedrock and surficial deposits, measuring stratigraphic sections, GPS surveying, groundwater monitoring, and analysis of geologic hazards. Results are presented in maps, computer graphics, written reports, and oral presentations. One hour of lecture and six hours of lab/field work per week. Prerequisite: GEO 2050, GEO 3150, and GEO 3550.

GEO 4100 - Engineering Geology

Credits: (3)
Typically taught:
Spring [Full Sem] taught odd years

Introduction to basic concepts in engineering geology and geotechnical engineering; emphasizes problem solving as the primary method. Three lectures per week. Prerequisite: GEO 1060 and GEO 1065, or GEO 2050, or consent of instructor.

GEO 4150 - Environmental Assessment

Credits: (3)
Typically taught:
Spring [Full Sem] taught even years

Interdisciplinary study of geology applied to transport of contaminants in groundwater, environmental site assessment and remediation. Three hours of lecture per week. Prerequisite: GEO 1060 and GEO 1065, or GEO 2050, or consent of instructor.

GEO 4210 - Introduction to Computer Mapping and Geographic Information Systems

Credits: (4)
Typically taught:
Fall [Full Sem]

Principles of spatial analysis including data base design, data input, and spatial modeling in the context of an information system using the ArcGIS family of software. The nature of computer mapping is examined with an emphasis on scale, minimum mapping unit, topology, and projected mapped features. Three lectures and one three-hour lab per week. Prerequisite: MATH 1040 and proficiency in the Windows operating system, or consent of instructor.

GEO 4220 - Technical and Applicational Issues in GIS

Credits: (4)
Typically taught:
Spring [Full Sem]

A capstone course in spatial analysis in which data entry, data manipulation, spatial modeling, and analysis are addressed through the completion of the research project addressing a spatial problem using GIS and the computer as a modeling instrument. Advanced level, computer-intensive applications are employed using the ArcGIS family of software. Three lectures and one three-hour lab per week. Prerequisite: GEO 4210.

GEO 4300 - Igneous and Metamorphic Petrology

Credits: (4)
Typically taught:
Spring [Full Sem] taught even years

The origin, classification, and identification of igneous and metamorphic rocks, and understanding of igneous and metamorphic processes. Laboratory includes analysis of rocks in thin section and an introduction to optical mineralogy. Three lectures and one three-hour lab per week. Prerequisite: GEO 2050 and CHEM 1220; or consent of instructor.

GEO 4400 - Remote Sensing II: Advanced Digital Image Processing

Credits: (4)
Typically taught:
Spring [Full Sem]

A laboratory intensive assessment of digital (raster) imagery using advanced computer-assisted digital processing procedures with an emphasis on quantitative statistical analysis through ERDAS Imagine image processing software. The focus is on feature classification of multi spectral imagery, principle components analysis, georectification, and error assessment. Three lectures and one three-hour lab per week. Prerequisite: GEO 3400.

GEO 4510 - Geology Field Camp

Credits: (4)
Typically taught:
Summer [1st Blk] taught even years

Integrated approach to collecting field data and interpreting geologic processes and history. Includes geologic mapping and analysis of bedrock, surficial deposits, and geologic structures using aerial photographs, topographic maps, and surveying techniques. Results presented in written reports, maps, and graphical formats. About forty hours of lab per week for about 4 weeks. Prerequisite: GEO 3060, GEO 3550, and GEO 4060; or consent of instructor.

GEO 4550 - Geochemistry

Credits: (3)
Typically taught:
Spring [Full Sem] taught odd years

The chemical evolution of the Earth and geochemical processes operating in the lithosphere, hydrosphere, and atmosphere. Applications to chemical reactions, mineral stability, aqueous solutions, geochemical cycles, and isotope geochemistry. Three lectures per week. Prerequisite: CHEM 1220 and GEO 2050; or consent of instructor.

GEO 4570 - Secondary School Science Teaching Methods

Credits: (3)
Typically taught:
~~Fall [Full Sem]~~Offered as needed

Acquaintance and practice with various teaching and assessment methods. Development of science curricula including lesson and unit plans. It is recommended that this course be completed immediately before student teaching. Prerequisite: Admission to the Teacher Education Program.

GEO 4600 - Geophysics

Credits: (3)
Typically taught:
~~(~~Not currently being offered ~~as needed)~~

Principles and techniques of geophysical exploration, including gravity, magnetic, electric, and seismic methods. Course includes field collection and computer modeling of geophysical data. Three lectures per week. Field trips required. Prerequisite: GEO 3060 and MATH 1220; or consent of instructor.

GEO 4630 - Global Tectonics

Credits: (3)
Typically taught:
~~(offered as needed)~~Spring [Full Sem] taught odd years

Large-scale structure and dynamics of the Earth. Framework of plate tectonics including plate motion, processes at plate boundaries, and driving mechanisms. Processes of crustal deformation and evolution of orogenic belts over time, with examples from North America. Three lectures per week. Field trips required. Prerequisite: GEO 2050 and GEO 3060; or consent of instructor.

GEO 4750 - Special Topics in Geosciences

Credits: (1-4)
Variable Title
Typically taught:
Spring [Full Sem]

An opportunity to examine in depth topics in the Geosciences not regularly offered as part of the standard course offerings. The specific title and credit authorized will appear on the student transcript. Prerequisite: GEO 1110, GEO 1115, and any specific courses selected by the instructor. May be repeated for a maximum of 8 credit hours.

GEO 4800 - Independent Research

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [~~Full Sem~~Offered as needed]

Prerequisite: Consent of instructor prior to registration. May be repeated for a maximum of five credit hours.

GEO 4890 - Cooperative Work Experience

Credits: (1-6)
Typically taught:
Offered as needed

A continuation of GEO 2890. Open to all students. May be repeated for a maximum of 6 credit hours.

GEO 4920 - Short courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Typically taught:
(Offered as needed)

Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated for a maximum of 6 credit hours.

GEO 4950 - Advanced Geoscience Fieldtrips

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Application of Geoscience field methods during fieldtrips. Readings, written and oral reports, and/or examinations required. Prerequisite: consent of instructor. May be repeated for a maximum of 6 credit hours.

GEO 4970 - Senior Thesis

Credits: (2)
Typically taught:
Offered as needed

A thesis to be written by a student at the culmination of a period of individual field/laboratory and library research, under the direction of a specific faculty person. Prerequisite: Senior standing and departmental approval of the thesis topic.

GEO 5030 - Geology for Teachers

Credits: (2-4)
Typically taught:
(Offered as needed)

Science content course for teachers in the M.Ed Science Emphasis Program. To register, select another departmental course and develop a contract detailing additional work required for graduate credit. Contract must be approved by instructor, department chair, and Director of the Master of Education Program. May be repeated once with a maximum of 4 credit hours.

GEO 5920 - Short courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Typically taught:
(offered as needed)

Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript.

GEOG 1000 PS - Natural Environments of the Earth

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [1st Blk, 2nd Blk]

A study of the interrelated systems that constitute the earth's surface environment, e.g., landforms, weather, climate, natural vegetation, hydrology, and soils, and their integrated patterns of world distribution.

GEOG 1001 - Natural Environments Field Studies

Credits: (1)
Typically taught:
Fall [Full Sem]

This introductory level field studies course investigates natural environmental phenomena including weather, climate, natural vegetation, landforms, hydrology, soils and human impacts on the environment. While exploring local natural environments from a geographic perspective, understanding of principles of physical geography is enhanced through direct observation in the field and through the measurement of phenomena noted above. Prerequisite/Co-requisite: Prerequisite or current enrollment in: GEOG 1000 Natural Environments of the Earth.

GEOG 1002 - Map Reading and Land Navigation

Credits: (2)
Typically taught:
Summer [1st Blk]

Orienteering and the use of maps, compasses, global positioning systems (GPS), and other navigational aids. Lecture and field work prepares course participants to apply navigational knowledge and skills in a professional setting. Weekly two-hour lab sessions for ten weeks.

GEOG 1300 SS/DV - Places and Peoples of the World

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [1st Blk, 2nd Blk]

The study of different places, countries, and regions of the world. Addresses topics relating to natural environment,

ethnic diversity, and regional differences in subjects related to culture, gender, age, class, social structure, spatial organization, and economic activities. Current social conditions within the world's major culture realms are analyzed and compared.

GEOG 1400 PS - The Science of Global Warming: Myths, Realities and Solutions

Credits: (3)
Typically taught:
Spring [Full Sem]

This course examines the science behind global warming, providing an understanding of the basic physical, chemical, biological and geographical principles that explain the workings of Earth's climate system and the human influence upon it. The course also considers the feasibility and societal impacts of possible solutions to human-induced global warming. Finally, examination of the scientific process is a central part of the course, as students learn to separate truth from fiction in the arguments about whether or not global warming is a real problem, and if so, what should be done about it.

GEOG 1520 SS/DV - Geography of the United States and Canada

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]

Addresses topics relating to the area's natural environment, ethnic diversity, and regional differences in such subjects as culture, gender, age, class, social structure, spatial organization, and economic activities. Present social and cultural conditions within the United States and Canada are analyzed and compared.

GEOG 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-6)
Typically taught:
(Offered as needed)

Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript.

GEOG 2950 - Elementary Regional Field Studies

Credits: (1-3)
The study of specific geographic regions, utilizing field observations, lectures, and individual student research. May be repeated twice with a maximum of 3 credit hours.

GEOG 3050 - Weather and Climate

Credits: (3)
Typically taught:
Fall [Full Sem] or

Spring [Full Sem]

The advanced study of the processes that produce global climate patterns; analysis of the prospects and possible repercussions of global climate change; and an examination of climatic anomalies such as El Niño, hurricanes, tornadoes and other unusual phenomena. Prerequisite: GEOG 1000, or GEO 1130, or the equivalent.

GEOG 3060 - World Environmental Issues

Credits: (3)
Typically taught:
Fall [Full Sem] or
Spring [Full Sem]

A study of global and local environmental issues such as changing air and water quality, food production, waste management, and other topics. The course identifies strategies for creating healthier and more sustainable ways of living within our natural and built environments. Prerequisite: GEOG 1000, or BTNY 1403, or the equivalent, or consent of the instructor.

GEOG 3070 - Wetland Environments

Credits: (3)
Typically taught:
~~as needed~~Not currently being offered

Analysis of physical properties, values, economic, and legal issues associated with wetland environments. Since wetlands in different places have many different attributes, a detailed examination is made of wetland environments in different parts of the United States.

GEOG 3080 - Arid Lands

Credits: (3)
Typically taught:
Fall [Full Sem]

Presents a general overview of the characteristics and variant topography, geography, and climatic conditions of the Earth's arid lands. Examines the spatial location of arid regions and their climatic controlling factors. Weather patterns, hydrology, and eolian processes will be discussed along with sediment transportation and deposition of arid environments. The course will also review dune types and formation along with soils of arid zones. The course concludes with a discussion on the desertification and the impact of human intervention in the misuse of arid lands, while discussing preservation versus reclamation of these regions. Prerequisite: GEOG 1000, or GEO 1060, or the equivalent, or consent of the instructor.

GEOG 3081 - History of Geographic Thought

Credits: (3)
Typically taught:
(alternate years)

A study of the development of the science of geography, giving attention to its changes in emphasis and philosophy. Prerequisite: Junior standing.

GEOG 3090 - Arctic and Alpine Environments

Credits: (3)
Typically taught:
Spring [Full Sem]

An examination of the physical environments of high altitude and high latitude places, the ways in which humans interact with these environments, and their broader roles within the large Earth systems. Topics will include causes and consequences of avalanches, climatic characteristics of the Arctic, glacier behavior, sea ice, and the responses of human physiology to high altitudes. Prerequisite: GEOG 1000, or GEO 1060, or the equivalent, or consent of the instructor.

GEOG 3210 - Urban Geography

Credits: (3)
Typically taught:
Fall [Full Sem]

The study of cities as elements of the landscape, their distribution, location, and structure, as related to their physical setting, economic function, and cultural inheritance.

GEOG 3300 - Historical Geography of the United States

Credits: (3)
Typically taught:
Spring [Full Sem]

A geographic analysis of America's past featuring an examination of cultural development in different parts of the United States and how this has produced many distinct regional landscapes throughout the country.

GEOG 3360 - Economic Geography

Credits: (3)
Typically taught:
Fall [Full Sem] or
Spring [Full Sem]

The spatial structure of the world's resources, production, commerce, and economic problems.

GEOG 3390 - Aerial Photo Interpretation

Credits: (3)
Typically taught:
~~(Offered as needed)~~Not currently being offered

The use of aerial photos to interpret geographic phenomena. One lecture and two 3-hour labs a week.

GEOG 3450 - Introduction to Cartography and GIS

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An introduction to map making, to include the history of cartography, the development of map components with emphasis on map projections, grid systems, scale, direction, and symbol design. Particular attention will be paid to the creation of maps using both manual and digital (computer and computer-assisted) techniques. The course also will deal with map reading skills for spatial analysis, orientation, and land navigation. One lecture and two 3-hour labs per week.

GEOG 3460 - Advanced Cartography and GIS

Credits: (3)
Typically taught:
Spring [Full Sem]

The advanced study of maps and their role in portraying geographic data. Emphasis will be placed on various digital (computer and computer-aided) mapping techniques that categorize geographic data and illustrate this information in map form. The course will also examine cartographic visualization, databases, and production. One lecture and two 3-hour labs per week. Prerequisite: GEOG 3450 or permission of instructor.

GEOG 3500 - Geography of Utah

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A study of the physical environment and activities of man in Utah.

GEOG 3540 - Geography of Latin America

Credits: (3)
Typically taught:
Fall [Full Sem]

Addresses topics relating to Latin America's natural environment, ethnic diversity, and regional differences in culture, gender, age, class, social structure, spatial organization, and economic activities. Current issues relating to culture and society in Latin America are analyzed within the context of its colonial inheritance and its future prospects.

GEOG 3590 - Geography of Europe

Credits: (3)
Typically taught:
Spring [Full Sem]

Addresses topics relating to Europe's natural environment, ethnic diversity, and regional differences in culture, gender, age, class, social structure, wealth, spatial organization, and economic activities. Current issues and social conditions within Europe and its major subdivisions are discussed and analyzed.

GEOG 3600 - Quantitative Methods in Geography

Credits: (3)
Typically taught:
Spring [Full Sem]

The gathering and analysis of spatial data. Hypothesis testing and the use of selected computer statistical packages. Two lectures and one 3-hour lab a week. Prerequisite: Quantitative Literacy (MATH 1040 recommended, but not required).

GEOG 3620 - Geography of Russia and the Former USSR

Credits: (3)
Typically taught:
(alternate years)

Addresses topics relating to Russia's natural environment, ethnic diversity, and regional differences in culture, gender and age structure, class structure, spatial organization, and economic activities. Current social and economic conditions in Russia and its Near Abroad are analyzed within the context of the breakup of the former Soviet Union.

GEOG 3640 - Geography of Asia

Credits: (3)
Typically taught:
Spring [Full Sem]

Addresses topics relating to Asia's natural environment, ethnic diversity, and regional differences in culture, gender, age, class, social structure, spatial organization, and economic activities. Current societies in Asia are analyzed with special attention given to their colonial inheritance and future prospects.

GEOG 3660 - Geography of China and Japan

Credits: (3)
Covers subjects dealing with the area's natural environment, ethnic diversity, and regional differences in culture, gender, age, class, social structure, spatial organization, and economic activities. Current topics relating to social conditions within China and Japan are analyzed and compared.

GEOG 3740 - Geography of Africa

Credits: (3)
Typically taught:
Fall [Full Sem]

The study of Africa's natural environment, ethnic diversity, and regional differences in culture, gender, age, class, societal structure, wealth, spatial organization, and economic activities. Current socio-economic conditions in Africa are analyzed within the context of its colonial inheritance and its future outlook.

GEOG 3780 - Geographic Area Studies

Credits: (1-3)
Surveys different geographic areas and regions of the world. When this number is used it will be accompanied by a descriptive title and the credit authorized, which will appear on the student's transcript. May be repeated for credit when a different title is used.

GEOG 4410 - Sustainable Land Use Planning

Credits: (3)
Typically taught:
Fall [Full Sem]

A study of the status and tools of planning, planning office organization, the federal and state role in planning, and problems in planning. The course emphasizes concepts of sustainable land use planning such as resource conservation, air and water quality improvement, agricultural land preservation, transit oriented development, and alternatives to suburban sprawl.

GEOG 4420 - Advanced Urban and Regional Planning

Credits: (3)
Typically taught:
Spring [Full Sem]

A study of the enabling legislation for planning, zoning laws and ordinances, rezoning and review processes, zoning problems, and the ramifications of urban growth. The preparation, financing, citizen participation and evaluation of land use pertaining to general plans. Class groups will prepare, critique, and present a draft urban general plan. Prerequisite: GEOG 4410.

GEOG 4800 - Individual Research

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

A personalized course designed to foster individual research and scientific writing. May be repeated up to a maximum of 12 credit hours. **Instructor approval required before registering for this course.**

GEOG 4890 - Cooperative Work Experience

Credits: (1-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Open to all students in Geography who meet the minimum Cooperative Work Experience requirements of the department. Provides academic credit for on-the-job experience. Grade and amount of credit will be determined by the department. A maximum of six credit hours will be accepted toward a major in geography. **Instructor approval required before registering for this course.**

GEOG 4920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-3)
Typically taught:
(Offered as needed)

Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student's transcript. May be repeated 5 times up to 6 credit hours.

GEOG 4950 - Advanced Regional Field Studies

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A directed study of specific geographic regions utilizing field observations, lectures, and individual student research. Prerequisite: A general course in Geography or consent of the instructor. May be repeated up to a maximum of 12 credit hours. May be repeated 11 times up to 12 credit hours.

GEOG 4990 - Research Seminar

Credits: (3)
Typically taught:
Fall [Full Sem]

A course in which hypothetico-deductive research methods and other quantitative techniques are applied to geographic problems. Prerequisite: GEOG 3600 and senior standing.

GEOG 5030 - Geography for Teachers

Credits: (3)
Typically taught:
(Offered as needed)

Science content course for teachers in the MEd Science Emphasis Program. To register, select another departmental

course and develop a contract detailing additional work required for graduate credit. Course may be repeated. Contract must be approved by instructor, department chair, and Director of the Master of Education Program.

GERT 1010 SS - Introduction to Gerontology

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A study of physical, psychological, social-psychological, and social dimensions of aging and the application of principles and strategies to facilitate adaptation to aging. Emphasis is placed on methods of gathering knowledge, the current knowledge base, and strategies for adaptation in the later stages of life cycle.

GERT 2220 - Introduction to Social Gerontology

Credits: (3)
Typically taught:
Spring [Full Sem]

A scientific study of social and psychological aging and the application of principles and strategies to facilitate adaptation to aging. The focus is on methods and systems for gathering data, demography of aging, social theoretical perspectives, psychological effects of aging, aging and the economy, and government and the politics of aging.

GERT 2900 - Current Topics on Aging

Credits: (2-4)
A study on age related topics of current interest. Specific title will appear on student's transcript along with authorized credit. May be repeated once for a maximum of 4 credits.

GERT 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated up to 3 times for a maximum of 4 credits.

GERT 3000 - Death and Dying

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An in-depth study of death, death-related issues and social institutions and practices dealing with death in American society, with special emphasis on the social processes surrounding death and constructive responses to death and dying. Cross-listed with SW 3000.

GERT 3120 - Aging: Adaptation and Behavior

Credits: (3)
Typically taught:
Fall [Full Sem]

An examination of the physical and psychological processes of aging. The emphasis is upon behavioral and social adaptation to these processes. Cross-listed with SW 3120.

GERT 3320 - Ethnicity and Older Women in the American Society

Credits: (3)
Typically taught:
Fall [Full Sem]

The importance of special populations (ethnic, racial and women) as they relate to the aging process. Cross-listed with SW 3320.

GERT 3400 - Methods of Research: Social and Behavioral Research

Credits: (4)
Typically taught:
Not currently being offered

Focus on acquiring knowledge, developing skills, and conducting social and behavioral scientific research, utilizing single system design that includes visual and statistical assessment. The course will include both qualitative methodologies (evaluative research, historical methods, case studies, field research, ethnography studies, and grounded theory) and quantitative methodologies (experimental and survey with a special emphasis on survey). Prerequisite: It is recommended to take a Statistics course before Research.

GERT 3500 - Social Welfare & Gerontological Policy Development and Service

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The history, mission, philosophy and human service aspects used in the development of social work/gerontology as a profession will be covered. Examples of social, public and social welfare policy will be identified and studied. Knowledge of local, state, and federal legislation, professional organizations, and membership organizations will assist in review of lobby, funding and implementation practices used in meeting human service needs. Methods for the political and organizational analysis of processes and policy will be covered. Prerequisite: SW 1010 or GERT 1010. (SW 3500/GERT 3500 must be completed before entering Field Practice).

GERT 3600 - Social Statistics

Credits: (3)
Typically taught:
Fall [Full Sem, ~~2nd~~1st Blk, Online]

Spring [Full Sem, 2nd Blk, Online]
Summer [Online]

Introduction to analysis and presentation of data. Prerequisite: Meet WSU Quantitative Literacy requirement. Cross-listed with SW 3600.

GERT 4220 - Societal Responses to Aging

Credits: (3)
Typically taught:
Fall [Full Sem]

This course is designed to cover aspects of retirement relating to job change or discontinuance. The processes, events, social roles, and phases of life will presented. Cross-listed with SW 4220.

GERT 4650 - Retirement: Adjustment/Planning

Credits: (3)
Typically taught:
Spring [~~2nd Blk~~Full Sem]

This course is designed to cover aspects of retirement relating to job change or discontinuance. The processes, events, social roles, and phases of life will presented. Cross-listed with SW 4650.

GERT 4830 - Readings and/or Projects

Credits: (2-4)
Individual readings and/or projects for the senior Gerontology major (with the approval of the instructor). May be repeated once for a maximum of 4 credits.

GERT 4860 - Introductory Field Practicum

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Introductory experience in the world of work in a gerontology setting whereby the student might develop, test, and use knowledge derived from classroom experiences (90 hours at approved agency). Prerequisite: GERT 1010, GERT 3320 and GERT 3500; must be a declared ~~major or~~ minor. Offered on demand.

GERT 4861 - Advanced Field Practicum

Credits: (2)
Typically taught:
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~

~~Summer [Full Sem]~~**Not currently being offered**

Advanced experience in the world of work in a gerontology setting whereby the student might develop, test, and use knowledge derived from classroom experiences (90 hours at approved agency). Prerequisite: GERT 3400, GERT 3500, GERT 4860, and must be a declared major or minor.

GERT 4862 - Specialized Field Practicum

Credits: (2)
Typically taught:
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~
~~**Summer [Full Sem]**~~**Not currently being offered**

Specialized experience in the world of work in a gerontology setting whereby the student might develop, test, and use knowledge derived from classroom experiences (90 hours at approved agency). Prerequisite: GERT 3600, GERT 4861, and must be a declared major or minor.

GERT 4900 - Current Topics on Aging

Credits: (2-4)
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~
~~**Summer [Full Sem]**~~

An in-depth study on age related topics of current interest. Specific title will appear on student's transcript along with authorized credit. May be repeated once for a maximum of 4 credits.

GERT 4920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~

Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated up to 3 times for a maximum of 4 credits.

GERT 4990 - Senior Seminar

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Preparation and discussion of gerontology concepts and topics. Information and techniques for obtaining a job and selecting a graduate school. Prerequisite: GERT 1010, GERT 3320, GERT 3400, GERT 3500 and GERT 3600. Offered on demand.

HAS 3000 - The Health Care System

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Online]

A study of the U.S. healthcare system to help students understand the critical issues facing healthcare in its ever-changing environment and to gain a sense of the complex multidimensional nature of healthcare delivery in the United States.

HAS 3020 - Health Care Marketing

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Online]

This course outlines the application of marketing principles to health care organizations and the public health arena. Students will apply those principles in the development of a marketing plan.

HAS 3150 - Community Health Agencies and Services

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

An overview of public and community health including history, management, prevention and epidemiology of disease. Emphasis on the role of community and government health agencies regarding health promotion and disease prevention activities.

HAS 3190 - Cultural Diversity in Patient Education

Credits: (3)
Typically taught:
Fall [Online]
Spring [Full Sem]
Summer [Online]

This course is an introduction to patient or client education skills and theory. It also focuses on health traditions of culturally diverse clients and how those traditions must be considered during effective patient education. In particular, the course will move from the general health traditions of world populations and religions, to the more specific behaviors and expectations of U.S. populations. Gender, age, and class will all be considered in the studies.

HAS 3230 - Health Communication

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

A broad examination of communication theory, application, and research in health care delivery and management. Examines many different levels and channels of communication including the development and application of interpersonal communication, small group communication and teamwork, organizational communication, communication ethics, leadership, and motivation skills in dealing with health care providers, staff, and consumers in a variety of health care environments. Cross-listed with COMM 3230.

HAS 3240 - Human Resource Development in Health Care

Credits: (3)
Typically taught:
Fall [Online]
Spring [Full Sem]

Study of human resource principles and practices in Health Care facilities. The general topics include: job analysis and work flows, compensation, recruitment and selection, performance appraisals, discipline, legal environment, unions, safety and health. Prerequisite: HAS 3000.

HAS 3260 - Health Care Administrative and Supervisory Theory

Credits: (3)
Typically taught:
Fall [Online]
Spring [Full Sem]
Summer [Online]

Basic theories and concepts of management. Emphasis is on individual and group behavior, interpersonal skills, decision making, leadership theory, planned change, motivation, teamwork, organizational design and culture within the context of the health care organization. Prerequisite: HAS 3000.

HAS 3700 - Public Health Finance

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Finance in the public sector is fundamentally different from business or corporate finance. This course will provide an overview of finance as directly related to public health. Basic concepts of government accounting and budgeting will be presented. The financial aspects of Medicare and Medicaid along with grant funding and funding agencies will be discussed. Students will leave the course with the ability to formulate a public health program budget as well as the background knowledge necessary to understand the financial operations of local and state departments of health.

HAS 3750 - Health Care Financial Administration

Credits: (3)
Typically taught:
Fall [Full Sem Online]
Spring [Full Sem]
Summer [Full Sem Online]

This course is designed to build upon the concepts introduced in basic accounting courses and develop proficiency in applying administrative financial techniques in health care decision making. Prerequisite: HAS 3000, ACTG 2010, Quantitative Literacy, HIM 3200.

HAS 4160 - Medical Practice Management

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem Online]

Covers the fundamentals of group practice and ambulatory care management. Includes leadership, planning, marketing, IT, business operations, physician/hospital relationships, and basic principles of management applied to the out-patient setting. This is an elective course for HAS students. Prerequisite: HAS 3000.

HAS 4320 - Health Care Economics and Policy

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Online]

Discussion and analysis of the economic models controlling healthcare markets with subsequent investigation of the complex federal, state, and local policies and policymaking processes which result from those models in U.S. healthcare systems. Prerequisite: HAS 3000 and ECON 2010.

HAS 4400 - Legal and Ethical Aspects of Health Administration

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Online]

Review of legal responsibilities of physicians, other healthcare workers, and healthcare institutions and means by which health-related laws and regulations are developed and implemented. Issues involved in healthcare professional ethics are discussed and evaluated. Prerequisite: HAS 3000 and HAS 3260.

HAS 4410 - Clinical Instructional Design and Evaluation

Credits: (3)
Typically taught:

Fall [Online]

Designed to provide individuals with the skills necessary for the preparation, planning and evaluation of instruction. The Philosophy, theory, and effective methods and techniques of teaching the adult learner.

HAS 4420 - Clinical Instructional Skills

Credits: (3)
Typically taught:
Spring [Online]

Designed to provide individuals with skills necessary for the implementation of instruction. Presentation practice is provided with peer evaluation and feedback.

~~**HAS 4520 - Long-Term Care Administration**~~

~~Credits: (2)~~
~~Typically taught:~~
~~Spring [Online~~**HAS 4500 - Grant Writing**

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem Online]

This course is an introduction to the art of grant writing. The general elements of a grant will be outlined and explored. Students will learn about what makes a grant proposal successful. Grant writing and evaluation skills will be developed, demonstrated, and exercised.

HAS 4520 - Long-Term Care Administration

Credits: (2)
Typically taught:
Spring [Full Sem]

Application of health administration core curriculum to specific practice issues in the long-term care setting. Setting-specific organization structures, relationships with healthcare providers, services offered, financial management issues, and regulatory issues are investigated. Prerequisite: HAS 3000 and HAS 4400.

HAS 4525 - Health Facility Operations

Credits: (1)
Typically taught:
Spring [2nd Blk]

A review of long-term care facility operations utilizing computer-based simulations. Teams of students make operational decisions utilizing financial statements, census reports, staffing schedules and other relevant factors. Prepares students for specific types of situations and questions encountered on the long-term care administrator licensing examination. Prerequisite: HAS 3000 and HAS 4520.

HAS 4620 - International Health and Health Care

Credits: (3)
Typically taught:
Spring [Full Sem]
Summer [Full Sem Online]

This course is designed to explore health and health care systems in countries other than the United States. Emphasis will be directed toward illnesses and treatments, health promotion, environmental and economic issues, governmental infrastructures that support health, and cultural considerations. The course will be targeted to the professional interested in international health information and experiences.

HAS 4700 - Public Health Capstone

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The Public Health Capstone will provide students in the Public Health program a comprehensive review culminating in an applied project. Public Health concepts including epidemiology, population health, finance, behavior change, communications and marketing among others will be brought together demonstrating their application in real world public health situations. A final project will be used to demonstrate the students understanding of general public health concepts and their applications.

HAS 4740 - Senior Seminar

Credits: (1)
Typically taught:
Fall [1st Blk]
Spring [1st Blk]

A capstone course for seniors designed to provide integration and application of theory through the use of case study analysis. Departmental approval required. Prerequisite: HAS 3000.

HAS 4741 - Senior Seminar Capstone

Credits: (3)
Typically taught:
Full [Full Sem]
Spring [Full Sem]
Summer [Full Sem Online]

A capstone course for seniors designed to provide integration and application of theory through the use of case study analysis, competency assessment, interaction with current practitioners, individual and team projects. Students will be provided with resources to assess and enhance their competencies in the various functional areas of health administration. Departmental approval required. Prerequisite: HAS 3000.

HAS 4800 - Individual Study

Credits: (1-3)
Topics in allied health education studies tailored to the particular needs and interests of the student. Class may be repeated once up to six credits with program approval.

HAS 4850 - Study Abroad

Credits: (1-6)
Variable Title
The purpose of this course is to provide opportunities for students in health professions to experience a study abroad program that is designed to explore healthcare, culture, and clinical experience. May be repeated five times up to six credit hours.

HAS 4860 - Practicum/Internship

Credits: (2-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem Online]

Provides opportunities for observation, participation and practical application of administrative and management skills in the institutional setting. Departmental approval required. Prerequisite: HAS 3000. May be repeated once up to 12 credit hours.

HAS 4990 - Seminar

Credits: (1)
Topics, issues, and trends in Health Care. May be repeated twice up to 3 credit hours with program approval.

HIM 2000 - Introduction to Health Information Systems and Settings

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Online]

Introduction to the health information profession. Job duties, functions, and the professional organization are discussed. Health care settings, numbering and filing systems and equipment, master patient indexes, health information documentation requirements, discharge analysis and incomplete chart control are presented. Prerequisite: HTHS 1101 and HTHS 1110 or ZOOL 2100.

HIM 2250 - Health Care Privacy and Security

Credits: (3)
Typically taught:
Fall [Online]

Spring [Full Sem]

The HIPAA privacy and security law, institutional review boards and human subjects research, development of policies and procedures for privacy and security, and release of information are discussed.

HIM 2300 - Diagnosis Coding

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Online]
Summer [Online]

Coding conventions and procedure using the ICD-10-CM coding system are introduced and practiced. Prerequisite: HTHS 1110 and HTHS 1111 or ZOOL 2100 and ZOOL 2200 or equivalent.

HIM 2320 - Ambulatory and Physician Office Coding

Credits: (3)
Typically taught:
Fall [Online]
Spring [Full Sem, Online]
Summer [Online]

CPT classification, conventions and coding procedures are introduced and practiced. Abstracting medical information from health documentation for coding facility outpatients, physician and professional billing is presented, discussed and practiced. Prerequisite: HIM 2300.

HIM 2330 - Classification Systems Topics and Reimbursement Issues

Credits: (2)
Typically taught:
Fall [Online]
Spring [Full Sem, Online]
Summer [Online]

Discussion of issues parallel to or founded in the use of classification systems: Federal reimbursement systems, coding compliance, quality auditing, peer review organizations, and database reporting.

HIM 2410 - ICD-10-PCS Coding

Credits: (2)
Typically taught:
Fall [Online]
Spring [Full Sem, Online]

ICD-10-PCS coding, conventions and guidelines are introduced and practiced. Students will gain exposure to procedure coding using the ICD-10-PCS system for hospital inpatient claims. Prerequisite: HIM 2300.

HIM 2500 - Healthcare Database Management & Security

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Online]

An introduction to database monitoring, maintenance and use. Data definition, vocabularies, terminologies and dictionaries are discussed. Clinical abstracting and report writing are practiced. A working knowledge of database management is developed. The HIPAA security law, development of policies and procedures to enforce the security rule are covered.

HIM 2861 - (2nd Year) Professional Practice Experiences

Credits: (2)
Typically taught:
Fall [Full Sem Online]
Spring [Full Sem Online]

Student's final experience in the health care setting. Skills and learning from the classroom and laboratory are reinforced and practiced. The student observes in other health care settings. Projects assigned give the student expertise in technical functions, e.g., ICD-9-CM, CPT, and other coding systems. Prerequisite: HIM 2000.

HIM 2862 - (2nd Year) Professional Practice Experiences

Credits: (2)
Typically taught:
Fall [Full Sem Online]
Spring [Full Sem Online]

Student's final experience in the health care setting. Skills and learning from the classroom and laboratory are reinforced and practiced. The student observes in other health care settings. Projects assigned give the student expertise in technical functions, e.g., ICD-9-CM, CPT, and other coding systems. Prerequisite: HIM 2000.

HIM 2863 - Professional Practice Experience in Coding

Credits: (1)
Typically taught:
Fall [Online]
Spring [Online]
Summer [Online]

Student's final experience in the coding setting. Skills and learning from the classroom and laboratory are reinforced and practiced in a simulated setting. Prerequisite: HIM 2300.

HIM 3000 - Computer Applications in Health Care

Credits: (3)
Typically taught:

Fall [Online]
Spring [Full Sem]
Summer [Online]

A survey of the clinical, research, and administrative applications of computers in the health care industry from which health care information is currently derived. The role of this technology and of the data collected in accomplishing the objectives and procedures of the principle functional areas in health care organizations is emphasized as are the interrelationships of the organizational units with respect to data acquisition, storage, analysis, retrieval, and use.

HIM 3200 - Epidemiology and Biostatistics

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Online]

The goals and objectives of epidemiology, its policy and procedure, and its foundation and support in health care information are the focus of this course. Investigation of an epidemic, measures of mortality, incidence and prevalence, measures of risk, biological variability, probability, screening, sampling, statistical significance, correlation, multiple regression, retrospective and prospective studies, and survival analysis are discussed. Advanced techniques for the statistical analysis of institutional case-mix and quality improvement data are presented. Prerequisite: Must meet WSU Quantitative Literacy requirement.

HIM 3210 - Advanced Epidemiology & Population Health

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course provides an advanced, in-depth, exploration of epidemiology, public health, and global population health. The history, philosophy, core values, concepts, and functions of public health will be discussed at the local, national, and international levels. The concepts and methods needed to track and analyze disease trends will be applied. Students will be able to identify and describe upstream determinants of health including the socioeconomic, behavioral, biological, environmental, and other factors that affect human health and contribute to health disparities. At the conclusion of the course, students will be able to identify public health issues, design a basic intervention, and formulate appropriate internal and external public health communications. Prerequisite: HIM 3200 - Epidemiology and Biostatistics.

HIM 3300 - Introduction to Quality Improvement in Health Care

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Online]
Summer [Online]

Quality assessment, disease processes, risk management, and utilization review systems are presented to the student with an emphasis upon integration. TQM/CQI processes are examined and practiced.

HIM 3400 - Health Care Networks and Databases

Credits: (3)
Typically taught:
Fall [Online]

A comprehensive introduction to health care application development, including local and wide area networks, the internet and intranets, database structure, database tools, data management, and information management.

HIM 3450 - Health Care Systems Analysis and Design

Credits: (3)
Typically taught:
Spring [Online]

A comprehensive introduction to the planning, design, and construction of health care information systems, using the systems development life cycle and other appropriate design tools.

HIM 3500 - Biomedical Research Support

Credits: (2)
Typically taught:
Fall [Online]

Design concepts and information systems used in biomedical research and investigation by drug companies, genetic engineering firms, academic institutions, and individual researchers and the support of same by health information professionals are discussed. The major national research policy-making bodies (NIH, NCHS, CDC) and their research protocols are reviewed. The student also learns what techniques and resources facilitate biomedical literature searches and how to assist a researcher in the pursuit of published information. An overview of the development, structure, and management of a health care institutional medical library is presented.

HIM 3550 - Health Care Data Analytics

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem Online]

An in depth exploration of healthcare data analytics. Application of data analytic methodologies to improve decision making, performance, healthcare quality and strategic planning will be presented and practiced. Students will become familiar with internal and external data sources in healthcare and will be able: extract data from the data source; evaluate the quality of the data; perform basic data analytics; interpret analysis; present information in a final report. Prerequisite: HIM 3500 - Biomedical Research Support. Prerequisite/Co-requisite: HIM 3200 - Epidemiology and Biostatistics.

HIM 3600 - Advanced Diagnosis and Procedure Coding

Credits: (3)
Typically taught:

Fall [online]
Spring [online]
Summer [online]

This is an advanced coding course designed for students with previous medical coding experience or previous medical coding courses. This course explores the more complex areas of ICD-10-CM, ICD-10-PCS, and CPT coding in hospital, outpatient, and physician based settings. Students will apply coding principles and guidelines related to complex diagnoses and procedures. Coding from actual patient records is emphasized. The use of coding references and coding software is integrated into the course. ~~Prerequisites/Corequisites~~Prerequisite: HIM 2300, HIM 2320, HIM 2410 or instructor approval.

HIM 3610 - Advanced Principles of Revenue Cycle Management

Credits: (3)
Typically taught:
Fall [online]
Spring [online]
Summer [online]

Elements of the revenue cycle are reviewed. Principles of revenue cycle management are examined including: scope and management of clinical coded data, process improvement and data quality, compliance, internal and external auditing, reporting, case-mix management, and changes in revenue cycle management. Prerequisite: HIM 2330 or instructor approval.

HIM 3620 - Principles of Clinical Documentation Improvement

Credits: (3)
Typically taught:
Fall [online]
Spring [online]
Summer [online]

Clinical documentation is the foundation of every patient health record. This course addresses the fundamentals of clinical documentation—assessing the current quality of health record documentation, development of a CDI program and process. How clinical documentation improvement impacts the revenue cycle of a healthcare organization will be reviewed. Prerequisite/Co-requisite: Prerequisites/Corequisites: HIM 2300, HIM 2320, and HIM 2410 or instructor approval.

HIM 4100 - Health Information Services Management

Credits: (3)
Typically taught:
Spring [Online]

Management issues of health information services departments are discussed and worked through with reference to planning information services, organizing work force, procedures, and resources, staffing work units with qualified personnel, influencing information services teams performance, controlling/evaluating health information services performance and products, and resolving organizational conflict involving information issues. Background is developed to facilitate evaluation of a vended system's ability to meet health care information applications, objectives and procedural requirements. "Entrepreneurial" skill is developed to lead organizations in finding solutions to their information management problems.

HIM 4990 - Baccalaureate Thesis and Presentation

Credits: (3)
Typically taught:
Fall [Online]

Senior health information management students complete a research project and thesis in partial fulfillment of program requirements. By the completion of the course, the senior student will be able to specify a thesis topic, specify individual thesis learning objectives, specify individual thesis learning activities, develop a thesis project timeline, implement the thesis project, write the thesis, and present it to the Health Information Management faculty and students. Topics are chosen by the student but require approval by the Program Coordinator.

HIM 5000 - Clinical Foundations in HIM

Credits: (3)
A foundation in the language of medicine, pathophysiology and pharmacology will be discussed and developed.

HIM 5010 - Health Data Management

Credits: (3)
This course prepares students to manage and create health data elements and data sets; and to develop and maintain organizational policies, procedures and guidelines for management of health information. Compliance with health care information laws, regulations, standards, and preparation for accreditation and licensing processes is discussed and practiced.

HIM 5020 - Diagnosis and Procedure Coding

Credits: (3)
Coding and classification conventions and procedures are developed and practiced. The course will also include auditing of coded data for accuracy.

HIM 5030 - Clinical Data Management for Quality Care & Revenue Cycle Integrity

Credits: (3)
This course prepares the student to collect, analyze, present and organize data to improve quality of patient care and revenue cycle management. The management of clinical data required in reimbursement systems and prospective payment systems in health care delivery are discussed.

HIM 5040 - Privacy, Security and Confidentiality in Health Care

Credits: (3)
This course prepares students to design and implement security measures to safeguard protected health information. The management, access, disclosure and use of PHI to ensure confidentiality is discussed. How to investigate and resolve health care privacy and security issues and problems are introduced.

HIM 5050 - Health Information Systems & Technology

Credits: (3)
A foundation of electronic heath record terminology and the information systems life cycle is explored. The important basis upon which successful EHR implementation must rely - project management, strategic planning, and migrations from the current state are discussed. Skills in selecting, negotiating for, implementing and operating the electronic health record and its corresponding databases are developed. The use of data dictionary, data models, database management and design for electronic health records are introduced.

HIM 5080 - Health Information Management Issues

Credits: (3)
Managing the HIM function including the monitoring of industry trends and organizational needs for change, strategic and operational planning, training or educational activity development, and preparation for accreditation and licensing processes are discussed.

HIM 5090 - HIM Internship

Credits: (3)
Provides opportunities for observation, participation and practical application of health information management skills in the institutional setting.

HIST 1500 SS - World History to 1500 C.E.

Credits: (3)
Typically taught:
Multiple Sections Each Semester
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem, 1st Blk, 2nd Blk, Full Sem Online]

Examines the political, social, cultural, economic, religious, scientific, and intellectual influences on the development of world civilizations to 1500 C.E. Emphasis is global, comparative, and multi-cultural.

HIST 1510 SS/DV - World History from 1500 C.E. to the Present

Credits: (3)
Typically taught:
Multiple Sections Each Semester
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem, 1st Blk, 2nd Blk, Full Sem Online]

A survey of the political, social, cultural, economic, religious, scientific, and intellectual influences on the development of Asia, Africa, the Americas, and Europe from 1500 to the present.

HIST 1700 AI - American Civilization

Credits: (3)
Typically taught:
Multiple Sections Each Semester
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem, 1st Blk, 2nd Blk, Full Sem Online]

An analysis of American civilization that traces social, cultural, economic, and political developments in the United States. May be taken to complete the American Institutions requirement (grade of C or better required).

HIST 2000 - Introduction to the Craft of History

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

History 2000 is a one-credit course for newly declared history majors. It is designed to introduce students to different subfields within history; to familiarize them with the standard modes of researching, interpreting, analyzing, and citing historical sources; and to teach them how to build an historical argument. It is a team taught course, calling upon all of the faculty from the History Dept. Should be taken upon registration as a history major or history teaching major.

HIST 2700 - History of the United States to 1877

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

A chronological survey of American history from Native American and European colonial origins through Reconstruction, 1877. Directed toward History majors, minors, and those planning to teach U.S. history. Students may fulfill the American Institutions requirement by completing this course and HIST 2710 with a grade of C or better.

HIST 2710 - History of the United States since 1877

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem]
Summer [Full Sem, Full Sem Online]

A chronological survey of American history from the Gilded Age, 1877, to the present. Directed toward History majors, minors, and those planning to teach U.S. history. Students may fulfill the American Institutions requirement by completing this course and HIST 2700 with a grade of C or better.

HIST 2890 - Cooperative Work Experience

Credits: (1-5)
Academic credit for internship opportunities in History-related careers. Grade, credit, and work experience to be determined in consultation with department chair. No more than 5 hours will count towards a major or minor. Prerequisite: Instructor approval.

HIST 2920 - Short Courses, Workshops, and Special Programs

Credits: (1-6)
Consult the semester class schedule for current offering under this number. The specific title and credit authorized will appear on the student transcript. No more than 6 hours will count towards a major or minor.

HIST 3010 - American Indian History: 1300 to Present

Credits: (3)
Typically taught:
Spring [Full Sem, Full Sem Online] ~~odd years~~Every Other Year

An introduction to American Indian history, stressing the integrity and viability of American Indian societies; dynamic, self-directed culture change; and the clash of cultures that occurred with Native American and European contact.

HIST 3030 - African-American History

Credits: (3)
Typically taught:
Spring [Full Sem Online] odd years
Summer [Full Sem Online]

African-American history from African origins to the late twentieth century. This course examines the historical experiences and enduring influence of African-Americans on U.S. history.

HIST 3050 - History of U.S. Latinos

Credits: (3)
Typically taught:
Fall [Full Sem] odd years

Traces the historical development of the Latin Americans in the U.S. from their Indian, Spanish and African heritage to the present with special emphasis on the Mexican-American, Chicano contributions to American life.

HIST 3070 - Women in American History: 1600 to Present

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online] ~~odd years~~Every Other Year

Examines gender as an organizing principle in United States history from the beginnings of European settlement to the present. Also explores the ways in which race, ethnicity, class, and region shaped different female experiences.

HIST 3090 - American Social History

Credits: (3)
Typically taught:
Fall [Full Sem] ~~odd years~~Every Other Year

Explores American society through analyses of the public and private lives of ordinary individuals from colonial times to the twentieth century.

HIST 3110 - American Ideas and Culture

Credits: (3)
Typically taught:
Spring [Full Sem] odd years

This course will look at key transformations in American cultural and intellectual history. Subjects will include the history of religion, the changing nature of political ideology, and transformations in who creates and controls entertainment, leisure and literature in American society. The course will use novels, sermons, essays, movies, museums, paintings, and music as tools for understanding American cultural life.

HIST 3130 - U.S. Urban History

Credits: (3)
Typically taught:
Fall [Full Sem] even years

Examines themes in social, economic and cultural development of American cities from the colonial era to the present. Key topics will include the process of urbanization and the ways in which various social groups and classes adapt to urban life and society. The course will also examine the transformation of urban neighborhoods and ghettos, social reform movements in the city, and the history of urban planning.

HIST 3210 - U.S. Constitutional History

Credits: (3)
Typically taught:
Fall [Full Sem]

The ideas and issues which resulted in the 1787 Constitution. It considers two centuries of America Constitutionalism, focusing on powers and rights, and the role of the Constitution in American culture.

HIST 3230 - American Foreign Relations

Credits: (3)
Typically taught:
Fall [Full Sem] ~~odd years~~Every Other Year

Diplomatic relations and foreign policy of the United States, with particular emphasis in the "American Century" beginning with the imperialist thrust of 1898.

HIST 3250 - Religion in American History

Credits: (3)
Typically taught:
Fall [Full Sem Online]
Spring [Full Sem Online]
Summer [Full Sem Online]

A history of religion in America from the colonial period (including Native American spirituality) through the early twentieth century. This course will examine religious figures, events, and movements in U.S. history. Particular emphasis will be placed upon the influence of religion in the United States on culture, politics, education, and reform.

HIST 3270 - American Environmental History

Credits: (3)
Typically taught:
Spring [Full Sem]

The new scholarship in American environmental history, considering the intellectual and material interaction people have had with the environment of North America, from pre-contact to the present.

HIST 3280 - American Military History from 1500 to 1890

Credits: (3)
Typically taught:
Fall [Full Sem] Odd Years

Significance of military affairs in the context of American political, economic, and social history from the formation of the earliest colonial militias to the pre-World War I preparedness movement. Discusses major wars of this period but also emphasizes such themes as the professionalization of the officer corps, the relationship between war and technology, and civil-military relations.

HIST 3290 - American Military History from 1890 to the Present

Credits: (3)
Typically taught:
Spring [Full Sem]

Significance of military affairs in the context of American political, economic, and social history from America's entry into World War I to the present. Discusses major wars of this period but also emphasizes such themes as the professionalization to the officer corps, the relationship between war and technology, and civil-military relations.

HIST 3350 - History and Philosophy of Science

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [~~1st Blk~~Full Sem]

The evolution and practice of Western science from origins to contemporary ideas.

HIST 3400 - Principles of Public History

Credits: (3)
Typically taught:
~~Fall~~Spring [Full Sem]

This course will consider the theoretical background of public history and its disciplines: historic preservation, museum studies, archives and records administration, and documentary editing. Students will survey, research, and analyze the ways in which history is conveyed to a broad public through museums, monuments, sites, films, and other media outside the classroom or scholarly writings. (Replaces HIST 2500.)

HIST 3500 - Historical Preservation

Credits: (3)
Typically taught:
~~Spring~~Fall [Full Sem]

Advanced principles in the preservation, organization, and presentation of historical materials.

HIST 4010 - Colonial America

Credits: (3)
Typically taught:
Fall [Full Sem] odd years

The colonial origins of the United States to 1763.

HIST 4020 - Era of the American Revolution: 1763-1800

Credits: (3)
Typically taught:
Spring [Full Sem] even years

Causes of American Revolution, including the military, diplomatic and social aspects; the formation of the Union under the Articles of Confederation; the Constitution; and the Federalist era.

HIST 4030 - New Nation: 1800-1840

Credits: (3)
Typically taught:
Fall [Full Sem, 1st Blk (odd years)]

Emphasizes Jefferson's Administration, War of 1812, the Era of Good Feelings, and the Age of Jackson, including the growth of political parties, territorial expansion, sectionalism, and social reform.

HIST 4040 - Era of the Civil War and Reconstruction: 1840-1877

Credits: (3)
Typically taught:
Fall [Full Sem Online]

Slavery and the causes of the Civil War with attention to the political, economic, social, and military aspects of the conflict, including the period of Reconstruction to 1877.

HIST 4050 - U.S. in the Gilded Age and Progressive Era: 1877-1919

Credits: (3)
Typically taught:
Fall [Full Sem] odd years

The transformation of the United States following the Civil War and Reconstruction into a modern urban-industrial superpower by the end of the First World War.

HIST 4060 - Twentieth-Century United States: 1919-1945

Credits: (3)
Typically taught:
Spring [Full Sem] odd years

Developments, historical patterns and conflicts which shaped the modern United States in the Twenties, the Great Depression and the Second World War.

HIST 4070 - Twentieth-Century United States since 1945

Credits: (3)
Typically taught:
Fall [Full Sem Online]
Summer [Full Sem Online]

The United States from 1945 to the present, including investigations of the Cold War, the Civil Rights Movement, the affluent society, modern politics, the Vietnam and Watergate crises and contemporary issues.

HIST 4110 - History of the American West to 1900

Credits: (3)
Typically taught:
Fall [Full Sem]

Explores the history of the Trans-Mississippi West region of the United States from 1500 to the 1890s. The course considers the varied experiences of its peoples and the myth of the West in American culture.

HIST 4120 - The American West since 1900

Credits: (3)
Typically taught:
~~Fall~~Spring [Full Sem]

Explores the history of the Trans-Mississippi West Region during the twentieth century, to include analysis of such issues as water use and allocation, population growth, land use, exploitation of resources, conservation, the federal presence, tourism, and threats to the environment.

HIST 4130 - History of Utah

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]
[Taught on-line when not offered face-to-face]

A study of Utah history from its Native American beginnings through the 20th Century-emphasizing political, economic and social developments.

HIST 4210 - Ancient History

Credits: (3)
Typically taught:
Spring [Full Sem] odd years

The ancient Near East and Mediterranean world, including the civilizations of Greece and Rome, from approximately 3500 B.C.E. to 475 C.E. This course examines the origins of civilization and traces the development of culture, emphasizing the religious, political, and intellectual legacy of the ancient world.

HIST 4220 - History of the Middle Ages 300-1300

Credits: (3)
Typically taught:
Fall [Full Sem] odd years

A survey of Europe during the Middle Ages emphasizing the religious, political, and cultural institutions shaping this period.

HIST 4230 - Renaissance and Reformation - Europe: 1300-1660

Credits: (3)
Typically taught:

Spring [Full Sem] even years

Examines the cultural, religious, political and economic factors that affected Europe from the end of the Middle Ages to the mid-1600s. Special emphasis is given to the Renaissance and Reformation as vital forces at work during the period.

HIST 4240 - Absolutism, Enlightenment and Revolution - Europe: 1660-1815

Credits: (3)
Typically taught:
Fall [Full Sem] even years

Examines the political, economic, social, and cultural factors that affected Europe during the period. Special consideration is given to the Enlightenment as a cultural phenomenon and to European-wide revolution and counter-revolution in the late eighteenth century.

HIST 4250 - Nineteenth-Century Europe

Credits: (3)
Typically taught:
Fall [Full Sem] ~~**odd years**~~

A survey of European history from the fall of Napoleon to the beginning of the First World War. The course will focus on the lingering impact of the political and economic revolutions of the late eighteenth century on the politics, culture, and social development of the nineteenth. Major consideration will be given to liberalism, romanticism, socialism, nationalism, imperialism, industrialization, science, and the rise of mass society.

HIST 4260 - Twentieth-Century Europe

Credits: (3)
Typically taught:
Spring [Full Sem] ~~**even years**~~

This overview of European history begins with the First World War and concludes with an assessment of the challenges and opportunities presented to Europe by the current world order. The course will examine the ways in which Europe has been shaped by the rise and fall of totalitarian movements, war, genocide, colonial and post-colonial politics, the Cold War, globalization and the shift to a post-industrial economy.

HIST 4280 - History of Christianity in Europe

Credits: (3)
Typically taught:
Spring [Full Sem] odd years

A history of the development and impact of Christianity within Europe through the twentieth century. This course will examine how Christianity affected European society, culture, politics, and science; and how these affected the institutions within Christianity. Particular emphasis will be placed on the early growth of Christianity, medieval changes, the Reformation, and spirituality in the industrial age.

HIST 4310 - History of Russia to 1917

Credits: (3)
Typically taught:
Fall [Full Sem]

Russia's political, economic, social and cultural institutions from pre-history to 1917, emphasizing dynastic leaders, expansion, religion and other significant forces of change. Includes an analysis of both foreign and domestic policies that led to world war and revolution.

HIST 4320 - Russia since 1917

Credits: (3)
Typically taught:
~~Spring~~Fall [Full Sem]

Analyzes the political, economic, military, diplomatic, social, and ideological problems, crises, and programs from the Russian Revolutions of 1917 to the present.

HIST 4330 - History of England to 1485

Credits: (3)
Typically taught:
Fall [Full Sem] even years

A survey of English history to 1485 with special consideration given to England's cultural, political, economic and social development during the Middle Ages.

HIST 4335 - Tudor and Stuart England

Credits: (3)
Typically taught:
Fall [Full Sem] odd years

A survey of English history during the Tudor and Stuart periods (1485-1714). Emphasis will be placed on the social, cultural, political, religious and economic development of England during this period.

HIST 4340 - History of England since 1714

Credits: (3)
Typically taught:
Spring [Full Sem] even years

A survey of English history from 1714 to the present. Special emphasis will be given to England's cultural, political, economic, and social development during the Industrial Revolution, the Victorian era, and the twentieth century.

HIST 4350 - History of Modern Germany

Credits: (3)
Typically taught:
Spring [Full Sem]~~ even years~~

German social-political, economic and cultural developments from the eighteenth century to the present. Topics include the Prussians, Classicism, Revolution, the Age of Bismarck, industrialism and warfare, and the 20th Century.

HIST 4370 - History of Modern France 1789-present

Credits: (3)
Typically taught:
Fall [Full Sem]~~ odd years~~

Examines the political, social, and cultural history of France from the outbreak of the French Revolution to the present. Attention will focus on political ideologies, religious and philosophical movements, artistic and literary expression, and changes in the social environment. The course will also attend to the impact of France and French culture on the world and to recent challenges presented to French national identity by globalization.

HIST 4410 - History of Spain and Portugal

Credits: (3)
Typically taught:
Fall [Full Sem] ~~odd~~even years

A survey of the political, economic, social and cultural development of Spain and Portugal from the beginning to the present.

HIST 4430 - History of Scandinavia

Credits: (3)
Examines the political, economic, social, and cultural development of Scandinavia, particularly Denmark, Norway, and Sweden. Special emphasis is given to the Viking Age, the Great Power period, and the twentieth century.

HIST 4450 - History of Modern Eastern Europe since 1815

Credits: (3)
Typically taught:
Spring [Full Sem]

Examines the political, economic, and social factors that have shaped the history of this region from 1815 to the present.

HIST 4500 - Teaching Social Studies in Grades 5-12

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Summer [Full Sem]

Materials and methods of teaching for skill, concept and value development in middle, junior high and senior high school social studies. (Required of all majors in Social Science area).

HIST 4510 - Twentieth Century World

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The political, economic, and social forces of the twentieth century since World War I. Emphasis is placed on global relationships, the rise of mass society, and conflict among cultures in an era of accelerating change.

HIST 4530 - Far Eastern History

Credits: (3)
Typically taught:
Fall [Full Sem]

A survey of the political, economic, social and cultural development of China, Japan, and Korea from the pre-modern era to the present, with particular emphasis given to the 19th and 20th centuries.

HIST 4550 - Southeast Asian History

Credits: (3)
Typically taught:
Spring [Full Sem] ~~even years~~

A survey of the political, economic, social and cultural development of Southeast Asia from the pre-modern era to the present, with particular emphasis given to the 19th and 20th centuries.

HIST 4590 - Middle Eastern History

Credits: (3)
Typically taught:
Spring [Full Sem] even years

A survey of the political, economic, social and cultural development of the Middle East from the rise of Islam to the present with particular emphasis on the 19th and 20th centuries.

HIST 4610 - History of Africa

Credits: (3)
Typically taught:
Spring [~~2nd Blk~~Full Sem Online]
Summer [Full Sem Online]

Africa from earliest times to the twentieth century, with emphasis on the Sub-Sahara from its ancient kingdoms through the travails of the slave trade, European colonialism, and the independence movement.

HIST 4630 - History of Ancient and Colonial Latin America

Credits: (3)
Typically taught:
Fall [Full Sem]

History of ancient Native Latin America through the Spanish and Portuguese takeover and colonization.

HIST 4650 - Modern Latin America

Credits: (3)
Typically taught:
~~Fall~~Spring [Full Sem]~~ odd years~~

A survey of the political, economic, social and cultural developments of the Latin American nations to the present.

HIST 4670 - History of Mexico

Credits: (3)
Typically taught:
Spring [Full Sem] even years

A survey from ancient Native American times, the colonial experience, and the nation including the U.S. Southwest until 1848.

HIST 4710 - Special Issues and Topics in American History

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

When offered will focus on a specific and detailed subject in American History. Students may repeat this course for credit when the topic offered is substantially different than the previous class. May be repeated 3 times with a maximum of 9 credit hours.

HIST 4720 - Special Issues and Topics in European History

Credits: (3)
Typically taught:
Fall [Full Sem]

When offered will focus on a specific and detailed subject in European History. Students may repeat this course for

credit when the topic offered is substantially different than the previous class. May be repeated 3 times with a maximum of 9 credit hours.

HIST 4730 - Special Issues and Topics in Global and Comparative History

Credits: (3)
Typically taught:
Fall [Full Sem] odd years

When offered will focus on a specific and detailed subject in global or comparative history. Students may repeat this course for credit when the topic offered is substantially different than the previous class. May be repeated 3 times with a maximum of 9 credit hours.

HIST 4810 - Experimental Courses

Credits: (3)

HIST 4830 - Directed Readings

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Independent reading under the supervision of a department member on special topics in History. For each hour of credit approximately 1500 pages of material will be read. A written assignment on this material will also be completed. No more than three hours will count towards a major or minor. Prerequisite: Instructor approval.

HIST 4860 - Internships in Historical Studies

Credits: (1-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Open to all students. Faculty supervised off-campus internships in public history institutions. Each internship is individually established and provides students with practical experience and the opportunity to apply and learn new professional skills. Six hours of internship are required for the Public History Emphasis. No more than six hours will count towards a major or minor. Prerequisite: Junior-class standing and permission of instructor and field supervisor. May be repeated 3 times with a maximum of 9 credit hours.

HIST 4890 - Cooperative Work Experience

Credits: (1-6)
Typically taught:
Fall [Full Sem]

Spring [Full Sem]
Summer [Full Sem]

Academic credit for advanced internship opportunities in History-related careers. Grade, credit, and work experience to be determined in consultation with instructor and field supervisor. No more than six hours will count towards a major or minor. May be repeated 4 times with a maximum of 12 credit hours.

HIST 4920 - Short Courses, Workshops, and Special Programs

Credits: (1-6)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. No more than six hours will count towards a major or minor.

HIST 4930 - History Workshop

Credits: (1-5)
Offered as needed to give background history on topics which arise in timely subjects of world affairs. May be repeated for credit more than once with different topics. No more than five hours will count towards a major or minor. Only ten hours of this course number can be applied toward graduation.

HIST 4980 - History Honors Senior Project

Credits: (2)
Designed for the History Honors student and will be taken in conjunction with History Seminar, HIST 4990. It will give the Honors student opportunity to develop more depth and skills in History on a Honors level of performance.

HIST 4985 - Historical Research and Methods

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

This course teaches research and writing skills and is designed to prepare History students for History 4990. Students will learn how to find a research topic, develop a thesis, identify primary sources, cite those sources, and prepare a research proposal. The course will expose students to models of good historical writing and argumentation which will serve as models for their own writing.

HIST 4990 - Senior Seminar

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

A seminar for History majors requiring the completion of an extensive thesis project. Prerequisite: HIST 4985.

HIST 6010 - Colonial America

Credits: (3)
The colonial origins of the United States to 1763.

HIST 6020 - The Era of the American Revolution 1763-1800

Credits: (3)
Causes of American Revolution, including the military, diplomatic and social aspects; the formation of the Union under the Articles of Confederation; the Constitution; and the Federalist era.

HIST 6040 - The Era of the Civil War and Reconstruction 1840-1877

Credits: (3)
Slavery and the causes of the Civil War with attention to the political, economic, social, and military aspects of the conflict, including the period of Reconstruction to 1877.

HIST 6130 - History of Utah

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

A study of Utah history from its Native American beginnings through the 20th Century, emphasizing political, economic and social developments.

HIST 6590 - Middle Eastern History

Credits: (3)
The Middle East from the rise of Islam to the present with emphasis on the 19th and 20th centuries.

HIST 6610 - History of Africa

Credits: (3)
Typically taught:
Spring [Full Sem Online]
Summer [Full Sem Online]

Africa from earliest times to the twentieth century, with emphasis on the Sub-Sahara from its ancient kingdoms through the travails of the slave trade, European colonialism, and the independence movement.

HIST 6710 - Reading Seminar in American History

Credits: (3)
When offered will focus on a specific subject in American History. It is assumed that these topics would generally be non-repetitive or repeated only infrequently based on the demand for the course and the instructor assigned to it. Students would be assigned readings on various aspects of the topic and respond through discussion in a seminar setting and written work.

HIST 6720 - Reading Seminar in European History

Credits: (3)
When offered will focus on a specific subject in European History. It is assumed that these topics would generally be non-repetitive or repeated only infrequently based on the demand for the course and the instructor assigned to it. Students would be assigned readings on various aspects of the topic and respond through discussion in a seminar setting and written work.

HIST 6760 - Reading Seminar in World History

Credits: (3)
When offered will focus on a specific subject in World History. It is assumed that these topics would generally be non-repetitive or repeated only infrequently based on the demand for the course and the instructor assigned to it. Students would be assigned readings on various aspects of the topic and respond through discussion in a seminar setting and written work.

HIST 6830 - Directed Readings

Credits: (1-3)
Independent readings under the supervision of a department member on special topics in History. For each hour of credit approximately 1500 pages of material will be read. A written assignment on this material will also be completed. No more than three hours will count towards a major or minor. Prerequisite: Instructor approval.

HLTH 1020 LS - Science and Application of Human Nutrition

Credits: (3)
(available online) Human nutrition is the platform to study the nature and integration of science across disciplines and in society through applied problem solving and data analysis. Nutritional balance and good health are explored in context of the levels of organization, metabolism and homeostasis, genetics and evolution, and ecological interactions. This course is taught Web enhanced.

HLTH 1030 SS - Healthy Lifestyles

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Online]

A systematic approach to promote health enhancing behaviors related to the prevention of disease and achievement of optimal health. Focuses on the total person with a consideration of the mental, emotional, intellectual, social, physical, and environmental dimensions which impact human health.

HLTH 1110 - Stress Management

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Online]

An introductory course focusing on the causes of stress, recognizing personal stressors and life change management for stress control.

HLTH 1300 - First Aid: Responding to Emergencies

Credits: (2)
Typically taught:
Fall [1st Blk]
Spring [1st Blk]
Summer [1st Blk]

Training the lay person to respond correctly in emergencies and act as the first link in the emergency medical service system. Course leads to American Red Cross certification in Adult, Infant and Child CPR and First Aid: Responding to Emergencies. Cross listed with Athletic Training.

HLTH 2220 - Prenatal and Infant Nutrition

Credits: (2)
This course focuses on nutrition and diet as they apply to birth outcome, the maintenance of maternal health, and the growth of the infant. Breastfeeding and community programs will be discussed in support of maternal and infant health. Prerequisite: NUTR 1020 or HLTH 1020.

HLTH 2300 - Emergency Response

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [2nd Blk]

Meets the needs of the non-health care professional who has a duty to respond in an emergency. Provides more skills and in-depth training than the First Aid: Responding to Emergencies course. Course leads to American Red Cross certification in Emergency Response and CPR for the Professional Rescuer. Cross listed with AT 2300.

HLTH 2400 - Mind/Body Wellness

Credits: (3)
Typically taught:
Fall [Full Sem]

Spring [Full Sem]
Summer [Full Sem]

Promotion of emotional wellness and understanding the body, mind, spirit connection. Required by the Utah State Board of Education for endorsement in health education.

HLTH 2420 - Childhood and Adolescent Nutrition

Credits: (2)
The effects of nutrition and diet on child growth, health and behavior are explored from toddler through adolescence. The processes of growth and puberty provide the foundations for understanding nutritional support. Common nutritionally-related problems such as obesity, anemia, and eating disorders are also addressed. Prerequisite: NUTR 1020 or HLTH 1020.

HLTH 2700 - Consumer Health

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem]
Summer [Full Sem, 1st Blk, Online]

Knowledge and skills relating to consumption of health products and services, including advertising and health, quackery, alternative health care, economics of health care, etc.

HLTH 2800 - Individual Projects

Credits: (1-3)
A comprehensive study or project in the field of Health Education. Hours to be arranged. May be repeated 2 times up to 3 credit hours.

HLTH 2890 - Cooperative Work Experience

Credits: (1-6)
Open to all students in Health who meet the minimum Cooperative Work Experience requirements of the department. Provides academic credit for on-the-job experience. Grade and amount of credit will be determined by the department. May be repeated 5 times up to 6 credit hours.

HLTH 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Typically taught:
As Needed

Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated 5 times up to 6 credit hours.

HLTH 3000 - Foundations of Health Promotion

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Online]

Emerging trends and roles of health education within occupational, medical, community, and school settings including history, philosophy, current practices. Prerequisite: HLTH 1030.

HLTH 3050 - School Health Program

Credits: (3)
Typically taught:
Fall [Full Sem]

Designed to prepare the prospective teacher for their responsibilities in administering the functions of the School Health Program, including: health services, healthful school environment, and health education.

HLTH 3100 - Applications of Technology in Health Promotion

Credits: (3)
Typically taught:
Spring [Full Sem]

This course is an exploration of current and future uses of technology in the health promotion fields. Prerequisite: Completion of Computer & Information Literacy requirement or permission of instructor.

HLTH 3150 - Community Health Agencies and Services

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]

An overview of public and community health including history, management, prevention and epidemiology of disease. Emphasis on the role of community and government health agencies regarding health promotion and disease prevention activities. Prerequisite: HLTH 3000 or HLTH 3050.

HLTH 3160 - Principles of Health Behavior

Credits: (3)
Typically taught:
Fall [Full Sem]

The course provides a comprehensive overview of theories and models that explain and modify health behaviors. The models and theories are viewed from a multidisciplinary perspective and are applied to health behaviors among both normal and special populations. Prerequisite: HLTH 3000.

HLTH 3200 - Methods in Health Education

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Designed to appraise and utilize the different methods and aids used in teaching health and lifestyle management in the schools, community, worksite, and health care settings. Students develop skills in organizing, presenting, and evaluating learning experiences presented to target populations in the various settings. Prerequisite: HLTH 3000 or HLTH 3050 or ~~PEP~~ESS 2200.

HLTH 3320 - Health and Nutrition in the Older Adult

Credits: (3)
The developmental process of late adulthood with focus on the physiological age-related changes provides the foundation for understanding physical, mental, and social health and well-being in the older adult. Nutrition and exercise assessments and prescriptions, clinical services, community and social support services, complementary and alternative medicine, and other topics are explored in the context of promoting healthy aging. Prerequisite: NUTR 1020 or HLTH 1020.

HLTH 3400 - Substance Abuse Prevention

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

Study of legal and illegal drugs from a pharmacological, historical, psychosocial, and behavioral perspective. Emphasis on primary prevention concepts and responsible consumerism. Education students can receive "Substance Abuse Certification" from the Utah State Office of Education.

HLTH 3420 - Multicultural Health and Nutrition

Credits: (3)
The application and understanding of social, religious, economic and aesthetic qualities of foods provides the knowledge for the explorations of the food patterns of various cultures. The understanding or world food problems as they pertain to the health will also be discussed. Prerequisite: NUTR 1020 or HLTH 1020 and NUTR 2320. This course is taught Web enhanced.

HLTH 3500 - Human Sexuality

Credits: (3)
Typically taught:
Fall [Full Sem, Online]

Spring [Full Sem, Online]
Summer [Full Sem, Online]

A survey course of the biomedical and psychosocial forces which shape our sexuality. The focus will be upon the scholarly study of the biological, social, psychological, and spiritual dimensions of human sexuality.

HLTH 4013 - Health Promotion Research and Assessment

Credits: (3)
Typically taught:
Fall [Full Sem]
Summer [Full Sem, Online]

Application of research methods used both in assessing individual and community needs for health education, and in assessing the effectiveness of health education programs. Prerequisite: HLTH 3000 and HIM 3200.

HLTH 4150 - Needs Assessment & Planning Health Promotion Programs

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Conducting needs assessment and planning health promotion programs in a community, occupational, school or clinical setting. Prerequisite: HLTH 3000.

HLTH 4220 - Women's Health Issues

Credits: (3)
A feminist perspective and analysis of the psychological, cultural and political health related issues that impact women throughout the life span. Prerequisite: Upper division standing or consent of instructor. (Cross listed with Women's Studies)

HLTH 4250 - Contemporary Health Issues of Adolescents

Credits: (2)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

Provides professionals who work with adolescents an overview of both the school health program and health issues prevalent among teens.

HLTH 4300 - Health Education in the Elementary School

Credits: (2)
Typically taught:

Fall [Full Sem]
Spring [Full Sem]

Provides elementary school teachers the resources and skills needed to teach the Utah Healthy Lifestyles curriculum.

HLTH 4700 - Wellness Coaching

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Wellness coaching provides a highly effective and focused approach towards improving people's individual health habits and involves coaching people towards achieving their personal, health, and wellness goals. Students with an interest in wellness coaching will gain a broad overview of the field including an introduction to the application of wellness coaching tools, theory, concepts and techniques. Prerequisite: HLTH 2400, HLTH 3200.

HLTH 4800 - Individual Projects

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A comprehensive study or project in the field of Health Education. Hours to be arranged for seniors only. May be repeated 2 times up to 3 credit hours.

HLTH 4860 - Field Experience

Credits: (1-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Work experience which applies prior academic learning in a supervised setting. Prerequisite: Consent of faculty supervisor prior to registration. May be repeated 5 times up to 6 credit hours.

HLTH 4890 - Cooperative Work Experience

Credits: (1-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A continuation of HLTH 2890. May be repeated 5 times up to 6 credit hours.

HLTH 4920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Typically taught:
As Needed

Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated 5 times up to 6 credit hours.

HLTH 4990 - Senior Seminar

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

This is a capstone course of Health Promotion seniors only. Summarizes the experiences of the Health Promotion Major, addresses future alternatives and prepares students for employment now and/or graduate study.

HLTH 6250 - Contemporary Health Issues of Adolescents

Credits: (2)
Typically taught:
Fall [Online]
Spring [Online]

Provides professionals who work with adolescents an overview of both the school health program and health issues prevalent among teens.

HLTH 6300 - Health Education in the Elementary School

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Provides elementary school teachers the resources and skills needed to teach the Utah Healthy Lifestyles curriculum.

HNRS 1110 HU - Introduction to Honors: The Construction of Knowledge

Credits: (3)
An interdisciplinary class introducing students to the different ways university disciplines see the world and construct meaning. A student may repeat a course number for up to 6 credits if the course name, course syllabus, and faculty/instructor teaching the course is different.

HNRS 1500 PS - Perspectives in the Physical Sciences

Credits: (3)
Variable Title Course

Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An interdisciplinary approach to the physical sciences. This introductory class deals with basic concepts, problems and issues of the physical sciences. A student may repeat a course number for up to 6 credits if the course name, course syllabus, and faculty/instructor teaching the course is different.

HNRS 1510 LS - Perspectives in the Life Sciences

Credits: (3)
Variable Title Course
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An interdisciplinary approach to the life sciences. This introductory class deals with basic concepts, problems and issues of the life sciences. A student may repeat a course number for up to 6 credits if the course name, course syllabus, and faculty/instructor teaching the course is different.

HNRS 1520 SS - Perspectives in the Social Sciences

Credits: (3)
Variable Title Course
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An interdisciplinary introduction to the social sciences. This introductory course deals with the basic concepts, methods, models and issues of the social sciences. A student may repeat a course number for up to 6 credits if the course name, course syllabus, and faculty/instructor teaching the course is different.

HNRS 1530 CA - Perspectives in the Creative Arts

Credits: (3)
Variable Title Course
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An interdisciplinary introduction to the creative arts. This introductory class deals with basic concepts, problems and issues of the creative arts. A student may repeat a course number for up to 6 credits if the course name, course syllabus, and faculty/instructor teaching the course is different.

HNRS 1540 HU - Perspectives in the Humanities

Credits: (3)
Variable Title Course
Typically taught:

Fall [Full Sem]
Spring [Full Sem]

An interdisciplinary approach to the arts and humanities. This introductory class deals with basic concepts, problems and issues of the arts and humanities. A student may repeat a course number for up to 6 credits if the course name, course syllabus, and faculty/instructor teaching the course is different.

HNRS 2010 HU - Exploring Key Concepts in the Disciplines: Humanities

Credits: (3)
Variable title course
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course will focus on the history and development of a central concept in the Humanities, using original sources as the primary class texts. Prerequisite: Prior to taking this course students are strongly advised to take HNRS 1110 HU and a 1000-level HNRS "Perspectives" General Education course. A student may repeat a course number for up to 6 credits if the course name, course syllabus, and faculty/instructor teaching the course is different.

HNRS 2020 CA - Exploring Key Concepts in the Disciplines: Creative Arts

Credits: (3)
Variable title course
This course will focus on a central concept in the Creative Arts, using original sources as the primary class texts. Prior to taking this course students are strongly advised to take HNRS 1110 and a 1000-level HNRS "Perspectives" General Education course. A student may repeat a course number for up to 6 credits if the course name, course syllabus, and faculty/instructor teaching the course is different.

HNRS 2030 PS - Exploring Key Concepts in the Disciplines: Physical Sciences

Credits: (3)
Variable title course
This course will focus on a central concept in the Physical Sciences, using original sources as the primary class texts. Prior to taking this course students are strongly advised to take HNRS 1110 and a 1000-level HNRS "Perspectives" General Education course. A student may repeat a course number for up to 6 credits if the course name, course syllabus, and faculty/instructor teaching the course is different.

HNRS 2040 LS - Exploring Key Concepts in the Disciplines: Life Sciences

Credits: (3)
Variable title course
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course will focus on a central concept in the Life Sciences, using original sources as the primary class texts. Prior to taking this course students are strongly advised to take HNRS 1110 and a 1000-level HNRS "Perspectives" General

Education course. A student may repeat a course number for up to 6 credits if the course name, course syllabus, and faculty/instructor teaching the course is different.

HNRS 2050 SS - Exploring Key Concepts in the Disciplines: Social Science

Credits: (3)
Variable title course
This course will focus on the history and development of a central concept in the Social Sciences, using original sources as the primary class texts. A student may repeat a course number for up to 6 credits if the course name, course syllabus, and faculty/instructor teaching the course is different.

HNRS 2110 HU/SS - Intellectual Traditions: Great Ideas of the West in the Classical and Medieval Eras

Credits: (3)
Variable Title Course
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A survey of influential ideas, literature and events that characterize antiquity and the middle ages in the Western world. The student may elect to apply general education credit in this interdisciplinary course to either Arts & Humanities or Social Sciences. Prior to taking this course students are strongly advised to take HNRS 1110 and a 1000-level HNRS "Perspectives" General Education course. A student may repeat a course number for up to 6 credits if the course name, course syllabus, and faculty/instructor teaching the course is different.

HNRS 2120 HU/SS - Intellectual Traditions: Great Ideas of the West in the Modern Era

Credits: (3)
Variable Title Course
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A survey of the great ideas, literature and events that characterize Western civilization from the Renaissance to relativity. The student may elect to apply general education credit for this interdisciplinary course in either Arts & Humanities or Social Sciences. Prior to taking this course students are strongly advised to take HNRS 1110 and a 1000-level HNRS "Perspectives" General Education course. A student may repeat a course number for up to 6 credits if the course name, course syllabus, and faculty/instructor teaching the course is different.

HNRS 2130 HU/SS/DV - Intellectual Traditions: Great Ideas of the East

Credits: (3)
Variable Title Course
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A survey of the great ideas, literature, religions and philosophical foundations of Asia. The student may elect to apply

general education credit for this interdisciplinary course in either Arts & Humanities or Social Sciences. This course also fills the Diversity requirement. Prior to taking this course students are strongly advised to take HNRS 1110 and a 1000-level HNRS "Perspectives" General Education course. A student may repeat a course number for up to 6 credits if the course name, course syllabus, and faculty/instructor teaching the course is different.

HNRS 2830 - Directed Readings, Projects, and Research

Credits: (1-3)
Individualized tutorial with a professor who may be selected from many possible disciplines. A student may repeat a course number for up to 6 credits if the course name, course syllabus, and faculty/instructor teaching the course is different.

HNRS 2900 - Honors Colloquium

Credits: (1-3)
Varied topics as described in the semester schedule; topics will be drawn from disciplines across the entire campus; may be taken twice up to 3 credits with different course content: restricted to lower division credit. A student may repeat a course number for up to 6 credits if the course name, course syllabus, and faculty/instructor teaching the course is different.

HNRS 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-3)
In order to provide flexibility and to meet many different needs, a number of specific offerings are possible using this catalog number. When the number is used it will be accompanied by a specific and descriptive title. The specific title with the credit authorized for the particular offering will appear on the student transcript. A student may repeat a course number for up to 6 credits if the course name, course syllabus, and faculty/instructor teaching the course is different.

HNRS 3110 - Great Books

Credits: (3)
A selection of books that embody some of the great ideas, literature, and events influential in history. A student may repeat a course number for up to 6 credits if the course name, course syllabus, and faculty/instructor teaching the course is different.

HNRS 3900 - Honors Colloquium

Credits: (3)
Varied topics as described in the semester schedule; topics will be drawn from disciplines across the entire campus. A student may repeat a course number for up to 6 credits if the course name, course syllabus, and faculty/instructor teaching the course is different.

HNRS 4830 - Directed Readings: Senior Project Research

Credits: (1-3)
This class is taken in preparation for the HNRS 4990 Honors Senior Project. Class time is TBA, but students working towards their Honors Senior Project usually meet about seven times during the semester. A student may repeat a course number for up to 6 credits if the course name, course syllabus, and faculty/instructor teaching the course is different.

HNRS 4900 - Honors Colloquium

Credits: (2-4)
Varied topics as described in the semester schedule; topics will be drawn from disciplines across the entire campus. A student may repeat a course number for up to 6 credits if the course name, course syllabus, and faculty/instructor teaching the course is different.

HNRS 4920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-3)
Consult the semester class schedule for current offering under this number. The specific title and credit authorized will appear on the student transcript. A student may repeat a course number for up to 6 credits if the course name, course syllabus, and faculty/instructor teaching the course is different.

HNRS 4990 - Honors Senior Project

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Must be taken by students whose major department offers no Senior Project course; or may be taken in conjunction with a departmental Senior Project course when the project merits additional credit. For the University Honors designation, a Senior Project/Thesis must be completed. A student may repeat a course number for up to 6 credits if the course name, course syllabus, and faculty/instructor teaching the course is different.

HTHS 1101 - Medical Terminology

Credits: (2)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

A comprehensive overview of medical language. This course takes a body-systems approach to presenting the medical terminology associated with anatomy, physiology, ~~disease~~diseases and ~~treatment~~treatments. Designed for all students interested in health sciences or a career in medicine.

HTHS 1103 - Introduction To Health Careers and Care in a Diverse Society

Credits: (3)
Typically taught:

Fall [Full Sem]
Spring [Full Sem]

This course will compare and contrast diverse health careers. Students will discuss the history, providers, and delivery models involved in Health Care. The course will explore how such factors as economic class and status in groups such as gender, age, and physical ability affect health care professionals. Students will also explore numerous fields and opportunities in the Health Care Industry.

~~**HTHS 1105 - Technology-Enhanced Anatomy & Physiology**~~

~~**Credits: (4)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem, Online]**~~

~~This course is the first semester of a two-semester anatomy and physiology sequence that focuses on the structure and function of the human body. Course module topics include: the atomic and molecular levels of organization, cell biology and metabolism, microbiology, and the integumentary, skeletal and muscular body systems. Integrated laboratory sessions serve to enhance the lectures through discussions, data analysis, hands-on, and interactive activities. This course is offered in a technology-enhanced environment (via IVC to off-campus sites).~~ ~~**Open to concurrent enrollment students only.**~~

~~**HTHS 1106 - Technology-Enhanced Anatomy & Physiology (continued)**~~

~~**Credits: (4)**~~
~~**Typically taught:**~~
~~**Spring [Full Sem]**~~

~~This course is the second semester of a two-semester anatomy and physiology sequence focusing on the structure and function of the human body. Course module topics include: the nervous, endocrine, cardiovascular (blood), cardiovascular (heart and blood vessels), respiratory, digestive, urinary, and reproductive body systems. Integrated laboratory sessions serve to enhance the lectures through discussions, data analysis, hands-on, and interactive activities. Prerequisite: HTHS 1106 with a grade of C or better. This course is offered in a technology-enhanced environment (via IVC to off-campus sites).~~ ~~**Open to concurrent enrollment students only.**~~ ~~May be repeated once with a maximum of 4 credit hours.~~

HTHS 1108 - Biocalculations for Health Professions

Credits: (5)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Fundamental mathematical concepts using health professions applications ~~will be taught.~~. Topics include: basic arithmetic, pre-algebra, beginning algebra, geometry, and statistics applied to solutions, dosage calculations, electrolytes, acid base balance, circulatory and urinary function, pulmonary function testing and energy and metabolism. This course does not meet the University's quantitative literacy requirement.

HTHS 1110 LS - Integrated Human Anatomy and Physiology I

Credits: (4)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

Integrated Human Anatomy and Physiology I is the first semester of a two-semester anatomy and physiology sequence that focuses on the structure and function of the human body. Course module topics include: the atomic and molecular levels of organization, cell biology and metabolism, microbiology, and the integumentary, skeletal and muscular body systems. Weekly integrated laboratory sessions serve to enhance the lectures through discussions, data analysis, hands-on activities, and activities utilizing cadaver specimens and interactive digital cadaver technology. This course meets the life science (LS) general education learning outcomes for the university. Completion of HTHS 1101 is strongly recommended before taking HTHS 1110.

HTHS 1111 - Integrated Human Anatomy and Physiology II

Credits: (4)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

Integrated Human Anatomy and Physiology II is the second semester of a two-semester anatomy and physiology sequence ~~focusing~~that focuses on the structure and function of the human body. Course module topics include: the nervous, endocrine, cardiovascular (blood), cardiovascular (heart and blood vessels), respiratory, digestive, urinary, and reproductive body systems. Laboratory sessions serve to enhance the lectures through discussions, data analysis, hands-on activities, and activities utilizing cadaver specimens and interactive digital cadaver technology. Prerequisite: HTHS 1110 with a grade of C or better.

HTHS 1120 - Case Studies in Health Sciences

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Online]

Case Studies in Health Sciences is a course designed for students wishing to explore the interdisciplinary nature of health care using case study models. Each case study focuses on a disease process. Progression through each case study involves a review of anatomy and physiology, pathophysiology, medical terminology and a study of a variety of health professionals including their educational and training requirements. Additionally, the student will explore key medical diagnostic tests (e.g. laboratory, imaging) used in patient disease diagnosis, management and prevention. The course emphasizes the importance of the team approach to patient care. Prerequisite: HTHS 1101, ~~HTHS 1105 and HTHS 1106 or~~ HTHS 1110 and HTHS 1111 or an equivalent course in anatomy and physiology.

HTHS 1130 - Common Medicines

Credits: (3)
Typically taught:
(offered only as needed)

This is an introductory course and will provide information regarding proper drug usage for persons without significant backgrounds in the Biological Sciences. The course primarily discusses over-the-counter medicines as well as prescription drug groups which are commonly used by the public. The overall objective will be to provide information in such a way that individuals are able to make wise and appropriate choices, are more aware of possible drug-related problems, ~~able to make wise and appropriate choices,~~ and will become well-informed consumers. May be repeated twice with a maximum of 6 credit hours.

HTHS 2230 - Introductory Pathophysiology

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

An introduction to the pathophysiologic disruptions of normal human body function. This course will emphasize disease mechanisms and the body's response to restore homeostasis. Units of study include foundational concepts of cellular injury, genetics, acid-base, electrolyte, and fluid balance and functional alterations of the immune, hematologic, nervous, endocrine, cardiovascular, respiratory, urinary, musculoskeletal, and reproductive systems. Prerequisite: Completion of HTHS 1110 and HTHS 1111~~, or HTHS 1105 and HTHS 1106~~, or ZOOL 2200, or an equivalent human physiology course with a grade of C or better. Concurrent enrollment in HTHS 2231 is recommended.

HTHS 2231 - Introductory Pathophysiology Laboratory

Credits: (1)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

Laboratory and computer exercises involving analysis of both clinical and laboratory data. Students evaluate signs, symptoms, diagnosis and treatment of various pathological conditions and diseases. One two-hour laboratory per week. Co-Requisite: HTHS 2230.

HTHS 2240 - Introduction to Pharmacology

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Online]

Introductory pharmacology course which covers pharmacological principles including modes of action, uses, modes of excretion, and patient side effects of various drug classes. The drugs are presented in a "system approach" with emphasis on medications utilized in diagnosing and treating diseases associated with the various body systems. Class format includes a 3 hour lecture class with students participating in oral presentations and case studies. ~~Prerequisite: (~~Recommended~~)~~ prerequisite: HTHS 1101, HTHS 1110 and HTHS 1111.

HTHS 2830 - Health Sciences Directed Readings

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Directed Readings in Health Sciences areas. Must have departmental approval. May be repeated twice with a maximum of 3 credit hours.

HTHS 2904 TD - Information Resources in the Health Professions

Credits: (1)
Typically taught:
Fall [Online]
Spring [Online]
Summer [Online]

Intended for students interested in the health professions, this one-credit hour course will assist in developing information literacy and research skills. Students completing this course will be able to use an academic library and the Internet to successfully identify, access, evaluate and use information resources to support academic and clinical success and lifelong learning. Emphasis is placed on resources in the health sciences. Completion of this course meets part D of the WSU Computer and Information Literacy requirement. Cross-listed as LIBS 2904.

HTHS 2990 - Health Sciences Seminar

Credits: (1)
Typically taught:
(Offered only as needed)

Presentations, group discussions and analysis of selected topics, designed to prepare the Health Science major for career opportunities in the job market and applying for Health Professions professional programs. May be repeated twice with a maximum of 3 credit hours.

HTHS 3240 - ~~Introduction to~~ Pharmacology Principles and Clinical Applications

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**(Not currently offered. Restructuring content)**~~

~~Introductory pharmacology course which covers pharmacological principles including modes of action, uses, modes of excretion, and patient side effects of various drug classes. The drugs are presented in a "system approach" with emphasis on medications utilized in diagnosing and treating diseases associated with the various body systems. Class format includes a 3 hour lecture class with students participating in oral presentations and case studies. Students taking the 3240 course for upper division will also be required to write a 10 page paper on an application of pharmacological principle applied to a drug class. Students taking HTHS 2240 cannot take HTHS 3240 for credit. Prerequisite: (Recommended) HTHS 1101, HTHS 1110 and HTHS 1111.~~
Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]

Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

Pharmacology Principles and Clinical Applications is an upper division course designed for students who are pursuing a career in health, health education, or the health professions. This course will focus on pharmacokinetics, pharmacodynamics, mechanisms of drug action, evidenced-based medicine, organ-systems approach to differential therapeutics, and topics of current relevancy. In addition, students will present on a pharmacology case or topic of their choice. Prerequisite: HTHS 1111, ZOOL 2200, or an equivalent human physiology course. HTHS 2230 - Introductory Pathophysiology is also recommended.

HTHS 3328 - Pathophysiology of Cells and Tissues

Credits: (2)
Typically taught:
Fall [Full Sem Online]
Spring [Full Sem Online]
Summer [Full Sem Online]

~~Biological~~Pathophysiology of Cells and Tissues is a course that will emphasize disease mechanisms and the body's response to restore homeostasis by presenting an orientation to disease as disordered physiology. This course describes the etiology, developmental considerations, pathogenesis and clinical manifestations of disease processes. Units of study focus on the interactions ~~among~~of cellular ~~injuries~~injury mechanisms, genetic disorders, neoplasia, and inflammatory and immune disorders. ~~A course in anatomy and physiology and/~~ WSU Online class only. Prerequisite: HTHS 1111, ZOOL 2200, or ~~pathophysiology with a "C" or better is strongly recommended.~~equivalent human physiology course. May be repeated once for credit. ~~WSU Online class only.~~

HTHS 3329 - Pathophysiology of Organs and Systems

Credits: (2)
Typically taught:
Fall [Full Sem Online]
Spring [Full Sem Online]
Summer [Full Sem Online]

~~Interpretation~~Pathophysiology of Organs and Systems is a course that will emphasize the mechanisms of disordered physiology that underlie disease conditions by analyzing the mechanism(s) of different disease states. Particular attention will be given to etiology, pathogenesis ~~and pathological symptoms. A course in anatomy~~, developmental and ~~physiology~~ environmental influences, and~~/~~ clinical manifestations. Units of study focus on the nervous, endocrine, cardiovascular, respiratory, urinary, musculoskeletal, and reproductive systems. WSU Online class only. Prerequisite: HTHS 1111, ZOOL 2200, or ~~pathophysiology with a "C" or better is strongly recommended.~~equivalent human physiology course. May be repeated once for credit. ~~WSU Online class only.~~

HTHS 3410 - Foundations of Health Science Technology

Credits: (3)
Typically taught:
Fall [Full Sem] (Offered only as needed)

The purpose of this course is to teach the student fundamental technological and pharmacological principles used in dental and medical equipment. It will be focused on criteria used by dental and medical personnel to make technology and pharmacology decisions.

HTHS 3412 - Health Science Technology Applications

Credits: (3)
Typically taught:
Spring [Full Sem] (Offered only as needed)

The purpose of this course is to teach students fundamental technological and pharmacological principles used in specific medical devices. The ~~student~~students will develop an understanding of different health science manufactured products and services and will receive exposure to industry representatives. Prerequisite: HTHS 3410.

HTHS 4010 - Interdisciplinary Health Care Teams

Credits: (3)
Typically taught:
(Offered only as needed)

This course provides an interdisciplinary experience with the team concept as a priority. The students learn the role of the health care team members, each with their different skills and objectives. The course teaches students to practice an interdisciplinary approach as they research, interact and learn in the interdisciplinary environment of a health care setting. Cross-listed with DENT 4010 and NRSG 4010. May be repeated twice for credit.

HTHS 4850 - Study Abroad

Credits: (1-6)
Variable Title
~~The purpose of~~ This course ~~is to provide~~provides opportunities for students in health professions to experience a study abroad program that is designed to explore healthcare, culture, and clinical experience. May be repeated 5 times for 6 credit hours.

IDT 1010 CA - Introduction to Interior Design

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Online]

Explores the interior design profession, professional certification and licensure. Students learn the various phases of the design process and develop spaces that relate to sustainability, accessibility and human factors. Study of architectural and furniture styles are explored. Students develop aesthetic judgment as they create spaces that utilize the elements and principles of design and color theory. May be repeated twice.

IDT 1020 - Presentation Techniques

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Exploration of materials and application of methods required for visual communications with interior design presentation. Emphasis in conceptualizing and quick-sketching techniques. Introduction to oral and technical visual presentation methods such as Adobe Illustrator, InDesign and Google SketchUp are incorporated into curriculum.

IDT 1050 - Architectural Drafting

Credits: (3)
Typically taught:
Fall [Full Sem]

Introduction to the fundamentals of drafting of architectural working drawings using hand and basic technical skills. Graphic symbols, lettering and procedures used in developing a set of residential plans, including architectural standards and building requirements are studied.

IDT 1860 - Practicum

Credits: (1-2)
A course of occupational experiences in the interior design industry. A plan is created by the instructor and student to provide meaningful training in the student's career field. May be repeated for a maximum of 2 credit hours. Prerequisite: IDT 2020, IDT 2035.

IDT 2010 - Sustainability I: Textiles and Soft Materials

Credits: (3)
Typically taught:
Spring [Full Sem]

A study of fibers, yarns, fabric structure, codes, finishes, and sustainable manufacturing practices and products-as they relate to residential and commercial interiors. Three-dimensional projects may be required as part of this course.

IDT 2020 - Computer-aided Design and Drafting

Credits: (3)
Typically taught:
Spring [Full Sem]

Application of basic computer-aided drafting and design as it relates to ~~current professional practice~~technology in interior design. ~~AutoCAD~~Layout, modeling, rendering, and ~~AutoDesk software~~ 3-D projects are featured~~. Three-dimensional projects may be required~~ as part of this course. Prerequisite: IDT 1050.

IDT 2035 - Design Process/Space Planning

Credits: (3)
Typically taught:
Fall [Full Sem]

Experiences in programming, research development, and schematic design development. Emphasis on problem solving and space planning for residential and non-residential spaces. Design charettes may be included as part of the course curriculum. Prerequisite: IDT 2020.

IDT 2040 - Architectural Detailing

Credits: (3)
Typically taught:
Spring [Full Sem]

This course develops interior detailing technical skills, emphasizing stairways, fireplaces, ceilings, floor systems, and millwork (built-in furniture) details for residential and commercial spaces. Accessibility standards are discussed and incorporated into construction drawings and custom millwork designs. Life safety issues in regards to door, frame and hardware specification. Preparation of construction drawings, specifications, door, window and finish schedules for use by the trade. Three-dimensional projects may be required as part of this course. Prerequisite: IDT 2020.

IDT 2050 - Codes

Credits: (2)
Typically taught:
Spring [Full Sem]

The study and application of interior building codes that insures the health, safety, and welfare of individuals who occupy the structure.

IDT 2830 - Directed Readings

Credits: (1-3)
Individually chosen readings or specialized topics supervised by a faculty member. Instructor's approval required. May be repeated up to 3 credit hours.

IDT 2860 - Practicum

Credits: (1-2)
Typically taught:
Spring [Full Sem]

A course of occupational experiences in the interior design industry. Students are given opportunity to apply the design process to a real-life project, often with a service-learning emphasis. Instructor's approval required. This course may be listed among credits for the IDT Study Abroad program. Prerequisite: IDT 2020 and IDT 2035. May be repeated up to 2 credit hours.

IDT 2990 - Interior Design Seminar

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Professional issues presented by guest lecturers, tours, and current discussions in interior design. Due to the nature of the curriculum, not all lectures, tours and experiences may be held in a traditional setting or time. This course may be listed among credits for the IDT Study Abroad program. It is encouraged that design majors enroll in this course each semester. May be taken for credit/no credit. May be repeated for credit up to 8 times.

IDT 3000 - Lighting Design

Credits: (3)
Typically taught:
Fall [Full Sem]

A study of lighting principles, lighting systems, light sources, layered lighting concepts, calculation of lighting levels. Voice and data telecommunications systems, communication of lighting design and specifications including budgetary limitations are covered. Lighting plans, switching plans and electrical plans are explored. Focus is given to life safety concerns, codes, and accessibility. Also, exploration of daylighting principles and energy efficiency is incorporated. Emphasis is placed on communicating a design solution by practical application of learned principles in project format. An interdisciplinary design charrette is featured as part of this course. Prerequisite: IDT 2020, IDT 2035.

IDT 3010 - Historical Interiors

Credits: (3)
Typically taught:
Spring [Full Sem]

Historical research of interior furnishing and architecture from Egyptian through English Victorian. Oral presentations, research projects and/or three-dimensional projects may be required as part of this course. This course may be listed among credits for the IDT Study Abroad program. Prerequisite: IDT 1020.

IDT 3020 - American and Modern Interiors

Credits: (3)
Typically taught:
Fall [Full Sem]

Historical survey and research of interiors, furnishings, and architecture from the 1880's to the present. Application of modern design in today's interior including oral presentations, research projects and/or three-dimensional projects may be required as part of this course. This course may be listed among credits for the IDT Study Abroad program. Prerequisite: IDT 1020.

IDT 3025 - Professional Practice

Credits: (3)
Typically taught:

Fall [Full Sem]

A study of the business aspect of Interior Design. Information will be presented regarding forms and professional practices for the Interior Designer, i.e., ethics, contracts, fees, purchase orders, letters of agreement, business formations and terminology of business practice. Job seeking skills will also be covered, along with professional licensing and certification. An interdisciplinary design charrette is featured as part of this course. Prerequisite: IDT 2050.

IDT 3030 - Sustainability II: Materials, Hard Surfaces, and Specifications

Credits: (3)
Typically taught:
Fall [Full Sem]

Exploration and research of interior finishes, materials, and sustainable practices. Practical application for specifying and installation of materials will be emphasized. Three-dimensional projects may be required as part of this course. An interdisciplinary design charrette is featured as part of this course.

IDT 3040 - Perspective/Rendering

Credits: (2)
Typically taught:
Fall [Full Sem]

Perspective drawing, sketching, and manual and computer-generated rendering techniques are explored and utilized. It is required that IDT 4830 for one credit hour be taken in conjunction with this course. An interdisciplinary design charrette is featured as part of this course. Prerequisite: IDT 3030.

IDT 3045 - Residential Design

Credits: (3)
Typically taught:
Spring [Full Sem]

This course focuses on projects that apply the design process to residential interiors. Kitchen and Bath curriculum and NKBA standards are introduced. 20/20 Technologies software is introduced. Design charettes, local or national competition participation, and/or three-dimensional projects may be featured as part of this course. Prerequisite: IDT 3000 and IDT 3040.

IDT 3060 - Kitchen & Bath

Credits: (3)
Typically taught:
Fall [Full Sem]

A continuation of residential design is explored in which NKBA guidelines for kitchens and baths is applied to projects. In-depth study of the design of kitchens and baths is the focus. Kitchen and bath-specific 20/20 Software is utilized. Design charettes and national competition participation are featured as part of this course. Prepares the student for NKBA (National Kitchen and Bath Association) certification exams. Prerequisite: IDT 3045.

IDT 3080 - Advanced Interior Architectural Drafting and Design

Credits: (3)
Typically taught:
Fall [Full Sem]

This course continues the study of technical digital interior architectural drafting and design using the latest technologies for interior construction documents and interior architectural renderings. Prerequisite: IDT 1050, IDT 2020.

IDT 4010 - Commercial Studio

Credits: (3)
Typically taught:
Spring [Full Sem]

Application of codes as they pertain to egress, accessibility, and fire in commercial interiors. Emphasis on NCIDQ-based commercial projects are featured in this studio course. Prerequisite/Co-requisite: IDT 4020.

IDT 4020 - Commercial Design

Credits: (3)
Typically taught:
Spring [Full Sem]

Applying the design process to commercial design projects is the focus of this course. Contract, hospitality, healthcare, and global projects are emphasized in which students apply codes knowledge and commercial design strategies and specification of commercial-grade finishes and furnishings. Design charettes and national competition participation are featured as part of this course. Prerequisite: IDT 2035, IDT 2050, IDT 3000, IDT 3040, IDT 3080.

IDT 4025 - Senior Program Development

Credits: (2)
Typically taught:
Fall [Full Sem]

The first of a two-part series for the senior student that produces a comprehensive project that features residential, contract, hospitality and healthcare design emphasis along with a research component. The first four phases of the design process are embarked upon in this semester. The senior student must take IDT 4030 in the same academic year following completion of IDT 4025. Local and national competition participation are featured as part of this course. Instructor approval required for registration for this course. Prerequisite: IDT 4020.

IDT 4030 - Senior Project

Credits: (3)
Typically taught:
Spring [Full Sem]

The second of a two-part series for the senior student that produces a comprehensive project that features residential, contract, hospitality and healthcare design emphasis along with a research component. The design process continues in this semester including presentation of the capstone project. The senior student must take IDT 4025 in the same academic year preceding IDT 4030. Local and national competition participation are featured as part of this course. Instructor approval required for registration for this course. Prerequisite: IDT 4025. May be taken twice.

IDT 4040 - Portfolio Design

Credits: (2)
Typically taught:
Spring [Full Sem]

Developing and presenting both a hard-copy and digital portfolio for job searching in the field of interior design. In addition to the portfolio, student will create a customized resume, business card, and letter of introduction to accompany both the hard-copy and digital portfolio for presentation to prospective employers and clients. Adobe Creative Suite software is used extensively in this course. Local and national competitions are featured as part of this course. Prerequisite: IDT 4025.

IDT 4830 - Directed Readings

Credits: (1-3)
Typically taught:
Fall [Full Sem]

Individual readings supervised by a faculty member. Junior/Senior level course. Must be taken with the approval of the instructor and in conjunction with IDT 3040. This course may be listed among credits for the IDT Study Abroad program. May be repeated twice for a maximum of 3 credit hours.

IDT 4860 - Internship for Interior Design

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A structured professional-level field experience where the interior design major applies skills through work experience with a qualified interior designer, architect, or design firm. The curriculum also involves research into the field of interior design, professional practice and professional certification. Tours, activities, and field trips may be featured as part of the course curriculum in addition to the on-site experience in the design field. Internship must be approved by the instructor within the first two weeks of the semester.

IST 1100 SS - The Digital Society

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, ~~1st Blk,~~Full Sem Online]
Summer [Full Sem Online]

The explosive growth of information technologies in general, and the Internet in particular, has irreversibly changed the way we work and play. This course prepares students to be knowledgeable citizens of cyberspace. It reviews our social institutions and how they are being impacted by information technology as well as the ways in which technology has been shaped by our social institutions. The course also provides hands-on experience with a variety of Internet tools.

IST 2010 TE - Business Computer Skills

Credits: (1)
Typically taught:
Fall [Full Sem Online]
Spring [Full Sem Online]
Summer [Full Sem Online]

This course prepares all students in business and economics to demonstrate current competence in desktop software commonly used in the business environment. The course covers computer competencies students will use in their business functional and cross-functional core courses, using more complex features of desktop software. It is followed by a hands-on exam that tests these competencies. Completion of IST TE2010 and an Information Literacy course (BSAD 2704 or LIBS 2704, or LIBS 1704, or ~~NTM~~WEB 1504) meets the WSU computer and information literacy requirement. *Credit/No credit*.

IST 2015 - Introduction to Information Systems & Technologies

Credits: (1)
Typically taught:
~~**Fall [1st Blk]**~~
~~**Spring [1st Blk]**~~**Not currently being offered**

This course introduces the student to the role played by computer technology in business strategy and problem resolution. It also introduces information technologies used in information systems, including: software development, hardware, operating systems, network management, project planning, and career paths. Students will develop their academic IST program plan. Lecture series by IST Faculty.

IST 2020 - Introduction to Information Systems

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Overview of the role and use of information systems to support individual, group, and business decision-making. Includes coverage of technology's role in supporting the business decision-making process. It will prepare students to use information technologies effectively to improve productivity and promote competitive position in the marketplace. Prerequisite: IST 2010.

IST 2110 - Software Development I

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course introduces the student to the fundamentals of software construction using a contemporary programming language. This includes the IDE (Integrated Development Environment), syntaxes of the language, basic programming constructs, data representation, object concepts, programming flow control and problem solving logic. Students will design, program and debug several business application projects. Prerequisite: MATH 1050.

IST 2410 - Information Systems Architecture

Credits: (3)
Typically taught:
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~**Not currently being offered**

This course provides students with a thorough grounding in computer hardware and operating system software, peripheral devices and contemporary information system architecture, including its structure, theory, and applications.

IST 2720 - Data Structures and Algorithms

Credits: (3)
Typically taught:
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~**Not currently being offered**

This course introduces the basics of specifying abstract data types, control structures and modularization, and using them to design programs. Commonly used data structures and algorithms are studied. Emphasis is made on choosing data structures and algorithms appropriate for solving given business problems. Prerequisite: MATH 1050 and IST 2110.

IST 2891 - Cooperative Work Experience

Credits: (1-4)
Open to all associate's degree-seeking students who have been selected to serve an internship in the information technology field or who have identified a special IST project with their current employer, subject to approval by the Business Administration Department. Credit is determined by hours/week of work. Prerequisite: Department Approval.

IST 2892 - Cooperative Work Experience

Credits: (1-4)
Open to all associate's degree-seeking students who have been selected to serve an internship in the information technology field or who have identified a special IST project with their current employer, subject to approval by the Business Administration Department. Credit is determined by hours/week of work. Prerequisite: Department Approval.

IST 2893 - Cooperative Work Experience

Credits: (1-4)
Open to all associate's degree-seeking students who have been selected to serve an internship in the information technology field or who have identified a special IST project with their current employer, subject to approval by the Business Administration Department. Credit is determined by hours/week of work. Prerequisite: Department Approval.

IST 2894 - Cooperative Work Experience

Credits: (1-4)
Open to all associate's degree-seeking students who have been selected to serve an internship in the information technology field or who have identified a special IST project with their current employer, subject to approval by the Business Administration Department. Credit is determined by hours/week of work. Prerequisite: Department Approval.

~~**IST 3110 - Information Technology for Business**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem, Online]**~~
~~**Spring [Full Sem, Online]**~~
~~**Summer [Online]**~~

~~This course provides students hands-on experience with information technology tools useful for academic and professional activities. It will prepare students to use information technologies effectively to improve productivity and promote competitive position in the marketplace. Prerequisite: IST 2010, ENGL 1010 and MATH 1010.~~

IST 3210 - Database Design and Implementation

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course provides a comprehensive coverage of business database systems. Students will learn how to design, implement and manage databases. They will learn both GUI interface and how to use the Structured Query Language (SQL). They will also gain experience in using an enterprise level, multi-user database. Prerequisite: MATH 1050 and IST 2110~~.~~, or IST 2020 (formerly 3110).

IST 3610 - Networks & Data Communications I

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course provides ~~coverage of local area networks (LAN) technology and operations with emphasis on~~ an introduction to the design ~~and configuration issues. Design topics cover various aspects of internetworking devices,~~

~~bridges and gates, backbones, gateways and wide area~~, operation, and management of telecommunication systems. It covers computer network ~~(WAN) connectivity. Configuration topics include installing a network operating system, hardening a~~definitions, concepts and principles, including (but not limited to): server~~, creating user accounts, managing the network, connecting devices and monitoring the network.~~ management; topologies; protocols; standards; and fundamental concepts related to data communication networks. Prerequisite: ~~Business Foundations; BSAD 2899, and~~IST 2020 (formerly 3110) or IST 2410.

IST 3620 - Networks and Data Communications II

Credits: (3)
Typically taught:
~~Spring~~Fall [Full Sem]

In this intensive hands-on course, the student will acquire the skills and techniques needed to configure, troubleshoot and support reliable TCP/IP internetworks. The student will learn the essentials of building an internetwork, including routing, configuring the Domain Name Server (DNS), setting up and managing a web server, configuring a firewall and IDS, and standards-based email. Students will also participate in configuring clients, redesigning networks and troubleshooting routing. Prerequisite: ~~Business Foundations;~~ BSAD 2899 and IST 3610.

IST 3700 - E-business Technologies & Web Development

Credits: (3)
Typically taught:
~~Fall [Full Sem]~~
Spring [Full Sem]

This course provides students with knowledge of technologies needed in planning, implementing and supporting web-hosted applications and on-line commerce. Topics include web and commerce server design and deployment, search engines n-tier web architecture and supporting software, client-side/server-side programming with data-bound controls and session management, e-business application languages, markup languages, on-line payment mechanisms, systems reliability and security, scalability analysis, and solutions sourcing. Prerequisite: ~~Business Foundations;~~ BSAD 2899 and IST 2110~~.~~, or IST 2020 (formerly 3110).

IST 3710 - Global Issues in Information Technology

Credits: (3)
Typically taught:
Fall [~~Online~~Full Sem]
Spring [~~Online]~~
~~Summer [Online~~Full Sem]

This course shows how information technology is used as a key competitive advantage by multinational and transnational businesses. Topics include global perspectives on coordination and control, cultural dimensions, and geo-political considerations of global information technology applications. Prerequisite: ~~Business Foundations and~~ BSAD 2899.

IST 3720 - Software Development II

Credits: (3)
Typically taught:
~~**Spring [Full Sem]**~~**Not currently being offered**

This course builds on the software development skills learned in Software Development I. Topics include class hierarchies, inheritance and interfaces, object aggregation, data structure and collections, file management, threading, network programming, and the design of multi-tiered, distributed computing applications involving relational databases. Prerequisite: ~~Business Foundations;~~ BSAD 2899 and IST 2720.

IST 3730 - Systems Analysis and Design

Credits: (3)
Typically taught:
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~**Not currently being offered**

This course provides the knowledge and skills to design and implement computer-based systems to solve business problems. Topics include feasibility studies, requirement analysis, system design and development, implementation and testing. Students will learn the use of appropriate methodologies and tools, including object-oriented modeling and the use of computer-aided software engineering (CASE). Prerequisite: ~~Business Foundations;~~ BSAD 2899 and IST 3210.

IST 3750 - Electronic Business Communications

Credits: (3)
Typically taught:
Not currently being offered

This course gives students knowledge regarding the best practices in designing or developing electronic presentations, meetings, and collaborations. This course also familiarizes students with technologies fostering effective communication in virtual situations. Prerequisite: ~~Business Foundations;~~ BSAD 2899, MGMT 3200 or ~~NTM~~NET 3250.

IST 4600 - Information Security I

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Fall [Online]**~~**Credits: (3)**
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course looks at management issues and practical implications related to securing information systems. This course focuses on the threat environment, security policy and planning, cryptography, secure networks, access control, firewalls, host hardening, application security, data protection, incident response, and networking and a review of TCP/IP. Prerequisite: Business Foundations; BSAD 2899 and IST 2020 (formerly 3110), or IST 3610.

IST 4620 - Information Security Basics

Credits: (3)
Typically taught:
Not currently being offered

In a computer-literate age, sophisticated criminals use computers in their illegal and destructive activities. ~~This course discusses cyber crime and teaches students how to: recognize the patterns of an impending attack; detect attacks; set up a secure environment; and use tools to investigate cyber crime. Prerequisite: Business Foundations; BSAD 2899 and IST 3610.~~

~~**IST 4620 - Information Security Basics**~~

~~**Credits: (3)**~~
~~In a computer-literate age, sophisticated criminals use computers in their illegal and destructive activities.~~ This course discusses cybercrime and teaches students to understand networks; the phases of computer hacking; and setting up a secure environment. Prerequisite: ~~Business Foundations,~~ BSAD 2899 and IST 2410 or IST 3610.

IST 4700 - Information Security II

Credits: (3)
Typically taught:
Spring [Full Sem]

This course covers the basic principles and concepts in information security and information assurance. It examines the technical, operational, and organizational issues of securing information systems. Topics include operating system issues, viruses, security awareness at the executive, technical and user levels, physical security, personnel security issues, policies, procedures, and the need for an enterprise security organization. Case studies and exercises in the computer lab will be used to provide examples of the need for organizations to develop security procedures and policies. Prerequisite: ~~Business Foundations;~~ BSAD 2899 and IST 4600.

IST 4710 - Enterprise Software Development

Credits: (3)
Typically taught:
Spring [Full Sem]

This course ~~covers~~ introduces students to the ~~creation~~concept of a business as an integrated set of business processes and ~~integration of~~ associated systems designed to deliver value to customers. It focuses on enterprise ~~applications using object-oriented programming~~systems, product lifecycle management, and ~~distributed object technology. Topics include design issues for~~supply chain management. This course also focuses on how to effectively manage enterprise ~~system development, application architectures, and integrating legacy data and applications~~projects with ~~new enterprise systems.~~respect to organizational constraints. Students will ~~use state-of-the-art practices to develop and implement systems.~~learn how to manage project initiation, planning, execution, monitoring and closing. Prerequisite: ~~Business Foundations;~~ BSAD 2899 and IST ~~3720.~~2020 (formerly 3110).

IST 4720 - Emerging Information Technologies

Credits: (3)
Variable Title
Typically taught:

Fall [Full Sem]

New information technologies can give early adopters significant competitive advantage when used with careful planning, or they can mean disaster if hastily implemented. This course covers how to conduct an environmental scan toward evaluating and implementing new information technologies. Prerequisite: ~~Business Foundations,~~ BSAD 2899 and IST 2410~~.~~, or IST 2020 (formerly 3110).

IST 4730 - ~~Senior Practicum: Project Management and~~ Systems ~~Development~~Analysis and Design

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This ~~is a capstone~~ course ~~for the IST major. It~~ provides ~~hands-on~~the knowledge and ~~problem-solving experience in all areas of information technology including systems analysis,~~ skills to design ~~, systems implementation, network design, software development,~~ and ~~database design. Students will participate as a member of a team to complete a proposal or a project for a significant~~implement computer-based ~~system. This course focuses on working with actual~~systems to solve business problems ~~as represented in a major case study.~~. Topics include feasibility studies, requirement analysis, system design and development, implementation and testing. Students will learn the use of appropriate methodologies and tools, including object-oriented modeling and the use of computer-aided software engineering (CASE). Prerequisite: Business Foundations; BSAD 2899~~, IST 2110, IST 2410,~~ and IST 3210~~,~~ and IST 3610~~, IST 3730, and Business Administration Department approval~~ and IST 2110.

IST 4801 - Individual Projects

Credits: (1-3)
This course is open only to senior IST majors. Students will be required to complete an individual project, program, system, or research paper which will enhance their skills and marketability. Prerequisite: ~~Business Foundations;~~ BSAD 2899, Business Administration Department approval, and Senior standing.

IST 4802 - Individual Projects

Credits: (1-3)
This course is open only to senior IST majors. Students will be required to complete an individual project, program, system, or research paper which will enhance their skills and marketability. Prerequisite: ~~Business Foundations;~~ BSAD 2899, Business Administration Department approval, and Senior standing.

IST 4803 - Individual Projects

Credits: (1-3)
This course is open only to senior IST majors. Students will be required to complete an individual project, program, system, or research paper which will enhance their skills and marketability. Prerequisite: ~~Business Foundations;~~ BSAD 2899, Business Administration Department approval, and Senior standing.

IST 4810 - Experimental Courses

Credits: (1-3)
Experimental or one-time courses designed to fill a need in the community or investigate interesting and unusual topics. May be repeated 5 times with a maximum of 6 credit hours with different topics.

IST 4850 - Information Systems & Technology Study Abroad

Credits: (1-3)
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~
~~**Summer [Full Sem]**~~

This course is designed for students who wish to explore information systems and technology theory and practice in countries other than the U.S. Students will study global information systems as offered through a partner university (or other university with department chair approval). Prerequisite: BSAD 2899. May be repeated once up to 6 credits.

IST 4891 - Cooperative Work Experience

Credits: (1-4)
Prerequisite: Business Administration Department Approval.

IST 4892 - Cooperative Work Experience

Credits: (1-4)
Prerequisite: Business Administration Department Approval.

IST 4893 - Cooperative Work Experience

Credits: (1-4)
Prerequisite: Business Administration Department Approval.

IST 4894 - Cooperative Work Experience

Credits: (1-4)
Prerequisite: Business Administration Department Approval.

IST 5930 - Professional Development Workshop in Information Technology

Credits: (1-4)
Information technology professionals must remain current with new technologies to remain competitive in their careers. This course offers professional development in new systems and software as they enter the mainstream of information technology practice. Prerequisite: Permission of instructor.

IST 6610 - Information and Communications Technologies for e-Business

Credits: (3)
Covers the information and communications technology infrastructure required to support a robust e-business activity. Issues such as reliability, scalability, security, and responsiveness as well as n-tier architectures are reviewed. Prerequisite: MACC, MBA, or IST Certificate program standing.

IST 6620 - Databases & Information Systems

Credits: (3)
This course covers the role of database technology in information systems. Through hands-on and conceptual knowledge, students will learn how databases are used to construct and operate information systems designed to support decision making. Various aspects of database systems including both correct methods and problems encountered during the design, implementation and operation of database systems will be covered. Students will gain hands-on familiarity with a relational database system. Prerequisite: Admittance to MACC or MBA program and IST ~~3110~~2020 or equivalent.

IST 6800 - Directed Studies

Credits: (1)
Directed individual study and research on special topics related to information assurance. May be repeated for a cumulative total of three credit hours. Prerequisite: Approval of Business Administration Department Chair and course instructor.

LEAP 2510 - Written Communication V

Credits: (3)
This class prepares students to function successfully in the required university writing classes, ENGL 1010 and ENGL 2010. Students write three to five page essays on academic topics. Students continue to use teacher and writing center resources to edit and revise their work as they expand their ability to write. Paraphrasing, analyzing, summarizing, and documenting sources are emphasized. Students are introduced to library and internet resources. Students continue to practice writing responses and opinions.

LEAP 2520 - Topics for Academic Study

Credits: (3)
This course focuses on reading, understanding, and dealing with academic topics and course assignments. Using authentic, unadapted texts, this course provides the student with a guided approach in bridging the difficulty level between ESL classes and other academic courses.

LIBS 1704 TD - Information Navigator

Credits: (1)
Typically taught:
Fall [Full Sem, 1st Blk, 2nd Blk, Online]
Spring [Full Sem, 1st Blk, 2nd Blk, Online]
Summer [Full Sem, 1st Blk, 2nd Blk, Online]

Students completing this course will be able to use an academic library and the Internet to successfully identify,

access, evaluate and use information resources to support academic success and lifelong learning. Completion of this course meets part D of the WSU Computer and Information Literacy requirement.

LIBS 2504 TD - Information Resources in History

Credits: (1)
Typically taught:
Spring [Full Sem, Online]

Intended for students interested in history, this one credit hour course will assist them in developing information literacy and basic research skills to support life-long learning. Students will develop skills in identifying, locating, retrieving, documenting and critically evaluating both electronic and print resources that are appropriate for undergraduate research, with an emphasis on resources in history. Completion of this course meets part D of the WSU Computer and Information Literacy requirement.

LIBS 2604 TD - Information Resources in Education

Credits: (1)
Typically taught:
Fall [1st Blk, 2nd Blk, Online]
Spring [1st Blk, 2nd Blk, Online]
Summer [1st Blk, Online]

Intended for students interested in education, this one-credit hour course will assist in developing information literacy and academic research skills, and an understanding of academic integrity issues unique to the field of education. Students will develop skills in identifying, locating, retrieving, documenting, and critically evaluating both electronic and print resources that are appropriate for undergraduate research, with emphasis in education and related disciplines. Completion of this course meets part D of the WSU Computer and Information Literacy requirement. Cross-Listed with EDUC 2604.

LIBS 2704 TD - Information Resources in the Business Disciplines

Credits: (1)
Typically taught:
Fall [1st Blk, 2nd Blk, Online]
Spring [1st Blk, 2nd Blk, Online]

Information Resources in the Business Disciplines is a one credit hour course that will assist students in developing information literacy and basic research skills to support life-long learning. Students will develop skills in identifying, locating, retrieving, documenting, and critically evaluating both electronic and print resources that are appropriate for undergraduate research, with emphasis in the business disciplines. Completion of this course meets part D of the WSU Computer and Information Literacy requirement. Cross listed with BSAD 2704.

LIBS 2804 TD - Information Resources in the Social Sciences

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Intended for students interested in the social sciences, this one credit hour course will assist them in developing information literacy and basic research skills to support life-long learning. Students will develop skills in identifying, locating, retrieving, documenting and critically evaluating both electronic and print resources that are appropriate for undergraduate research, with an emphasis on resources in the social sciences. Completion of this course meets part D of the WSU Computer and Information Literacy requirement. Prerequisite: Social Science General Education course.

LIBS 2904 TD - Information Resources in the Health Professions

Credits: (1)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

Intended for students interested in the health professions, this one-credit hour course will assist in developing information literacy and research skills. Students completing this course will be able to use an academic library and the Internet to successfully identify, access, evaluate and use information resources to support academic and clinical success and lifelong learning. Emphasis is placed on resources in the health sciences. Completion of this course meets part D of the WSU Computer and Information Literacy requirement. Cross-listed as HTHS 2904.

LING 4830 - Directed Readings in Linguistics

Credits: (1-3)
Directed readings may be undertaken in the general area of linguistics, whether theoretical or applied. Specific topics are to be selected in consultation with the instructor and the linguistics minor program coordinator. The amount of material to be read, and any written assignments based on the reading, will be at the discretion of the instructor; it will be based on the level of the topic and the degree of difficulty of the reading, consistent with existing departmental or university guidelines. Prerequisite: ENGL 3010 Introduction to Linguistics is a prerequisite for this course. The prerequisite may be waived or replaced by an equivalent at the discretion of the instructor in consultation with the linguistics minor program coordinator. May be repeated twice with a maximum of 3 credit hours.

LING 4900 - Variable Topics in Linguistics

Credits: (1-3)
This course will offer opportunities for classroom study beyond those available in the regular course offerings for the linguistics minor. Topics will vary according to the interests of students and the expertise of the instructor; for example, advanced syntax, sociolinguistics, language typology, language and the law, artificial intelligence, neurolinguistics, and language death. The course may be taken more than once with different content. Prerequisite: ENGL 3010 Introduction to Linguistics is a prerequisite for this course. The prerequisite may be waived or replaced by an equivalent at the discretion of the instructor in consultation with the linguistics minor program coordinator. May be repeated twice with a maximum of 3 credit hours.

LING 4990 - Centering Experience

Credits: (3)
The Centering Experience is a capstone/synthesis requirement to be completed by reading texts from a list prepared by members of the Linguistics Minor Advisory Committee. The texts must be central to at least two of the disciplines represented in the minor. The reading will be done either as a directed reading or, enrollment permitting, a seminar,

either of which may be team taught. Assessment in LING 4990 will be tailored to the students' interests, and might take the form of a practicum, a project, or a thesis (especially suitable for BIS or Honors students).

MACC 6120 - Financial Accounting & Reporting

Credits: (3)
Typically taught:
Spring [Full Sem]
Summer [Full Sem]

In-depth coverage of financial accounting and reporting topics from a theoretical and practical standpoint through a combination of reading assignments, classroom lecture/discussion sessions, assignments, cases, and student presentations. Topics include the FASB and the standard-setting process; SEC policy and practice; accounting for leases, post-employment benefits, deferred income taxes, and stock compensation plans.

MACC 6130 - Governmental and Nonprofit Accounting

Credits: (3)
Typically taught:
Fall [Full Sem]

A study of governmental and nonprofit accounting concepts including revenue and expense recognition; asset and liability valuation; and reporting, disclosure, and financial analysis. Includes in-depth discussion of the new GASB reporting model for governments and analysis of actual government financial statements produced using the new model.

MACC 6160 - Financial Statement Analysis

Credits: (3)
Typically taught:
Spring [Full Sem]

Comprehensive study of the analysis and interpretation of financial statements by external decision makers and the impact of accounting conventions and alternative standards on analytical measures.

MACC 6210 - Ethical Considerations & Legal Liability

Credits: (3)
A study of the ethics espoused by accountants and their professional organizations with attention given to the current legal climate in which accountants operate.

MACC 6310 - Advanced Cost Accounting

Credits: (3)
Typically taught:
Fall [Full Sem]

Advanced cost accounting topics including cost accounting for non-manufacturing organizations, human information processing, activity resource usage, pricing, performance measurement, and non-routine decisions.

MACC 6330 - Strategic Management Accounting

Credits: (3)
Typically taught:
Spring [Full Sem]

A study and analysis of advanced managerial accounting subjects. Examines the impact of accounting information on managerial processes including planning, organizing, and controlling.

MACC 6560 - Advanced Auditing & Assurance Services

Credits: (3)
Typically taught:
Fall [Full Sem]

Advanced topics of auditing and assurance services including professional and technical aspects of auditing practice, introduction to SEC, ethics and legal responsibilities, fraud, recent auditing developments, sampling techniques for decision making, internal control, and risk assessment.

MACC 6570 - Information Systems Auditing

Credits: (3)
Typically taught:
Spring [Full Sem]

Methods, techniques, controls, and procedures used in the audit of computerized accounting systems.

MACC 6580 - Internal Auditing

Credits: (3)
Typically taught:
Spring [Full Sem]

Internal audit profession, internal control, risk assessment, evidence gathering, audit management, internal/external auditor relations, environmental auditing and federal sentencing guidelines, and audit reporting.

MACC 6610 - Advanced Accounting Information Systems

Credits: (3)
Typically taught:
Fall [Full Sem]

An advanced study of accounting information systems including general ledger, principles, tools, and techniques for controls, database systems, management query, and data analysis tools and systems. Course integrates projects and case studies where applicable.

MACC 6695 - Graduate Accounting Internship

Credits: (1-3)
Typically taught:
Variable

A significant professional-level field experience in the area of accounting or taxation. The student will be counseled and supervised as he/she applies and integrates the knowledge and skills obtained through MAcc/MTax courses. Prerequisite: Admission to the MAcc or MTax program; approval by department chair and program director. Can be repeated once up to 6 credit hours.

MACC 6801 - Individual Study

Credits: (1, 2, 3)
Individual work or work in small groups, by arrangement, on special topics not included in the announced course offerings. Prerequisite: Approval of Graduate Coordinator and Instructor.

MACC 6802 - Individual Study

Credits: (1, 2, 3)
Individual work or work in small groups, by arrangement, on special topics not included in the announced course offerings. Prerequisite: Approval of Graduate Coordinator and Instructor.

MACC 6803 - Individual Study

Credits: (1, 2, 3)
Individual work or work in small groups, by arrangement, on special topics not included in the announced course offerings. Prerequisite: Approval of Graduate Coordinator and Instructor.

MACC 6991 - Lecture Seminar

Credits: (1, 2, 3)
Lecture and discussion of current accounting topics by individuals from business and industry.

MACC 6992 - Lecture Seminar

Credits: (1, 2, 3)
Lecture and discussion of current accounting topics by individuals from business and industry.

MACC 6993 - Lecture Seminar

Credits: (1, 2, 3)
Lecture and discussion of current accounting topics by individuals from business and industry.

MATH 0810 - Experimental Courses

Credits: (1-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. Currently 0810 is titled, 'Pathway to Contemporary Mathematics' for 4 credit hours. The fee for this course includes $102 for the MyMathLab software license for the semester. The balance of the fee ($19 per credit hour) is for student academic support. Prerequisite: MATH 0950 or placement test within previous 24 months. This course cannot be transferred.

MATH 0950 ND - Pre-algebra

Credits: (3)
Typically taught:
Fall [Full Sem, ~~1st Blk, 2nd Blk,~~ Online]
Spring [Full Sem~~, 1st Blk, 2nd Blk~~, Online]
Summer [Full Sem, 1st Blk, 2nd Blk, Online]

Whole number, integer, and fraction operations, solving linear equations, exponents, ratio and proportion, and applications (word problems). The fee for this course includes $102 for the MyMathLab software license for the semester. No textbook is required. The balance of the fee ($19 per credit hour) is for student academic support. Does not count toward graduation.

MATH 0970 ND - Pathway to Contemporary Mathematics

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

This course integrates geometry, numeracy, proportional reasoning, algebraic reasoning, and topics in statistics and functions (linear, quadratic, rational, radical, exponential and logarithmic) using modeling, problem solving, and critical thinking. Prerequisite: MATH 0950 or Level 2 placement. This course cannot be transferred.

MATH 0990 ND - First Course in Algebra

Credits: (3)
Typically taught:
Fall [Full Sem, ~~1st Blk, 2nd Blk,~~ Online]
Spring [Full Sem~~, 1st Blk, 2nd Blk~~, Online]
Summer [Full Sem, 1st Blk, 2nd Blk, Online]

Properties of real numbers, solving linear equations and inequalities, geometry, ratio and proportion, applications (word problems), graphing, solving linear systems, exponents, scientific notation, polynomials, factoring, and solving quadratic equations. The fee for this course includes $102 for the MyMathLab software license for the semester. No

textbook is required. The balance of the fee ($19 per credit hour) is for student academic support. Prerequisite: MATH 0950 or equivalent Placement Rubric criteria. Does not count toward graduation.

MATH 1010 - Intermediate Algebra

Credits: (4)
Typically taught:
Fall [Full Sem, ~~1st Blk, 2nd Blk,~~ Online]
Spring [Full Sem~~, 1st Blk, 2nd Blk~~, Online]
Summer [Full Sem, 1st Blk, 2nd Blk, Online]

Inequalities (including absolute value and systems), systems of equations, applications (word problems), functions (inverse, exponential, and logarithmic), variations, factoring, rational expressions, radicals, complex numbers, quadratic equations, parabolas, circles, quadratic formula, formulas, properties and applications of logarithms. The fee for this course includes $102 for the MyMathLab software license for the semester. No textbook is required. The balance of the fee ($19 per credit hour) is for student academic support. Prerequisite: MATH 0990 or equivalent Placement Rubric criteria.

MATH 1020 - Fundamentals of Geometry

Credits: (3)
An introduction to the definitions, methods, and logic of geometry. Prerequisite: MATH 0990 or placement test.

MATH 1030 QL - Contemporary Mathematics

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

Topics from mathematics which convey to the student the beauty and utility of mathematics, and which illustrate its application to modern society. Topics include geometry, statistics, probability, and growth and form. Prerequisite: MATH 0970 or MATH 1010 or ACT Math score 23 or higher or placement test.

MATH 1040 QL - Introduction to Statistics

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

Basic concepts of probability and statistics including data collection and analysis, correlation and regression, probability, discrete and continuous distributions (binomial, normal and t distributions), estimation and hypothesis testing, with an emphasis on applications and understanding of the main ideas. Prerequisite: MATH 1010, Math ACT score 23 or higher, Placement Test, MATH 1050, MATH 1080, or MATH 1210 and above.

MATH 1050 QL - College Algebra

Credits: (4)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

This course covers a survey of college mathematics and is also a preparatory course for calculus. Topics from continuous mathematics include polynomial, rational, exponential and logarithmic functions, equations and their applications, absolute value, polynomial and rational inequalities, and nonlinear systems. Topics from discrete mathematics include matrices, matrix algebra and inverses, and determinants~~, sequences and series, counting techniques, and an introduction to probability. In addition, mathematics of finance, rational zero and binomial theorems and mathematical induction are covered briefly.~~. Prerequisite: MATH 1010 or Math ACT score of 23 or higher or placement test.

MATH 1060 - Trigonometry

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

This course is true to its Greek title root "triangle-measure" and is a preparatory course for calculus. Topics include trigonometric functions and their graphs, trigonometric identities, inverse trigonometric functions, trigonometric equations, solving triangles, and applications of trigonometry. Complex numbers, polar coordinates and vectors are also introduced. Prerequisite: MATH 1010 or Math ACT score of 23 or higher or placement test.

MATH 1080 QL - Pre-calculus

Credits: (5)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

This is an accelerated course that covers the main topics of College Algebra and Trigonometry. It is a single course prerequisite to calculus and is primarily for those students that need a review. Topics include polynomial, rational, exponential and logarithmic functions, equations and their applications, absolute value, polynomial and rational inequalities, and nonlinear systems; matrices, matrix algebra and inverses, determinants, sequences and series; trigonometric functions and their graphs, trigonometric identities, inverse trigonometric functions, trigonometric equations, solving triangles, and applications of trigonometry. In addition, conics and polar coordinates are also covered. Prerequisite: MATH 1010 or Math ACT score of 23 or higher or placement test.

MATH 1110 - Calculus Concepts and Applications

Credits: (3)
A conceptual understanding of the fundamental notions of calculus (limits, continuity, differentiation and

integration). Application of these ideas to economics, the social and life sciences, and natural resource modeling is central to the course. Prerequisite: MATH 1050 QL or MATH 1080 QL or placement test.

MATH 1200 - Mathematics Computer Laboratory

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Computer solution of mathematics problems using a computer algebra system. Prerequisite: MATH 1050 and MATH 1060, or MATH 1080, or Co-Requisite: MATH 1210.

MATH 1210 - Calculus I

Credits: (4)
Typically taught:
~~SFall~~Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Limits, continuity, differentiation, integration. Prerequisite: MATH 1050 and MATH 1060 or MATH 1080 or placement test. Co-Requisite: The ability to use a computer algebra system.

MATH 1220 - Calculus II

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Transcendental functions, techniques of integration, analytic geometry, infinite series. Prerequisite: MATH 1210. Co-Requisite: The ability to use a computer algebra system.

MATH 1630 - Discrete Mathematics Applied to Computing

Credits: (4)
An overview of the fundamentals of algorithmic, discrete mathematics applied to computation using a contemporary programming language. Topics include logic, proofs, sets, functions, counting, relations, graphs, trees, Boolean algebra, and models of computation. This course includes programming. Prerequisite: MATH 1050 or MATH 1080, and CS 1400 or ability to program in a contemporary computer language and the consent of the instructor.

MATH 2010 - Mathematics for Elementary Teachers I

Credits: (3)
Typically taught:

Fall [Full Sem]
Spring ~~[Full Sem]~~
~~Summer~~ [Full Sem]

Prospective elementary school teachers revisit mathematics topics from the elementary school curriculum and examine them from an advanced perspective including arithmetic, number theory, set theory and problem solving. Prerequisite: MATH 1050 or placement test.

MATH 2020 - Mathematics for Elementary Teachers II

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring ~~[Full Sem]~~
~~Summer~~ [Full Sem]

Prospective elementary school teachers revisit mathematics topics from the elementary school curriculum and examine them from an advanced perspective including probability, statistics, geometry and measurement. Prerequisite: MATH 1050 and MATH 2010.

MATH 2120 - Euclidean Geometry

Credits: (3)
Typically taught:
Fall [Full Sem]

Exploration of Euclidean geometry, from basic concepts to advanced theorems. Prerequisite: MATH 1210 or consent of instructor.

MATH 2210 - Calculus III

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Vector algebra, vector valued functions, multivariable functions, partial derivatives, multiple integrals, line integrals, integration in vector fields. Prerequisite: MATH 1220.

MATH 2250 - Linear Algebra and Differential Equations

Credits: (4)
Typically taught:
Spring [Full Sem]

Introduction to Linear Algebra and Differential Equations. Systems of linear equations, matrices, vector spaces, eigenvalues. First and second order differential equations and models, higher order linear equations, linear systems. Prerequisite: MATH 1220.

MATH 2270 - Elementary Linear Algebra

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Systems of linear equations, matrices, vector spaces, eigenvalues linear transformations, orthogonality. Prerequisite: MATH 1220.

MATH 2280 - Ordinary Differential Equations

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Methods of solution for ordinary differential equations. Exact equations, linear equations Laplace Transforms, series solutions. Prerequisite: MATH 1220.

MATH 2410 - Foundations of Probability and Statistics

Credits: (3)
An introduction to probability and statistics with special emphasis on concepts in the K-12 school curriculum. Prerequisite: MATH 1210 or MATH 1050 and consent of instructor.

MATH 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated 3 times for a maximum of 4 credit hours.

MATH 3050 - History of Mathematics

Credits: (3)
Typically taught:
~~Fall [Full Sem]~~Check with Department

A survey of the history of mathematics and its impact on world culture with emphasis on mathematical motivations, original methods and applications. Prerequisite: MATH 1220.

MATH 3110 - Foundations of Algebra

Credits: (3)
Typically taught:

Spring [Full Sem]

An introduction to Abstract Algebra, Number Theory and Logic with an emphasis on problem solving and proof writing. Prerequisite: MATH 1210.

MATH 3120 - Foundations of Euclidean and Non-Euclidean Geometry

Credits: (3)
Typically taught:
Spring [Full Sem]

Axiomatic development of geometry; Euclidean and non-Euclidean. Prerequisite: MATH 1220 and MATH 2120.

MATH 3160 - Number Theory

Credits: (3)
Typically taught:
Spring [Full Sem]

An overview of beginning number theory including the integers, modulo arithmetic, congruencies, Fermat's theorem and Euler's theorem. Prerequisite: MATH 1210.

MATH 3270 - Linear Algebra

Credits: (3)
Typically taught:
Spring [Full Sem]

Theory and applications of linear algebra including abstract vector spaces and canonical forms of matrices. Prerequisite: MATH 2270.

MATH 3280 - Dynamical Systems

Credits: (3)
Typically taught:
Spring [Full Sem]

Linear and nonlinear systems of differential equations, qualitative behavior and stability of solutions, applications. Prerequisite: MATH 2270 and MATH 2280.

MATH 3410 - Probability and Statistics I

Credits: (3)
Typically taught:
Fall [Full Sem]

Introductory probability theory and mathematical statistics, including applications. Prerequisite: MATH 1220.

MATH 3420 - Probability and Statistics II

Credits: (3)
Typically taught:
Spring [Full Sem]

A continuation of MATH 3410-Introductory probability theory and mathematical statistics, including applications. Prerequisite: MATH 2210 and MATH 3410.

MATH 3550 - Introduction to Mathematical Modeling

Credits: (3)
Typically taught:
Fall [Full Sem]

Formulation, solution and interpretation of mathematical models for problems occurring in areas of physical, biological and social science. Prerequisite: MATH 1200, MATH 1220, and Co-requisite MATH 2270 or MATH 2280.

MATH 3610 - Graph Theory

Credits: (3)
Typically taught:
Fall [Full Sem]

Principles of Graph Theory including methods and models, special types of graphs, paths and circuits, coloring, networks, and other applications. Prerequisite: MATH 1220.

MATH 3620 - Enumeration

Credits: (3)
Typically taught:
Spring [Full Sem]

Principles of Enumeration including counting principles, generating functions, recurrence relations, inclusion-exclusion, and applications. Prerequisite: MATH 1220.

MATH 3710 - Boundary Value Problems

Credits: (3)
Typically taught:
Fall [Full Sem]

Fourier series and the method of separation of variables. Heat, wave, and potential equations, Sturm-Liouville problems, orthogonal functions, special functions. Prerequisite: MATH 2210 and MATH 2280.

MATH 3810 - Complex Variables

Credits: (3)
Typically taught:
F or Sp (alternate years)

Analysis and applications of a function of a single complex variable. Analytic function theory, path integration, Taylor and Laurent series and elementary conformal mapping are studied. Prerequisite: MATH 2210.

MATH 4110 - Modern Algebra I

Credits: (3)
Typically taught:
Fall [Full Sem]

Logic, sets, and the study of algebraic systems including groups, rings, and fields. Prerequisite: MATH 2270 and MATH 3110.

MATH 4120 - Modern Algebra II

Credits: (3)
Typically taught:
Spring [Full Sem]

A continuation of MATH 4110: advanced topics from groups, rings, and fields including the Sylow theorems and Galois theory. Prerequisite: MATH 4110.

MATH 4210 - Introductory Real Analysis I

Credits: (3)
Typically taught:
Fall [Full Sem]

Develop the analysis underlying calculus. In-depth study of limits, continuity, integration, differentiation, sequences and series. Other topics may include Lebesgue measure and integration and Fourier Analysis. Prerequisite: MATH 2210, MATH 2270, and MATH ~~2270~~3110.

MATH 4220 - Introductory Real Analysis II

Credits: (3)
Typically taught:
Spring [Full Sem]

A continuation of MATH 4210-Develop the analysis underlying calculus. In-depth study of limits, continuity, integration, differentiation, sequences and series. Other topics may include Lebesgue measure and integration and Fourier Analysis. Prerequisite: MATH 4210

MATH 4320 - Topology

Credits: (3)
Typically taught:
Spring [Full Sem]

Introduction to point-set topology, including metric and topological spaces, continuity, homeomorphisms, compact and connected spaces, and complete metric spaces. Other topics may include the Baire Category Theorem and Tietze Extension Theorem. Prerequisite: MATH 2210, MATH 2270 and MATH ~~2270~~3110.

MATH 4610 - Numerical Analysis I

Credits: (3)
Typically taught:
Fall [Full Sem]

Introduction to numerical methods. Use of the digital computer in solving otherwise intractable problems. Prerequisite: MATH 2270 and an ability to use a programming language

MATH 4620 - Numerical Analysis II

Credits: (3)
Typically taught:
Spring [Full Sem]

A continuation of MATH 4610-Introduction to numerical methods. Use of the digital computer in solving otherwise intractable problems. Prerequisite: MATH 4610

MATH 4710 - Partial Differential Equations

Credits: (3)
Typically taught:
Spring [Full Sem]

Partial differential equations. First and second order equations, characteristics and classifications, methods of solution, applications. Prerequisite: MATH 3710.

MATH 4750 - Topics in Mathematics

Credits: (2-4)
This course will vary with the demand and may be taken more than once for a maximum of 8 credit hours. Prerequisite: Consent of the instructor.

MATH 4910 - Senior Research Project

Credits: (3)
Mathematical research project for seniors. Students may not register for this course the last semester before they intend to graduate. Prerequisite: Instructor approval.

MATH 4920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript.

MBA 6010 - Legal and Regulatory Environment of Business

Credits: (3)
This course is an introduction to business law, emphasizing basic legal principles and the broad application of domestic and international public and private law. Its overriding objective is to provide a working understanding of the legal environment of business for MBA students. Its focus is on regulatory law, business organizations, and other legal topics of special importance to managers of businesses.

MBA 6020 - Financial and Managerial Accounting

Credits: (3)
A general study of the use of accounting information by internal and external decision makers with emphasis on the use of accounting information by managers of an entity. Topics covered include the accounting cycle, the basic financial statements, inventories, long-term liabilities, cost concepts and behaviors, cost-volume-profit analysis, and financial statement analysis.

MBA 6040 - Managerial Economics

Credits: (3)
This course develops the basic concepts and analytical tools of economics which include opportunity cost, marginal analysis, constraints, and optimizing behavior. Applications include theories of the firm, its organizational architecture, transactions costs, markets, pricing, and other managerial issues.

MBA 6050 - Quantitative Methods I

Credits: (3)
This class will give students the opportunity to learn how to write, read, and analyze statistical data as it pertains to business and society. The basic premise of this course is to provide the student with an understanding of statistics as it is used in business and economics. This course will give special emphasis to understanding, interpreting and communicating statistics. Topics covered include descriptive statistics, probability, probability distributions, sampling distributions and hypothesis testing. Prerequisite: Additional course work in College Algebra may be required prior to course registration as per department advisement and student's program of study requirements.

MBA 6051 - Quantitative Methods II

Credits: (3)
This course will build on the first foundation course on descriptive statistics by emphasizing inferential statistics. This course will be application oriented and will focus on hypothesis testing and regression analysis. Students will learn how to design a survey and evaluate the data in order to test theories learned in other MBA classes. Students will also learn basic concepts and methods of optimization using elementary concepts in differential calculus. Additional foundation course work in statistics may be required prior to course registration as per department advisement and student's program of study requirements. Prerequisite: MBA 6050, or equivalent course in statistics.

MBA 6110 - Tools for the Ethical Manager

Credits: (3)
This course is designed to be taken at the beginning of formal course work in the MBA program. Students will explore various aspects of moral reasoning and apply these concepts to common ethical issues faced in business. Students will work individually and in groups to explore issues of personal values, self-awareness, teamwork, communication, managing differences, and career management. Students in this course will be introduced to analytical, communication, and technological tools used throughout the program.

MBA 6120 - Organizational Behavior

Credits: (3)
This is a course for graduate students who have already been exposed to the principles of management and organizational behavior and who are now seeking a more advanced preparation for the behavioral role of the manager. It offers a critical review of the factors that influence behavior within the organizational setting. Behavioral concepts are emphasized which particularly relate to group dynamics, interpersonal relations, and ultimately, organizational effectiveness. In short, this course deals with the human aspects of management--the kinds of problems most frequently experienced in day-to-day interaction with others. The format will include discussions, group and individual exercises, case studies, and student reports.

MBA 6130 - Financial Management

Credits: (3)
Financial Management is a detailed presentation of the practices, techniques, and applications of theory in corporate finance. The focus is an understanding of how companies operate and acquire the tools necessary to analyze and evaluate corporate financial policies. Cases and applied research in the form of outside readings will assist students to focus on key issues. The purpose of the course is to assist current and prospective managers in making better investment and financing decisions. The course addresses (1) the investment decision (capital budgeting) as well as (2) the financing decision. Class discussion and cases will focus on capital budgeting and specifically on the establishment of goals, development of strategy, identification of investment opportunities, evaluation of projects, implementation of projects, and the monitoring processes. Shareholder wealth maximization is the standard for determining why one decision is "better" than another. The ethical considerations of wealth maximization will also be addressed. Additional foundation course work in accounting and statistics may be required prior to course registration as per department advisement and student's program of study requirements. Prerequisite: MBA 6020, MBA 6050 & MBA 6051, or equivalent courses in accounting and statistics.

MBA 6140 - Marketing Management

Credits: (3)
This course centers on creating customer value profitability in competitive markets. In an integrative fashion, it covers analyzing customer needs and preferences; estimating market potential; assessing market opportunities and threats in view of the focal company's and its competitors' resources and capabilities; developing market and marketing strategies; making astute product, pricing, distribution, and promotion decisions; and measuring marketing performance. Pedagogical vehicles include lectures, reading assignments, and case-based discussions and reports.

MBA 6150 - Operations/Supply Chain Management

Credits: (3)
"Manufacturing of the future will be required to meet customer-driven demand instantaneously." The future is now! The requirements for faster response, more customer input, and greater product variety have not diminished, but instead have escalated. This course builds upon basic production and operations management knowledge to meet the needs of customers generated in today's global market. It is designed to enhance the student's understanding of how to analyze problems related to design, planning, control, and improvement of manufacturing and service operations. Topics include, but are not limited to, supply chain management, materials management, production planning and control, scheduling, capacity and facilities planning, manufacturing strategy, and global operations. Additional foundation course work in statistics may be required prior to course registration as per department advisement and student's program of study requirements. Prerequisite: MBA 6050 & MBA 6051, or equivalent courses in statistics.

MBA 6160 - Applications of Decision Models

Credits: (3)
This course presents a rigorous treatment of quantitative decision-making with emphasis on data collection, analysis, and model building. This course emphasizes experience in structuring realistic business problems, collecting data, developing an appropriate model for analysis, and interpreting and defending results. A number of cases are employed. Additional foundation course work in statistics may be required prior to course registration as per department advisement and student's program of study requirements. Prerequisite: MBA 6050 & MBA 6051, or equivalent courses in statistics.

MBA 6170 - Corporate Communications

Credits: (3)
The focus of this course is to develop an integrated corporate communications program in organizations which will provide effective communication both to internal and external stakeholders. Among the topics to be discussed are corporate image and identity, corporate advertising and advocacy, media relations, marketing, communication, financial communication, community relations, corporate philanthropy, government affairs and crisis communication. Attention will also be given to effective communication internally through various methods, such as meetings, programs and publications.

MBA 6180 - Strategic Management

Credits: (3)
This course takes a broad view of the entire organization. In some instances, the organization will have one line of business. In other cases, the organization may be a large diversified corporation with many lines of business. We will examine the strategic issues facing diversified corporations including: vertical integration, diversification into related and unrelated businesses, and operating synergies. Prerequisite: MBA 6130, MBA 6140, MBA 6150.

MBA 6210 - Management Accounting and Control

Credits: (3)
This course is designed to introduce the student to the concepts and procedures of managerial accounting through readings and case studies. The course emphasizes the use of accounting data in the decision-making process by internal decision-makers (e.g., management), rather than external decision-makers (e.g., stockholders, investors, creditors, and regulatory bodies). The course topics include cost terms and concepts, job-order costing, activity-based costing, quality management, cost behavior, cost-volume-profit analysis, profit planning, relevant costs, capital budgeting, cost allocation, and pricing. Additional foundation course work in accounting may be required prior to

course registration as per department advisement and student's program of study requirements. Prerequisite: MBA 6020, or equivalent courses in accounting.

MBA 6310 - Information Technology in the Enterprise

Credits: (3)
Information technology from an enterprise perspective with an orientation toward the management of technology for competitive/ strategic advantage. Managers will be increasingly responsible for making decisions with respect to implementing new technology. This course will provide the background knowledge to enable managers in traditional business units to function as full participants in decisions involving the purchase and application of technology to create a business advantage.

MBA 6360 - Aerospace Program Management

Credits: (3)
Within the context of the aerospace industry, students will be taught how to manage change across multiple projects using program management techniques. In organizations in which multiple strategic initiatives as well as continuous improvement projects are ongoing, understanding how to successfully plan and execute is vital.

MBA 6370 - CPI & Strategy in Aerospace Management

Credits: (3)
This management course is designed to teach aerospace business managers how to use the tools in Continuous Process Improvement (CPI) to attain and maintain operational excellence. The course includes relevant CPI tools such as Lean, Six Sigman, Theory of Constraints and Benchmarking. The course will also show managers how to conduct a stategic planning session with senior leadership and straegically align their organizations to maximize the use of CPI tools. Prerequisite: Admission to the MBA Program or approval to seek the stand-alone Graduate Certificate in Aerospace Management. This course is an elective for all MBA students, but is a required course for students seeking the Graduate Certificate in Aerospace Management.

MBA 6410 - Global Macroeconomic Conditions

Credits: (3)
This course will focus on the impact of global macroeconomic conditions on firm decision-making. To review and analyze current macroeconomic topics, a theoretical framework is developed, from the start showing the linkages among national economies. This framework is used to analyze and forecast business cycles, interest rates, exchange rates, causes of trade deficits, short- and long-term consequences of fiscal and monetary policy decisions, and the globalization of financial markets. Examples from different countries are used to enhance knowledge of the world economy. Additional foundation course work in economics may be required prior to course registration as per department advisement and student's program of study requirements. Prerequisite: MBA 6040, or equivalent course in economics.

MBA 6420 - The Economics of Industry

Credits: (3)
This course will focus on the behavior of the individual firm in different market settings, competitive and imperfectly competitive. We are concerned with the strategic behavior of firms under different industry structures as they struggle with the pressures of competition. Students will study how differing levels of the firm's market power impacts pricing

and output policies, product differentiation, and barriers to entry. In addition, the student will learn the basics of game theory and use it to analyze the strategic behavior of firms. Topics will include different types of pricing strategies including price discrimination, pricing of product lines, predatory pricing, peak load pricing, and entry deterrence. Issues of non-price competition such as research and development, information, externalities, moral hazard, and firm structure will also be discussed. The course includes both supplemental readings designed to illustrate real-world applications of the theoretical principles developed as well as in-class experiments in strategic behavior designed to illustrate certain theoretical conclusions. Additional foundation course work in economics may be required prior to course registration as per department advisement and student's program of study requirements. Prerequisite: MBA 6040, or equivalent course in economics.

MBA 6430 - International Marketing

Credits: (3)
The course provides foundational knowledge and practical application of international marketing principles and practices so as to prepare participants for entry-level marketing positions in the global context.

MBA 6440 - Strategic Leadership

Credits: (3)
This course will expose students to the strategic nature of leadership. Students will evaluate and discuss key principles and frameworks of leadership through the case method. Students will study leadership styles, situational leadership, personal leadership, and power & influence, as they relate to strategy.

MBA 6450 - Leadership Through People Skills

Credits: (3)
This course will provide a highly applied introduction to the interpersonal dynamics of leading and motivating others. Emphasis will be placed on the development and acquisition of key behaviors, skills, techniques and mental models for influencing others through sound people skills. By means of hands-on application, role-playing and "learning-by-doing" activities, students will learn to listen for understanding and insight; gain commitment rather than compliance; manage conflict; adapt their style to different people; apply influence skills in all directions; and develop insights into their impact on others.

MBA 6510 - Investment Analysis and Portfolio Management

Credits: (3)
This course engages class participants in a detailed study of the practices, techniques, policies and applications of theory in investments. Emphasis will be on an understanding of security markets, analysis, asset allocation, portfolio management and evaluation. Students will examine and apply investment tools and evaluate financial policies. Cases and applied research in the form of outside readings will assist students to focus on key issues and current topics. Course work in finance may be required prior to course registration as per department advisement and student's program of study requirements. Prerequisite: MBA 6130.

MBA 6520 - International Business Field Studies

Credits: (3)
This course integrates international travel and site visits with the study of international business topics. Through readings, assignments, discussions, and visits to important business and cultural sites in the destination countries,

the course builds understanding and competence in international business practices and managing across cultures. This course entails travel expenses beyond regular tuition and may be repeated when offered to a different world region. May be repeated 3 times with a maximum of 9 credit hours.

MBA 6530 - E-Business

Credits: (3)
The Internet has become an important influence in the world. Business on the internet, in terms of operations, marketing, security, etc., has increased concomitantly in influence. This course will provide a foundation for understanding the possibilities and potential pitfalls for doing e-business.

MBA 6540 - Negotiations

Credits: (3)
The purpose of this course is to provide opportunities for class participants to develop their negotiating abilities for use in organizational and other settings. The course is premised on the assumption that negotiating concepts are best learned through practice which is grounded in rigorous analysis and reflection. While theoretical principles and concepts from various reference disciplines (such as social psychology, sociology, and economics) will be presented through lectures and readings, this course will focus primarily on improving practical skills. Class participants will not only learn to enhance their individual abilities in dyadic and group situations, but also to analyze contexts for the most effective application of these skills.

MBA 6550 - Managing and Improving Quality

Credits: (3)
This course examines how organizations can gain competitive advantage by improving the quality and productivity of their business processes, manufactured goods and service outputs. Customer-focused approaches for designing, controlling and improving processes are emphasized, together with other concepts and approaches of quality management. Specific topics include process analysis, problem-solving methods, variability and statistical process control, performance measurement, and quality management systems. Guest lectures from industry professionals, experiential learning exercises and cases from manufacturing and service industries will assist students in understanding key issues and current topics. Prerequisite: MBA 6050 & MBA 6051, or equivalent courses in statistics.

MBA 6560 - Business/Market Planning Using Online Resources

Credits: (3)
In this hands-on project-oriented course, students learn to (1) develop and write effective business/marketing plans and (2) use online resources to gather pertinent market, competitor, and environmental information. Students may develop a business/marketing plan for an existing business or for a potential start-up of interest to them. Alternatively, they may write a business/marketing plan and conduct requisite research and data analyses for a business suggested by the course instructor. Learning is facilitated primarily via practical discovery exercises, an extensive term project, and coaching. Although lectures and reading assignments serve to convey essential background knowledge, especially during the first half of the course, much class time is devoted to working on plans in teams under the instructor's guidance.

MBA 6580 - Project Management

Credits: (3)
This course is a study of topics involved with managing projects. It examines the roles and skills of the project manager and the project office. Students will study the phases of the project life cycle, specifically the activities, requirements, methodologies, and tools common in project management.

MBA 6590 - Strategic Business Tax Planning

Credits: (3)
This course examines tax strategy and planning topics related to making important business decisions. The course addresses business formations, operations, terminations, reorganizations, acquisitions, and divisions. The course also covers tax issues related to multi-state and multi-national business transactions. Unique issues related to executive compensation, partnerships, limited liability companies, S corporations and C corporations are also addressed. Prerequisite: MBA 6010 or equivalent course in business law; MBA 6020 or equivalent courses in accounting.

MBA 6630 - Networking & Information Systems

Credits: (3)
This course covers the role of networking technology in information systems. Through hands-on and conceptual knowledge, students will learn how data communications and networks are used to facilitate decentralized and distributed systems in support of decision making. Various aspects of networking including standards, media, network design and applications will be covered. Students will gain hands-on familiarity with a local area network and the Internet. Prerequisite: Admittance to MACC, MBA or MHA program.

MBA 6640 - Information Assurance in the Enterprise

Credits: (3)
This course covers the basic principles and concepts in information assurance. It examines the managerial, operational, and organizational issues of securing information systems. Topics include legal and ethical issues in computer security; privacy concerns; malware; security awareness at the executive, technical and user levels; physical security, personnel security issues; policies and procedures; the need for enterprise security awareness; and the need for an enterprise security organization. Case studies and exercises in the computer lab will be used to provide examples of the need for organizations to develop security procedures and policies. Prerequisite: Admittance to MACC, MBA or MHA program.

MBA 6680 - Graduate Consulting Project

Credits: (3)
Graduate students are given the opportunity to consult with an existing organization, make recommendations for improvements, and assist in implementing changes in the organization. Students meet periodically with supervising faculty to review results. Prerequisite: Instructor approval.

MBA 6700 - Managing for Sustainability

Credits: (3)
This course explores how business organizations can address environmental issues to meet societal needs and create competitive advantages. Emphasis is placed on understanding the impacts of businesses on the natural environment; identifying the opportunities for businesses to align their strategies and practices toward more sustainable business models; and using various methods and tools for measuring and improving the environmental performance of

individual business organizations and the business system as a whole. Major topics include frameworks for understanding business and environmental sustainability; innovation, design and assessment of green products/services; green marketing issues; green purchasing; environmental management systems; operations and supply chain management issues for environmental sustainability. Prerequisite: Admission to MBA program; or graduate standing with permission of the MBA program.

MBA 6710 - Accounting and Finance for Environmental Sustainability

Credits: (3)
This course will expose MBA students to contemporary accounting and finance thought on environmental sustainability. The course will be divided into accounting and finance modules. The focus of the accounting module will include measurement and reporting of the environmental sustainability of business practices. The focus of the finance module will include capital budgeting for sustainability, financial assessment of sustainable business practices, and investing in environmental sustainability.

MBA 6715 - Sustainability Tools and Methods

Credits: (3)
This hybrid 8-week course consists of weekly modules, each of which addresses key aspects of sustainability-related business practices. Weekly topics are designed to explore in more depth specific sustainability-related tools and methods as they relate and add value to various aspects of business operations, including finance, accounting, supply chain management, information technology, stakeholder relations, and strategic planning. Secondly, students will gain an overview of the tools, techniques and bodies of knowledge through which they may pursue sustainability-related projects or entrepreneurship within their organizations. The course will utilize sustainability practitioners and subject-matter experts from a variety of organizational backgrounds. Prerequisite: MBA 6700; Admission to the MBA Program or Graduate Certificate in Sustainability in Business.

MBA 6720 - Business, Economics, and the Environment

Credits: (3)
Environmental economics considers the efficient and equitable use of society's scarce environmental resources. Environmental resources include air, water, land, wildlife, biodiversity, and ecological systems. The allocation of environmental resources will be considered from different perspectives: (1) market allocations; (2) efficient allocations; (3) equitable allocations; and (4) government attempts to allocate these resources efficiently. Topics of the course include property rights, market failures, benefit-cost analysis, welfare economics, non-market valuation, environmental regulation, and sustainable development and business practices. Emphasis will be placed on the impacts on the firm resulting from environmental problems and regulations; and on sustainable business practices. Prerequisite: MBA 6040, MBA 6051 or equivalent.

MBA 6730 - Consulting Project in Sustainability

Credits: (3)
Graduate students are given the opportunity to consult with an existing organization, evaluate sustainable business practices, make recommendations for improvements, and assist in implementing changes in the organization. Students meet periodically with supervising faculty to review results. Prerequisite: Instructor approval and MBA 6700, MBA 6710, and MBA 6720.

MBA 6740 - Principles of Contract Management

Credits: (3)
Students will gain an overview of the fundamentals of contract management from the development of acquisition requirements, solicitation/proposal, negotiation, contract formation, contract performance, and contract closeout. Learn the basics of what it takes to solicit, procure, negotiate and administer contracts and subcontracts while gaining a broad understanding of business principles to establish long-term relationships with customers, suppliers and other stakeholders. Explore an insider's view of the roles and responsibilities of contract administrators and the various interfaces with program management and other internal disciplines. Learn how to identify the basic differences between contract types and how they are selected to mitigate risk in a contractual environment, as well as exploring the key distinctions between commercial, government and international contracting processes.

MBA 6750 - Financial Aspects of Contract Management

Credits: (3)
Within the context of contract management, students will learn how to structure cash flow through financial methods that include invoice timing, pricing, overhead considerations, advance payments, letters of credit and other financial sources. Gain a comprehensive knowledge of accounting systems, budgeting, reporting, auditing and settlements. Enhance the profitability of your business through prudent contracting financial practices.

MBA 6760 - Legal Aspects of Contract Management

Credits: (3)
Within the context of contract management, students will gain a working knowledge of stakeholder requirements, applicable common law, Federal Acquisition Regulations (FAR), Uniform Commercial Code (UCC) and other local, state and federal regulations and law that must be adhered to throughout the contract management process. Students will learn the legal aspects of contract management with an emphasis on real world, day-to-day application. Students will explore all phases of managing an approved contract successfully through completion of performance including change management, communications, negotiations, contract types, terms and conditions, risks, defaults, terminations, claims and much more. Students will participate in projects and discussions to rapidly enhance knowledge and proficiency in contract management in order to apply classroom concepts in the workplace.

MBA 6800 - Directed Study

Credits: (1-3)
Directed individual study and research on special topics related to business. May be repeated for a cumulative total of three credits. Prerequisite: Written approval of MBA program and instructor.

MBA 6850 - Entrepreneurship

Credits: (3)
Students will learn how to effectively come up with an idea, iterate around that idea, and validate customers around their final direction so that they can learn how to successfully launch an idea into a business with low risk, low capital, and higher degrees for success. In addition, if a student is interested in learning how to be a better "intrapreneur" this course will help them use some of these same skills in a corporate or employee environment. Being innovative and creative is always valuable.

MCJ 6000 - Criminal Justice Statistics

Credits: (3)
Criminal Justice Statistics is a focus on the role of data collection and analysis in formal, empirical research projects. The course begins with a review of statistical applications including measures of central tendency, dispersion, and hypothesis testing. The course concludes with an examination of more complex analytical tools such as MANOVA, Factor Analysis, Path Analysis, and Logistical Regression. Students will review various styles of multivariate analysis in peer-reviewed scholarly literature as well as use computing resources to conduct their own multivariate analysis of a criminal justice dataset.

MCJ 6100 - Contemporary Criminal Justice

Credits: (3)
Typically taught:
Fall [Full Sem]

Course provides an analysis of the policies and practices of agencies of the criminal justice system including the police, prosecution, courts and corrections. Additionally, the latest technology and developments in the field of criminal justice will be addressed.

MCJ 6110 - Research Methods in Criminal Justice

Credits: (3)
Typically taught:
Summer [Full Sem]

Course teaches quantitative and qualitative research design, data collection and analysis techniques, and research presentation and dissemination methods. Descriptive and inferential statistics will be covered as well as basic computer applications in criminal justice.

MCJ 6120 - Theories of Crime and Delinquency

Credits: (3)
Typically taught:
Fall [Full Sem]

Course focuses on a review of classical and current theories of criminology and delinquency and the underlying assumptions of each. Advancements in profiling and classification as well as other applications of theoretical models will be studied.

MCJ 6130 - Law and Social Control

Credits: (3)
Course focuses on the nature of law and legal institutions and the relationships between law and social control. Concepts of law and justice from the perspectives of its effects on the American criminal justice system will be investigated as well as the public policy concerns of laws and their relationship to our society.

MCJ 6140 - Technology and Innovation in Criminal Justice

Credits: (3)
Typically taught:
Fall [Full Sem]

Course explores the latest developments in technology and innovations in criminal justice. Included will be current developments in forensic science, i.e. DNA and the use of computer applications in criminal justice. Specific topics will be adjusted as new technologies arrive. Emphasis will be on impact and management rather than the strict science of the protocols.

MCJ 6150 - Diversity Issues in Criminal Justice

Credits: (3)
Typically taught:
Spring [Full Sem]

Course will sensitize and educate criminal justice professionals to issues of diversity. It explores the cross-cultural contact that criminal justice professionals have with citizens, victims, suspects, and co-workers, and the influence of culture, race and gender in the criminal justice field.

MCJ 6160 - Seminar: Criminal Justice Policy Analysis

Credits: (3)
Course focuses on crime as a political issue and examines how conflicting political philosophies influence criminal justice policy. Emphasis will be placed on how decisions in politics affect criminal justice organizations and how these decisions can be influenced by executive managers.

MCJ 6170 - Seminar: Juvenile Justice

Credits: (3)
Course examines the origins and development of the juvenile justice system with particular emphasis on the current policies and practices of the agencies which process young offenders through the juvenile system. Course examines a variety of political initiatives designed to reduce the jurisdiction of the juvenile court, enhance the due process rights of juveniles, and create a more punitive approach in the juvenile justice system.

MCJ 6180 - Seminar: Contemporary Legal Issues

Credits: (3)
Typically taught:
Spring [Full Sem]

This course exposes students to current law impacting criminal justice professionals. Topics will change depending upon current legal developments, but will include the general areas of corrections, law enforcement, employment, civil liability and criminal procedure.

MCJ 6190 - Legal Foundations of Criminal Justice

Credits: (3)
Typically taught:

Fall [Full Sem]

Broad survey of foundational legal topics relevant to criminal justice, including: criminal law, search and seizure, bail, right to counsel, self-incrimination, lineups, responsibilities of courtroom legal actors, speedy trial, impartial jury, plea bargaining, double jeopardy, sentencing law, inmate rights, juvenile law, death penalty law, and basic rules of evidence.

MCJ 6210 - Seminar: Judicial Administration

Credits: (3)
Typically taught:
Fall [Full Sem]

Course exposes students to the dynamics of the American criminal courthouse. Students will examine how defense attorneys, defendants, prosecutors, judges, juries and others interact and contribute to America's version of criminal case disposition. Course also examines the mechanics of criminal case processing, as well as how the court system is supposed to work, how it really does work, and the implications for American democracy.

MCJ 6220 - Seminar: Contemporary Law Enforcement

Credits: (3)
Typically taught:
Spring [Full Sem]

From the response and investigation of crimes committed, to the theory and practice involved in crime prevention, this course studies the development, theory, history and contemporary organizational structure of America's law enforcement organizations.

MCJ 6230 - Seminar: Contemporary Corrections

Credits: (3)
Course provides an analysis of critical problems confronting contemporary adult corrections agencies. Course examines the problems of institutions, the affect of judicial intervention in corrections, alternatives to incarceration, and the political milieu in which this occurs.

MCJ 6240 - Criminal Justice Planning, Budgeting, and Evaluation

Credits: (3)
Typically taught:
Fall [Full Sem]

Course focuses on the planning, budgeting, and evaluation process in criminal justice organizations. Course examines both strategic and policy planning issues to include establishing organizational goals, budgeting, program implementation, evaluation and review.

MCJ 6250 - Topics in Criminal Justice

Credits: (1-3)
Variable Title
Typically taught:
Fall [Online]
Spring [Online]
Summer [Online]

Course focuses on a special issue or topic in criminal justice. A new topic/issue will be selected each time the course is offered. May be repeated with a maximum of 10 credit hours.

MCJ 6255 - Great Thoughts in Criminal Justice

Credits: (3)
This course explores the broader context of criminal justice studies and concepts through the writings of significant authors and thinkers. Readings will focus on subjects such as justice, punishment, law and social control. Students will be expected to read extensively and participate in analysis and discussion.

MCJ 6260 - Graduate Readings

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Course allows the student to examine the scholarly literature on a subject of special interest under the supervision of faculty. Reading list and accompanying assignments must be approved by the supervising faculty member. Periodic progress meetings will be scheduled throughout the semester. May be repeated once with a maximum of 6 credit hours.

MCJ 6270 - Thesis

Credits: (3)
Typically taught:
Fall [Full Sem]

Course provides students with the opportunity to conduct original research in criminal justice or complete a project in a criminal justice agency. Methods learned in the master's program will be applied. May be taken twice by those selecting the Thesis Option.

MCJ 6810 - Experimental Course

Credits: (1-3)
May be repeated 5 times with a maximum of 6 credit hours.

MCJ 6920 - Workshops and Conference

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Summer [Full Sem]

May be repeated 5 times with a maximum of 6 credit hours.

MED 6000 - Fundamentals of Graduate Study

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Review of program goals, policies, and procedures in the MED program. Introduction to the library, campus writing lab, and word processing facilities. A process for scholarly and professional writing will be covered as well as style, form, documentation, support, organization, and a number of other topics to help develop writing confidence for graduate work.

MED 6010 - Advanced Historical Foundations

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [1st Blk]

Study of the relationship of contemporary schooling issues to historical practices and philosophies.

MED 6020 - Diversity in Education

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [2nd Blk]

Topics in this course will include issues related to differences among groups of people and individuals based on ethnicity, race, socioeconomic status, gender, exceptionalities, language, religion, sexual orientation, and geographical area as they impact teaching and learning.

MED 6030 - Advanced Educational Psychology

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [2nd Blk]

Educational applications of principles and theories of psychology, human behavior, personality development and learning. Prerequisite: (Recommended) MED 6080.

MED 6050 - Curriculum Design, Evaluation & Assessment

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [2nd Blk]

An overview of the theories of curriculum development as well as a practical appraisal of curriculum design, implementation, evaluation and assessment. Prerequisite: (Recommended) MED 6080.

MED 6060 - Instructional Strategies

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [1st Blk]

This methods course will include organizing and universal teaching strategies that can accommodate the variety of learning contexts and content that is taught to a diverse audience of learners. Prerequisite: (Recommended) MED 6080.

MED 6080 - Conducting Educational Research

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Students learn to locate and interpret educational research, and to apply research methods to their own education issues. Prerequisite: MED 6000. (Only taught fall and spring)

MED 6085 - Developing a Project Proposal

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

This course is designed to help students develop a Master's project proposal that is carefully researched and professionally written. Prerequisite: Graduate Committee approved and MED 6030, MED 6050, MED 6060, and MED 6080 successfully completed.

MED 6090 - Master's Project

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Development of a master's project is often related to a student's work assignment. Student must have a signed proposal and department permission to register. Prerequisite: MED 6085.

MED 6091 - Graduate Synthesis

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [2nd Blk]

A review and synthesis of the program and its course work. The course includes opportunity to work with the development of personal portfolios. Prerequisite: All core requirements completed; Master's Project Proposal committee-approved, and Master's Project Report completed or in progress. Student must have a signed proposal and program approval to register. Prerequisite: MED 6085.

MED 6110 - Introduction to Classroom Management

Credits: (3)
Typically taught:
Spring [Full Sem]
Summer [2nd Blk]

This course serves as an introduction to classroom management for those who have not had classroom experience or have been hired by a school district on a "letter of authorization," (hired without a license). The focus will be on current issues, methodology, and application of a variety of approaches for behavior change, discipline, and management of diverse learners in the context of classroom environments. Classroom management as a function of good teaching will be examined. This course or MED 6120 is required for licensure.

MED 6120 - Advanced Classroom Management

Credits: (3)
Typically taught:
Fall [Full Sem]

Eclectic review of the popular teacher-pupil interaction models as they are classified into ideological camps and effect, and management and strategies for the classroom. This course or MED 6110 is required for licensure.

MED 6130 - Topic in Education: (i.e., School Finance, Cooperative Learning, TRIBES, Teaching for Inquiry, etc.)

Credits: (1-3)
Typically taught:
Summer [1st Blk]

This course explores a topic receiving current attention by educators and the public and deemed worthy of in-depth study. Credit will be determined by the nature of the topic.

MED 6140 - Adolescent Development

Credits: (2)
Study of physical, mental, social, and psychological characteristics of adolescents, their needs and problems, and methods of working with those who have behavior problems.

MED 6150 - Action Research in the Classroom

Credits: (2)
Students will explore effective classroom-based research techniques, complete classroom-based research projects, and engage in ongoing application of action research for the improvement of teaching practice.

MED 6160 - Effective Mentoring in the Classroom

Credits: (2)
Course will cover strategies for effectively mentoring student teachers and novice teachers by expert teachers. Expectations for the course include journal keeping, writing assignments, and mentoring project.

MED 6180 - Teaching Interpersonal Skills

Credits: (2)
Typically taught:
Fall [Full Sem]

Study and application of interpersonal skills leading to the application and teaching of selected techniques and systems in the classroom.

MED 6200 - Current Trends in Early Childhood Education

Credits: (3)
variable title
A variable title advanced course in Early Childhood Education (birth through age eight) based upon examination of the current trends in curriculum and instruction for young children. When this number is used it will be accompanied by a brief and specific descriptive title, i.e. literacy, math, science. May be repeated 2 times up to 9 credit hours.

MED 6201 - Coaching EC/ECE Professionals: Foundation & Organization of Coaching Application: Organization & Self Reflection

Credits: (3)
Typically taught:
Spring [Full Sem]

Educator coaching is an evidence-based strategy to increase program quality and teacher effectiveness in early childhood/early childhood education classrooms, programs, and home delivery systems. This course will train EC/ECE coaches using material from research-based sources, program experiences, and related theory. Participants will learn recommended practices in coaching related to early childhood and develop a systematic, individualized approach to effective coaching. Participants will learn practical strategies for coaching early childhood staff of diverse backgrounds and varying adult learning styles. Materials and discussions will include theory, research, interpersonal communication skills, and a systematic approach to more intentional coaching. Students will apply these strategies to Case Studies and field work experiences throughout the course and will participate in hands-on activities in class to apply new skills. Educator coaching skills will apply to any early childhood/early childhood education curriculum or model. This is course 1 of a three course series for the Utah Coaching Credential.

MED 6202 - Coaching EC/ECE Professionals: Connecting Awareness with Application & Deepening of Practice

Credits: (3)
Typically taught:
Summer [Full Sem]

Becoming an effective educator coach is a result of theoretical understanding, introspection, thoughtful planning, application of coaching skills and knowledge, and continuous self–improvement. This course will identify effective ongoing support strategies for individuals providing educator coaching. Participants will integrate skills with effective application in real life coaching experiences. Discussions will include self-reflective practices, self- directed action, planning and goal setting, and managing progress and accountability. Students will apply these strategies to case studies and real life experiences throughout the course. Students will be encouraged to engage in self-reflection and share ideas, successes, and challenges with other students in this course. This is course 2 in a three course series for the Utah Coaching Credential. Prerequisite: CHF 4201/MED 6201 or instructor permission.

MED 6203 - Coaching EC/ECE Professionals: Attuning for Personal and Organizational Change

Credits: (3)
Typically taught:
Fall [Full Sem]

The success of the educator coaching relationship has been based on the trusting relationship between two peers, coach, and adult learner, through a collaborative process of co-learning. The opportunity for the adult learner to self-monitor, self- analyze, and self-modify enhances the adult learner's own resourcefulness and alters his/her own personal understanding. In addition, when the act of coaching is a collaborative process, the coach is also allowed the same opportunity to reflect on self as part of their learning. This course is designed to support the coach in creating a social learning climate where a synergy of shared learning and reflective dialogue about practice are examined, analyzed and refined. Participants will integrate skills from Course 1 and 2 with opportunities to engage in conducting and constructing ongoing support strategies the coach can apply, refine and alter based on the adult learners' needs, readiness, and values about practice. Using strategies and protocols, coaching for organizational change in diverse settings (home- based programming, early care settings, classrooms, and school districts, etc.), and identifying effective ongoing personal supports will also be addressed. Students will apply these strategies to case studies and real life experiences throughout the course. This is course 3 of a three course series for the Utah Coaching Credential. Prerequisite: CHF 4201/MED 6201 and CHF 4202/MED 6202 or instructor approval.

MED 6210 - School Law

Credits: (3)
Considers the rights and responsibilities of students, teachers, and other educational practitioners. Relates these to school programs and operations as determined by state and federal constitutions, laws, and court decisions.

MED 6220 - Current Problems in Education

Credits: (3)
Typically taught:
Summer [1st Blk]

A survey course which identifies and gives opportunity to research current problems in education at national, state, and local levels. Solutions and responses are developed from the research to address problems.

MED 6229 - Instructional Technology for Pre-service Teachers

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course allows students to apply existing technology literacy into educational environments to promote use of technology for teaching and instructional support in learning environments. The curriculum is based on teacher skills required to teach Utah State Educational Technology Standards. Prerequisite: Verification of technology literacy training (through coursework or job experience) within the past five years.

MED 6230 - Instructional Technology for Teachers

Credits: (3)
Typically taught:
Spring [Full Sem]
Summer [1st Blk]

Designed for students who have had a prior introduction to technology. Topics could include classroom applications of technology, software evaluations, and technology integration. Prerequisite: Verification of technology literacy training (through coursework or job experience) within the past five years.

MED 6240 - Foundations of Teaching for Cultural and Language Differences

Credits: (2)
This course will address the nature of pluralism in American Society, including but not limited to exploration of multiculturalism, bilingualism, first and second language acquisition and instructional strategies. Establishes the core foundations for valuing diversity.

MED 6250 - Second Language Acquisition: Theories and Implementation

Credits: (3)
Typically taught:
Fall [Full Sem]

This course explores second language acquisition processes, current theories, and effective strategies as a knowledge base in planning appropriate curriculum and instruction for English language learners.

MED 6265 - Foundations of Inclusive Teaching

Credits: (2)
Typically taught:
Spring [Full Sem]
Summer [2nd Blk]

This course, designed for non-special education teacher candidates, will introduce candidates to the legal, philosophical, historical, and ethical foundations of special education. An emphasis is placed on strategies and methods for instructing students with exceptionalities in the general education setting and the expanded roles and responsibilities of school personnel for providing appropriate educational experiences for all students. Prerequisite: Admission to the masters of education program.

MED 6270 - Literacy Strategies for Teaching English Language Learners

Credits: (3)
Typically taught:
Spring [Full Sem]
Summer [1st Blk]

This course will examine literacy strategies for English Language Learners. Teacher candidates will learn how to apply literacy strategies to teach reading, writing, listening and speaking skills, while including culture, to scaffold language development in both the second language and mainstream classrooms.

MED 6280 - Family and Community Involvement in Education

Credits: (2)
Examination of methods which would facilitate the interaction between the parent/community and the teacher/school through reciprocal communication, home-based involvement, school-based involvement and decision making. Special emphasis will be given to the importance of parental involvement in the education of second language learners.

MED 6300 - Conducting Qualitative Research

Credits: (3)
Designed as an introduction to the philosophy, theory, and methodology of qualitative research. This course is a companion course to MED 6080, Conducting Educational Research. Special emphasis is placed on designing qualitative research proposals for master's degree projects.

MED 6311 - Content Instruction in the Elementary School: Science

Credits: (2)
Typically taught:
Summer [1st Blk]

Explores new concepts in curriculum and methods of science instruction in the elementary schools. This course is required for elementary licensure.

MED 6312 - Content Instruction in the Elementary School: Mathematics

Credits: (2)
Typically taught:
Spring [Full Sem]

Explores new concepts in curriculum and methods of mathematics instruction in the elementary schools. This course is required for elementary licensure.

MED 6313 - Content Instruction in the Elementary School: Social Studies

Credits: (2)
Typically taught:
Fall [Full Sem]

Explores new concepts in curriculum and methods of social studies instruction in the elementary schools. This course is required for elementary licensure.

MED 6314 - Reading Instruction in Elementary Schools

Credits: (2)
Typically taught:
Fall [Full Sem]

An exploration of current research theories and their pedagogical implications related to teaching vocabulary, reading comprehension, fluency, phonics, and phonemic awareness in elementary school classrooms. This course is required for elementary licensure.

MED 6316 - Language Arts Instruction in Elementary Schools

Credits: (2)
Typically taught:
Spring [Full Sem]

Students will explore theory, instructional methodology, and activities for supporting students in developing expertise in the essential skills of communication: listening, speaking, reading, writing, viewing, and visually representing. This course is required for elementary licensure.

MED 6317 - Arts Integration for Elementary Teachers

Credits: (2)
Typically taught:
Summer [1st Blk]

This course is designed to prepare students to successfully teach the arts in the elementary classroom. Students are expected to design, prepare, and teach lessons to engage elementary students in arts and music activities. State curriculum guidelines will be reviewed and discussed.

MED 6320 - Content Area Literacy Instruction

Credits: (3)
Typically taught:
Fall [Online]
Spring [Online]
Summer/odd years[Online]

Use of reading as an effective means to help students comprehend their course material. Explores how to incorporate these skills into the curriculum of the content areas. This course is required for secondary licensure.

MED 6330 - Using Children's Literature and Informational Text in the Classroom

Credits: (2)
Typically taught:
Spring [Full Sem]

This course will provide a broad basis for using children's literature for instructional purposes in elementary classrooms to enhance literacy development.

MED 6340 - Reading Assessment and Instructional Interventions

Credits: (3)
Typically taught:
Spring [Full Sem]

Assessment of reading problems and corrective procedures for remediation in elementary classrooms.

MED 6350 - Reading Comprehension Instruction

Credits: (3)
Typically taught:
Spring [Full Sem]

An exploration of current research theories and their pedagogical implications related to teaching vocabulary, reading comprehension, and metacognition. This course is required for the Level 1 Reading Endorsement.

MED 6352 - Early Literacy Instruction (K-6)

Credits: (2)
Typically taught:
Fall [Full Sem]

The purpose of this course is to focus on the research on emergent and early literacy development so that teachers may construct well-designed, appropriate literacy learning environments, and experiences for young language learners. Because this is an advanced course, students will be expected to have a reading background in early literacy. This course is required for the Level 1 Reading Endorsement.

MED 6353 - Understanding and Supporting Reading Development (grades 6-12)

Credits: (3)
Typically taught:
Summer [2nd Blk]

This course is to help practicing secondary teachers acquire skills and strategies to support struggling readers. Specifically, this course will provide teachers with a systematic and ongoing approach to classroom intervention to prevent continued failure in reading. Required for the Level 1 Basic Secondary Reading Endorsement.

MED 6354 - Literacy Leadership and Professional Development

Credits: (2)
This course is designed to increase understanding of the administration and supervision of school literacy programs. Major topics will include: professional development, school/community relations, mentoring partnerships, student diversity, curriculum evaluation and development, and assessment. This course is required for the Reading Specialist Endorsement. Prerequisite: Basic Reading Endorsement.

MED 6355 - Research in Reading

Credits: (3)
This course will engage students in studying and understanding primary research documents in reading. Students will be guided to explore both classical and contemporary reading research studies. Students will also be instructed in basic research techniques in reading. This course is required for the Reading Specialist Endorsement. Prerequisite: Level 1 Basic Reading Endorsement.

MED 6356 - Internship in Reading

Credits: (3)
This course is a field-based experience designed to give students an opportunity to work with curriculum and school leaders for improving reading instruction on a district or school level. Prerequisite: Level I Basic Reading Endorsement, MED 6355, MED 6354. The course is graded Credit/No Credit.

MED 6360 - Foundations of Literacy

Credits: (3)
Typically taught:
Summer [1st Blk]

An exploration of current reading, oral and written language theories, and their applications for the improvement of literacy practices in schools.

MED 6375 - Foundations of Dual Immersion or Immersion Education

Credits: (3)
The course examines the background, underlying theory, and research foundations that support dual language and immersion education practices. Issues for teachers and administrators will be addressed. Practices and principles that inform language attentive curriculum will be a focus of the course.

MED 6380 - Values Education

Credits: (3)
Typically taught:
Summer [Hybrid]

Designed for teachers, administrators, parents and community leaders. Examines the developmental processes of socialization and moral development. Four separate approaches of values education are evaluated.

MED 6415 - Content-Based Second Language Curriculum, Instruction and Assessment

Credits: (3)
Participants in this course learn to plan curriculum and instruction for dual language and immersion classrooms that combine language and content goals using standards-based and backwards design approaches. They also learn a range of classroom-based strategies for assessing language and content.

MED 6420 - Foundations of Education of the Gifted

Credits: (3)
An overview of education for the gifted and talented: historical and philosophical background; characteristics, needs, and developmental patterns of the gifted; issues in identification, differentiating curriculum and educational program options; special populations of gifted students.

MED 6430 - Creative Processes in the Elementary School

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [1st Blk]

This course focuses on the development of attitudes, methods, and skills in creative teaching, including an exploration of using music, art, dance, and drama in the elementary classroom. Graduate students will also explore philosophy, research, and theories which support arts integration, and development of teaching strategies and materials for use in the elementary classroom.

MED 6440 - Social and Emotional Needs of the Gifted

Credits: (2)
This course examines social and emotional developmental needs of gifted and talented children and proposes strategies for recognizing and meeting those needs in classrooms and with families.

MED 6450 - Creativity and Applied Imagination

Credits: (2)
Typically taught:
Fall [Full Sem]

Exploration and development of readily available personal and community resources to encourage creative thinking/reasoning, classroom involvement, and transfer of learning.

MED 6470 - Teaching for Thinking

Credits: (2)
Typically taught:
Fall [Full Sem]

Theory and practice for teaching thinking skills in elementary, middle, and high school classrooms.

MED 6480 - Differentiated Curriculum for the Gifted

Credits: (3)
Curriculum theories and educational strategies for educating gifted and talented students. A practical course with special attention to the development of instructional materials appropriate for use by gifted students in special programs as well as in the regular classroom.

MED 6490 - Assessment and Evaluation in Education of the Gifted

Credits: (3)
Principles of assessment applied to identification of gifted and talented students including identification of gifted in minority populations, diagnosis of student learning needs, learning styles, evaluation of student progress, and evaluation of program effectiveness.

MED 6495 - Action Research in Education of the Gifted

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This is a capstone course in the program leading to a Utah teaching endorsement in education of the gifted and talented and meets the USOE endorsement requirement for a field experience or practicum in education of the gifted by requiring a community-based project in which learning from previous endorsement courses is synthesized in a practical way. Students are expected to take initiative in planning, implementing, documenting, and evaluating meaningful action research projects relevant to education or the gifted and talented. Prerequisite: Bachelor's degree, teaching license, and MED 6420, MED 6480, MED 6490.

MED 6510D - Advanced Foundations in Special Education Practice & Law (Special Education License)

Credits: (3)
Typically taught:
Fall [Full Sem]

This course focuses on the learning and social characteristics of young people with exceptionalities – that is, disabilities (physical, mental, learning) or giftedness – and about public policy and services available to them. As future teachers, students will learn about how such individuals are identified and served by the school system, what strategies are effective for instructing them, and roles and responsibilities of school personnel in providing appropriate educational experiences for all students in an includive classroom. Prerequisite: Admission to Masters of Education.

MED 6515 - Foundations in Special Education: Law and Practice

Credits: (3)
Typically taught:
Spring [Full Sem]
Summer [2nd Blk]

This course will introduce students to the philosophical, historical, legal, and ethical foundations of special education. Students will examine in depth the laws and practices related to special education and how those laws are influencing children with special needs today. Students will also learn about individuals with special needs as they are identified and served in our school system.

MED 6520 - Collaboration, Consultation, and IEP Development

Credits: (3)
Typically taught:
Fall [Full Sem]

Roles of the special educator and families. IEP development, Least Restrictive environment, managing multidisciplinary team activities, and techniques of collaboration and consultation.

MED 6521 - Practicum in Special Education

Credits: (2)
Typically taught:
Spring [Full Sem]

This Practicum experience will focus on examining in depth the lives of students with mild to moderate disabilities in school, home, and community settings. Students will be introduced to the IEP process and will practice developing collaborative relationships within school settings. This Practicum must be taken either concurrently with, or after completion of, MED 6510 and MED 6520.

MED 6530 - Principles and Applications of Special Education Assessment

Credits: (3)
Typically taught:
Spring [Full Sem]

Administer, score, and interpret norm-referenced assessment instruments, analyze in combination with data from other assessment processes, and use to determine eligibility and develop educational programs.

MED 6540 - Advanced Managing Student Behavior

Credits: (3)
Typically taught:
Spring [Full Sem]

This course will address current issues, practices, and application of a variety of approaches for behavior change. It is designed to teach students validated classroom management strategies, behavioral intervention strategies and techniques for use with students who have behavioral and social skill deficits. The primary goal of this couse is for each student to conduct a functional assessment and implement and evaluate a behavior intervention plan. Prerequisite: MED 6510 or MED 6520.

MED 6550 - Advanced Instructional Planning and Learning Environments for Special Education Students

Credits: (3)
Typically taught:
Spring [Full Sem]

Effective teaching methods, instructional programming and modification of curriculum for students with disabilities. A direct instruction model is emphasized. Prerequisite: Admission to Masters of Education.

MED 6555 - Advanced Instructional Methods and Practicum: Reading

Credits: (4)
This course is designed to introduce principles and techniques for diagnosis and remediation of reading problems. The course will cover student characteristics and school setting demands which contribute to lack of success in reading classrooms. Field experience required.

MED 6560 - Advanced Instructional Methods and Practicum: Mathematics

Credits: (4)
Typically taught:
Spring [Full Sem]

Assessment and diagnosis of mathematics problems and corrective procedures for remediation. This course focuses on the needs of students with learning problems or who are at-risk for school failure. Students will apply the concepts learned in an action research project in a K-12 classroom.

MED 6565 - Advanced Instructional Methods and Practices: English Language Arts

Credits: (3)
Typically taught:
Fall [Full Sem]

The purpose of this course is to prepare teacher candidates to teach English Language Arts to elementary and secondary students. Teacher candidates learn to identify reading and writing difficulties, using evidence-based interventions. They will also learn how to implement effective instruction, using data-based instructional decision model to monitor students' ELA progress. This course is to be taken concurrently with MED 6860 Practicum in Education. Co-Requisite: MED 6860.

MED 6570 - Advanced Instructional Methods and Practicum: Written Expression

Credits: (4)
Typically taught:
Fall [Full Sem]

This course is designed to introduce principles and validated strategies for teaching written expression to students with mild/moderate disabilities. The course will cover student characteristics and school setting demands that contribute to lack of success in written expression. Field experience required.

MED 6575 - Advanced Instructional Methods and Practices: Mathematics

Credits: (3)
Typically taught:
Spring [Full Sem]

The purpose of this course is to prepare teacher candidates to teach mathematics to Tier 2 and 3 students in elementary and secondary classrooms. Teacher candidates will acquire a set of skills that will enable them to determine what math concepts to teach to pupils and effective instructional methods to aid in the teaching of these concepts. This course is to be taken concurrently with MED 6860 Practicum in Education. Co-Requisite: MED 6860.

MED 6580 - Advanced Learning Strategies and Transition for Special Education Students

Credits: (3)
Typically taught:
Fall [Full Sem]

Effective teaching methods, strategies, and practices for secondary age level students with disabilities. A cognitive learning strategies approach is emphasized. Prerequisite: Admission to Masters of Education.

MED 6581 - Pre-Student Teaching in Special Education

Credits: (4)
Typically taught:
Not currently being taught.

The purpose of pre-student teaching is to continue field experience in a supportive and professional manner. The student will have the opportunity to experience teaching and the responsibilities that it entails under the direct guidance of the cooperating teacher and the course instructor. This course is designed to provide students with

practical experiences in the areas of: (a) assessment, (b) behavior management, (c) curriculum and instruction for students K-12, and (d) planning and developing post secondary transition plans. Prerequisite: EDUC 4521/MED 6521 Practicum in Special Education, with a grade of B or better. Must be taken either concurrently with, or after completion of, EDUC 4530/MED 6530, EDUC 4540/ MED 6540, EDUC 4550/MED 6550, and EDUC 4580/MED 6580.

MED 6610 - Life Science for Elementary Teachers

Credits: (3)
This course provides a background in concepts relating to living organisms and the interactions among them and their environment. The flexibility of these concepts is examined in light of research activities.

MED 6620 - Physical Science for Elementary Teachers

Credits: (3)
Basic concepts of the physical sciences (chemistry and physics) are covered. The importance of the scientific method and the design of experiments is addressed as well as basic facts and discoveries. Hands-on laboratory activities are an important part of the course.

MED 6630 - Earth Science for Elementary Teachers

Credits: (3)
Typically taught:
Fall [Full Sem]

A background in basic concepts relating to the formation, development, and history of the earth is provided. General concepts of the structure, composition, and modification of the planet (atmosphere, lithosphere, and hydrosphere) are investigated through laboratory activities applicable to elementary classrooms. Activities emphasize inquiry and appropriate activities for developing content, process skills, laboratory skills, and positive attitudes toward science.

MED 6640 - The World As A Classroom

Credits: (1-3)
variable title
This course is designed to provide enrichment opportunities for those who undertake either domestic or foreign travel to participate in study tours, research, and other professional development experiences. It offers participants an opportunity to learn outside the classroom in locations available only through travel. May be repeated up to 3 credit hours.

MED 6650 - Understanding Science

Credits: (3)
This course will examine the nature of science, the philosophy of science, and research in science education. Students will engage in authentic scientific research.

MED 6661 - Life Science for Secondary Teachers: Zoology

Credits: (3)
This course examines basic concepts relating to living organisms, interactions among them, and relationships with their environment. Concepts of structure, function, ecology, behavior, and evolution will be investigated through laboratory activities applicable to secondary classrooms. Content relates to current areas of public concern and advances in the life sciences.

MED 6662 - Life Science for Secondary Teachers: Microbiology

Credits: (3)
This course examines basic concepts relating to living organisms, interactions among them, and relationships with their environment. Concepts of structure, function, ecology, behavior, and evolution will be investigated through laboratory activities applicable to secondary classrooms. Content relates to current areas of public concern and advances in the life sciences.

MED 6663 - Life Science for Secondary Teachers: Botany

Credits: (3)
This course examines basic concepts relating to living organisms, interactions among them, and relationships with their environment. Concepts of structure, function, ecology, behavior, and evolution will be investigated through laboratory activities applicable to secondary classrooms. Content relates to current areas of public concern and advances in the life sciences.

MED 6670 - Physics for Secondary Teachers

Credits: (3)
A background in the basic concepts of physics is provided. Topics include laws of motion, gravity, energy, light, heat, sound, electricity, magnetism, atomic and nuclear physics, radioactivity, and relativity. Laboratories investigate concepts applicable to secondary classrooms. Activities associate science content with appropriate activities designed to develop process skills, laboratory skills, and positive attitudes toward science.

MED 6680 - Chemistry for Secondary Teachers

Credits: (3)
A background in the basic concepts related to matter, its properties, and its reactions is provided. Laboratories investigate concepts applicable to secondary classrooms. Activities associate science content with appropriate activities designed to develop process skills, laboratory skills, and positive attitudes toward science.

MED 6691 - Earth Science for Secondary Teachers: Geology

Credits: (3)
A background in basic concepts relating to the information, development, and history of the earth is provided. General concepts of the structure, composition, and modification of the planet's lithosphere are investigated through laboratory activities applicable to secondary classrooms. Activities emphasize inquiry and appropriate activities for developing content, process skills, laboratory skills, and positive attitudes toward science.

MED 6692 - Earth Science for Secondary Teachers: Meteorology

Credits: (3)
A background in basic concepts relating to the information, development, and history of the earth is provided. General concepts of the structure, composition, and modification of the planet's atmosphere are investigated through laboratory activities applicable to secondary classrooms. Activities emphasize inquiry and appropriate activities for developing content, process skills, laboratory skills, and positive attitudes toward science.

MED 6693 - Earth Science for Secondary Teachers: Oceanography

Credits: (3)
A background in basic concepts relating to the information, development, and history of the earth is provided. General concepts of the structure, composition, and modification of the planet's hydrosphere are investigated through laboratory activities applicable to secondary classrooms. Activities emphasize inquiry and appropriate activities for developing content, process skills, laboratory skills, and positive attitudes toward science.

MED 6730 - Mathematics for Teaching K-8: Assessment and Intervention

Credits: (3)
Practicing teachers will gain a deeper understanding of the various types of assessment and their appropriate use for guiding instruction, intervention, and evaluation of student learning of mathematics content. This course is part of the Elementary Mathematics Endorsement.

MED 6860 - Practicum in Education

Credits: (1-4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Practical synthesis and application of knowledge and skills gained in previous education courses. ~~Student~~Students must have approval from the ~~department or~~ program ~~chair~~director, and should follow specific graduate certificate in teaching program guidelines for prerequisites and other requirements. ~~This course may be taken more than one time. Offered CR/NC only;~~ This course does not grant credit ~~toward~~towards the MED degree, but is required for a teaching license in the state of Utah. This course may be repeated three (3) times for credit.

MED 6870 - Student Teaching in Elementary Education for MED Students

~~**Credits: (6)**~~**Credits: (6)**
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [limited opportunities]

The student teaching experience is the culminating learning experience for the elementary licensure track. Student teaching is a time for developing one's classroom management style, instructional design, and collaborating with a mentor teacher. Student teaching is a rigorous experience, which is carefully planned, guided, assessed, and evaluated. Offered CR/NC only; this course does not grant credit towards the MED degree but is required for a teaching license in the state of Utah. Prerequisite: MED 6860, MED 6110 or MED 6120, MED 6050, MED 6510D, MED 6020, MED 6311, MED 6312, MED 6313, MED 6314, MED 6316.

MED 6880 - Student Teaching in Secondary Education for MED Students

Credits: (6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Student teaching experience, with supervision, in a public school to synthesize theory and practice from previous education courses. Offered CR/NC only; this course does not grant credit toward the MED degree but is required for a teaching license in the state of Utah. Prerequisite: MED 6860, MED 6020, MED 6060, MED 6120 or MED 6110, MED 6050, MED 6320, and MED 6510D.

MED 6890 - Student Teaching in Special Education for MED Students

Credits: (4-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The student teaching experience is the culminating learning experience for the special education licensure track. Student teaching is a time for developing one's classroom management style, instructional design, and collaborating with a mentor teacher. Student teaching is a rigorous experience, which is carefully planned, guided, assessed, and evaluated. Offered CR/NC only; this course does not grant credit towards the MED degree but is required for a teaching license in the state of Utah. Prerequisite: MED 6050, MED 6515, MED 6530, MED 6540, MED 6565, MED 6575, MED 6580, and MED 6860.

MED 6900 - Individual Study

Credits: (1-3)
Intended for the candidate who has special needs and who would benefit from an individual study program. Forms are available from Room ED 234 MEd program office and must be approved by the instructor and the director at time of registration. May be repeated up to 3 credit hours.

MED 6920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
In order to provide flexibility and to meet many different needs, a number of specific offerings are possible using this catalog number. When the number is used it will be accompanied by a brief and specific descriptive title. The specific title with the credit authorized for the particular offering will appear on the student transcript. May be repeated 5 times up to 6 credit hours.

MED 6990 - Continuing Graduate Advisement

Credits: (1)
This course is used to fill the continuous enrollment requirement while completing the Master's project. The course is graded Credit/ No Credit.

MENG 5010 - Introduction to Linguistics

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course introduces students to the scientific study of language. It explores what languages have in common, as well as what distinguishes them. Students learn basic analytic techniques in articulatory phonetics, phonology, morphology, syntax, and semantics and apply them to data drawn from various languages. These core concepts may be expanded and applied to other areas, such as language acquisition, language history, language and culture, language and thought, and language and literary expression. This course is designed for students with bachelor's degrees who have no upper-division undergraduate coursework in linguistics.

MENG 5020 - Introduction to the Study of Language for Teachers

Credits: (3)
This course is designed for English teaching majors and minors. It introduces students to the nature of language and linguistics and reviews the elements of traditional grammar. This course surveys prescribed applications for prospective secondary school English teachers, including language variation, contemporary alternatives to traditional grammar, the history of English, and linguistics and composition. This course is designed for students who have no upper-division undergraduate coursework in linguistics.

MENG 5050 - Grammar, Style, and Usage for Advanced Writing

Credits: (3)
This course presents the concepts and nomenclature of traditional grammar as a context for students wishing to increase their control of punctuation, style, and usage to become more proficient writers. Its offers practical guidance in how grammatical concepts can be applied to revising and editing one's own or others' writing to more effectively express one's intended meaning. The course is designed for students with bachelor's degrees who have no upper-division undergraduate coursework in linguistics.

MENG 5080 - Critical Approaches to Literature

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [1st Blk, 2nd Blk]

Students will study and practice critical approaches to literature. The course will begin with New Criticism and proceed to study more resistant reading strategies such as feminism, Marxism, and deconstruction. Students will not only learn the theoretical premises behind these theories, but also practice explicating various texts from a particular critical perspective.

MENG 5210 - Practicum in Teaching English

Credits: (2)
Typically taught:
Spring [Full Sem]

This course provides a broad, practical background in teaching young adult (YA) literature for MENG students seeking secondary school licensure. Selection, evaluation, curriculum planning, and assessment in teaching literature will receive primary emphasis. Issues concerning community values and censorship will also receive our attention. Prerequisite: MED 6050 Curriculum Design, Evaluation, Assessment (3) must be taken prior to MENG 5210/6120. We strongly recommend that MENG 6110 Writing for Teachers (3) or MENG 6230 Wasatch Range Writing Project Summer Institutes (3) be taken prior to MENG 5210/6120. MENG 5210 and MENG 6120 must be taken concurrently.

MENG 5510 - World Literature

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Students in this course read texts from a variety of eras and of authors and regions outside the United States and Great Britain. This course may not be applied to graduate degree requirements if an undergraduate survey covering the same period was applied toward an undergraduate degree.

MENG 5520 - American Literature: Early and Romantic

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Students in this course read texts from the late eighteenth century to the decades just before the Civil War. This course may not be applied to graduate degree requirements if an undergraduate survey covering the same period was applied toward an undergraduate degree.

MENG 5530 - American Literature: Realism and Naturalism

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Students in this course read texts from the Civil War through World War I. This course may not be applied to graduate degree requirements if an undergraduate survey covering the same time period was applied towards undergraduate degree.

MENG 5540 - American Literature: Modern

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Students in this course read texts from the first half of the twentieth century. This course may not be applied to

graduate degree requirements if an undergraduate survey covering the same time period was applied towards an undergraduate degree.

MENG 5550 - American Literature: Contemporary

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Students in this course read texts from the 1950s to the present. This course may not be applied to graduate degree requirements if an undergraduate survey covering the same time period was applied towards undergraduate degree.

MENG 5610 - British Literature: Medieval

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Students in this course read texts from the eighth century to the end of the fifteenth century. Works written in Anglo-Saxon English and northern medieval dialects will be read in modern translations. This course may not be applied to graduate degree requirements if an undergraduate survey covering the same time period was applied towards undergraduate degree.

MENG 5620 - British Literature: Renaissance

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Students in this course read texts from the beginning of the sixteenth century to the middle of the seventeenth. This course may not be applied to graduate degree requirements if an undergraduate survey covering the same time period was applied towards undergraduate degree.

MENG 5630 - British Literature: Neoclassical and Romantic

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Students in this course read texts from the late seventeenth century to the early nineteenth century. This course may not be applied to graduate degree requirements if an undergraduate survey covering the same time period was applied towards undergraduate degree.

MENG 5640 - British Literature: Victorian

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Students in this course read texts from 1830 until roughly World War I. This course may not be applied to graduate degree requirements if an undergraduate survey covering the same time period was applied towards undergraduate degree.

MENG 5650 - British Literature: Modern

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Students in this course read texts from the first half of the twentieth century. This course may not be applied to graduate degree requirements if an undergraduate survey covering the same time period was applied towards undergraduate degree.

MENG 5660 - British Literature: Contemporary

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Students in this course read British and Anglo-Irish literature since 1950. This course may not be applied to graduate degree requirements if an undergraduate survey covering the same time period was applied towards undergraduate degree.

MENG 5730 - Literature of Cultures and Places

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Students in this course read texts focusing on a single national culture or works from various cultures. This course may not be applied to graduate degree requirements if an undergraduate survey covering the same time period was applied towards undergraduate degree.

MENG 5750 - Classical Literature

Credits: (3)
Students in this course read texts from the Golden Age of Greece to the fall of the Roman Empire. This course may not be applied to graduate degree requirements if an undergraduate survey covering the same time period was applied towards undergraduate degree.

MENG 5840 - Methods and Practice in Tutoring Writers

Credits: (3)
Typically taught:
Fall [Full Sem]

Faculty supervised experience in tutoring student writers in all disciplines. This course is limited to teaching assistants in the MENG program.

MENG 5850 - Principles & Practicum in Tutoring Writing

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course provides writing center tutors with the theoretical knowledge of the writing process critical to effective tutoring. In addition, the course provides students with an understanding of various approaches to and methods of tutoring. The course is effectively divided into three parts: tutoring and writing theory, College Reading and Learning Association certification, and practicum.

MENG 5920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
In order to provide flexibility and to meet many different needs, a number of specific offerings are possible using this catalog number. When the number is used it will be accompanied by a brief and specific descriptive title. The specific title with the credit authorized for the particular offering will appear on the student transcript. May be repeated 5 times with a maximum of 6 credit hours.

MENG 6005 - Intercultural Classroom Discourse

Credits: (3)
Students will read, discuss and experience interactive learning tools from the fields of sociolinguistics, intercultural communication, and TESOL pedagogy. Students will analyze dialects and personal/social conversational styles. Examples from literature and film will help provide a contextualized means of observing and understanding cultural identities.

MENG 6010 - Introduction to Graduate Studies

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Students will learn research methods and methodologies that will allow them to produce publishable, sophisticated pieces of academic prose of the kind expected of professional academics. Students will compose abstracts, conference paper proposals, annotated bibliographies, and surveys of scholarship. Students will explore academic databases extensively and learn to evaluate rigorously other scholars' work. Students will be encouraged to submit their work in the class to journals, conferences, or collections of essays. Students should take this course within their first year of

study and focus their research on topics that may support future work on a thesis or project. Required in first or second semester.

MENG 6030 - Studies in Literary Theory and Criticism

Credits: (3)
Variable Title
Students will study influential works in literary theory--potentially ranging from Plato's REPUBLIC to Gayatri Spivak's groundbreaking feminist studies to Stephen Greenblatt's New Historicist studies to Homi Bhabha's postcolonial analyses--paying specific attention to the influence of these theories on English studies. May be repeated 10 times for credit hours with different content.

MENG 6110 - Writing for Teachers

Credits: (3)
Typically taught:
Fall [Full Sem]

Designed primarily for in-service teachers, this course explores the most current research and theory concerning the teaching of writing and applies it to issues in the secondary classroom. Permission of instructor required to register.

MENG 6120 - Teaching Traditional and Contemporary Young Adult Literature

Credits: (4)
Typically taught:
Spring [Full Sem]

This course provides a broad, practical background in young adult literature, both traditional and contemporary, with emphasis on current theories and methods in literature pedagogy. Selection and evaluation of texts that appeal to young adults, reading strategies, censorship, themes and genres will be given special attention. Prerequisite: MED 6050 Curriculum Design, Evaluation, Assessment (3) must be taken prior to MENG 5210/6120. We strongly recommend that MENG 6110 Writing for Teachers (3) or MENG 6230 Wasatch Range Writing Project Summer Institutes (3) be taken prior to MENG 5210/6120. MENG 5210 and MENG 6120 must be taken concurrently. Permission of instructor required to register.

MENG 6210 - Teaching Literature in the Secondary Schools

Credits: (3)
Designed primarily for in-service teachers, this course explores the most current research and theory concerning the teaching of literature and applies it to issues in the secondary classroom.

MENG 6230 - Wasatch Range Writing Project Summer Institute

Credits: (1-6)
Typically taught:
Summer [1st Blk, 2nd Blk]

This course is designed to follow the National Writing Project model. The four-week Invitational Institute is for

inservice teachers nominated by their school district or their peers. It is designed to develop leadership skills in those teachers to enable them to impact the quality of writing instruction in their individual schools and district. It is also designed to develop teacher leadership for the Wasatch Range Writing Project. The One Week Open Institute is open to any inservice teacher wishing to improve writing instruction in his/her classroom. Can be repeated once up to eight (8) credit hours total. Permission of instructor required to register.

MENG 6231 - Wasatch Range Writing Project Advanced Institute

Credits: (1-6)
Variable Title and Credit Course
This is a variable topics variable title course designed for Wasatch Range Writing Project Teacher Consultants, teachers who have taken the WRWP Summer Institute and work with WRWP providing professional development to local school districts. It allows those teachers to increase their effectiveness as teachers, add to their expertise for work with inservice teachers and research possible solutions to literacy issues facing elementary and secondary education in our region. Course titles may include: Developing Utah State Core Standards Workshops, Digital Writing, Developing Argument Writing Across the disciplines. Only six hours can be used for meeting elective requirements in the MENG program. Prerequisite: Six hours credit in MENG 6230. May be repeated 6 times and up to 18 credit hours.

MENG 6240 - Seminar in American Literature

Credits: (3)
Variable Title
This seminar explores major texts of one particular American era. The course focuses on literature which articulates the selected period. This variable emphasis course may be repeated 10 times for credit with different content.

MENG 6250 - Seminar in British Literature

Credits: (3)
Variable Title
This seminar explores major texts of one particular British era. This course focuses on the literature which articulates the selected period. This variable emphasis course may be repeated 3 times up to 6 credit hours with different subject matter.

MENG 6260 - Seminar in World Literature

Credits: (3)
Variable Title
This seminar explores literature other than American or British. The course focuses on the literature which articulates the selected time and place. This variable emphasis course may be repeated 10 times for credit with different subject matter.

MENG 6280 - TESOL Practicum

Credits: (3)
TESOL practicum provides guided and supported experience in one or more of the following: tutorial, small group teaching, whole class lesson planning. Candidates will practice a variety of instructional modes for speaking, reading and writing. Permission of instructor required to register.

MENG 6310 - Language and Linguistics for Teachers

Credits: (3)
Designed primarily for in-service teachers, this course explores recent research in linguistics and applies it to issues in the secondary classroom.

MENG 6320 - World Languages

Credits: (3)
This course broadens students' awareness of diversity among the world's languages, thereby fostering understanding and appreciation of the nature of human language in general. Issues may include language obsolescence and maintenance, writing systems of the world, prosody and poetic forms in other languages, language history, and language families. Some prior experience in linguistics or language structures will be helpful as students study profiles of selected languages representing major language families of the world and various geographical areas.

MENG 6330 - Literary and Rhetorical Stylistics

Credits: (3)
This course surveys the literature on style in linguistics, literature, and rhetoric. Some prior background in grammar will be useful as students engage in quantitative and qualitative stylistic analysis of texts from a literary period, genre, or particular author and learn how diction, syntax, and figurative language can be deployed to communicative and artistic ends.

MENG 6400 - Multicultural Perspectives on Literature for Young People

Credits: (3)
This course examines the theories of literature and multicultural education for young people K-12, as well as the use of multicultural literature in and out of the classroom. Students will apply the latest critical and pedagogical theories to extensive readings in Young Adult literature. This course is especially suited to in-service teachers, librarians and others who work with young people.

MENG 6410 - Strategies and Methodology of Teaching ESL/Bilingual

Credits: (3)
Typically taught:
Fall [Full Sem, Online]

This course emphasizes practical strategies and methods of teaching English as a Second Language in elementary and secondary schools.

MENG 6420 - English Phonology and Syntax for ESL/Bilingual Teachers

Credits: (3)
Typically taught:
Fall [Full Sem]

This course provides the foundation for ESL/Bilingual teachers in the workings of the English language: its pronunciation and spelling systems, its word-forming strategies, and its sentence structure patterns.

MENG 6450 - ESL/Bilingual Assessment: Theory, Methods, and Practices

Credits: (3)
This course explores how to evaluate and implement assessment processes effectively for ESL/Bilingual pupils in public schools. Students will gain experience with both standardized test and authentic assessment.

MENG 6510 - Seminar in Eminent Writers:

Credits: (2-3)
Variable Title
This seminar examines significant works of and relevant criticism on an influential writer or a small group of writers. This variable emphasis course may be repeated 10 times for credit with different subject matter.

MENG 6520 - Seminar in Shakespeare

Credits: (3)
Typically taught:
Summer [2nd Blk]

This seminar examines a range of Shakespeare's major works as well as relevant criticism.

MENG 6610 - Advanced Studies in Genre

Credits: (2-3)
Variable Title
Students will analyze primary and secondary texts about one genre or sub-genre to develop a definition and understanding of the form. This variable emphasis course may be repeated 10 times for credit with different subject matter.

MENG 6710 - Variable Topics

Credits: (2-3)
Variable Title
Topics will vary based on student interest and instructor expertise. This course may be repeated 10 times for credit with different subject matter.

MENG 6730 - Creative Writing Forms and Crafts

Credits: (3)
Variable Title
Typically taught:
Fall [Full Sem]

This course will investigate the relationship of form and function in creative work and explore how the underlying structure affects the impact of the work. This course will examine a variety of work to examine the effect of formal choices on readers' response. The course will then put these strategies and insights to work by drafting, workshopping, and revising students' own original writing. May be repeated 2 times and up to 9 credit hours.

MENG 6740 - Creative Nonfiction Writing

Credits: (3)
Variable Title
Typically taught:
Spring [Full Sem]

In this course, students will study the art and craft of writing creative nonfiction. Along with writing their own original work, students will read a variety of contemporary texts and will critique their peers' writing. May be repeated 2 times and up to 9 credit hours.

MENG 6750 - Fiction Writing

Credits: (3)
Variable Title
Typically taught:
Summer [Full Sem]

In this course, students will study the art and craft of writing fiction. Along with writing their own original work, students will read a variety of contemporary texts and will critique their peers' writing. May be repeated 2 times and up to 9 credit hours.

MENG 6760 - Poetry Writing

Credits: (3)
Variable Title
Typically taught:
Spring [Full Sem]

In this course, students will study the art and craft of writing poetry. Along with writing their own original work, students will read a variety of contemporary texts and will critique their peers' writing. May be repeated 2 times and up to 9 credit hours.

MENG 6821 - Teaching Developmental Reading and Writing

Credits: (2)
This course introduces first-time teachers to the theory and practice of teaching developmental reading and writing. Permission of instructor required to register.

MENG 6822 - Teaching College Writing

Credits: (2)
This course introduces first-time teachers to the theory and practice of teaching college writing. Permission of instructor required to register.

MENG 6823 - Teaching Practicum

Credits: (1)
This course supports teachers in their second semester of teaching college writing. Students will meet regularly to develop teaching strategies, enhance grading skills, resolve problems that have arisen in their classes, and plan strategies and procedures for classes they are teaching. Permission of instructor required to register.

MENG 6830 - Directed Readings

Credits: (1-3)
This course allows students credit for individual study with a professor, usually for further study that grows out of course work. The student and professor agree to a written contract for study which must be approved by the program director. No more than 3 credit hours of directed readings may apply toward the MA degree unless approved by the program director. This course is designed to allow students to explore in depth and/or breadth, subject matter which goes beyond the established courses in the Master's Degree Program. May be repeated 3 times with a maximum of 9 credit hours.

MENG 6920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
In order to provide flexibility and to meet many different needs, a number of specific offerings are possible using this catalog number. When the number is used it will be accompanied by a brief and specific descriptive title. The specific title with the credit authorized for the particular offering will appear on the student transcript. May be repeated 5 times with a maximum of 6 credit hours.

MENG 6940 - Masters Project

Credits: (2-6)
This course provides for the creation and execution of a project growing out of graduate study particularly as it applies to the workplace. Project credit may be taken in increments of 1-3 hours in any term. May be repeated twice up to 6 credits.

MENG 6960 - Thesis

Credits: (6)
Thesis credit may be taken in increments of 1-3 hours in any term. The thesis is a capstone research and scholarly writing course for the Master's Degree Program. May be repeated 5 times with a maximum of 6 credit hours.

MENG 6990 - Extension of Thesis/Project

Credits: (1)
Typically taught:

Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

This course allows students to continue to work on their thesis/project. The course is graded credit/no credit and may be repeated up to two times.

MET 1000 - Introduction to Mechanical Engineering Technology and Design

Credits: (3)
Typically taught:
Fall [Full Sem]
Summer [Full Sem]

Introductory course for students majoring in mechanical engineering technology. The role of mechanical engineering technology and its place in the occupational spectrum. The experimental and analytical tools used in mechanical engineering technology and fundamentals of mechanical design and problem solving. College algebra and trigonometry strongly recommended.

MET 1500 - Mechanical Design Engineering

Credits: (3)
Typically taught:
Spring [Full Sem]

This course will focus on understanding the engineering design process within the MET discipline. Students will develop problem statements and use brainstorming techniques to generate design concepts. These design concepts are evaluated and implemented for possible solutions to bring a factious engineered product to market. Prerequisite: MET 1000, Math ACT score of 23 or above or MATH 1010 or MATH 1030 or MATH 1040 or MATH 1050 or MATH 1060 or MATH 1080.

MET 1890 - Cooperative Work Experience

Credits: (1-3)
Provides academic credit for on-the-job experience. Grade and amount of credit will be determined by the department. Prior consent of the department chair and the employer are required. Prerequisite: DET 1010, MATH 1080 and Permission of Instructor.

MET 2500 - Modern Engineering Technologies

Credits: (3)
Typically taught:
Spring [Full Sem]

A survey of modern engineering technologies including, but not necessarily limited to, energy generation, nano systems, smart materials, robotics, lasers, transportation systems, and bioengineering. Prerequisite: MET 1500.

MET 2890 - Cooperative Work Experience

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Provides academic credit for on-the-job experience. Grade and amount of credit will be determined by the department. Prior consent of the department chair and the employer are required. Prerequisite: Credit or concurrent enrollment in MFET 2300.

MET 3050 - Dynamics

Credits: (3)
Typically taught:
Fall [Full Sem]

Fundamentals of force, mass and acceleration, work and energy, and impulse and momentum applied to particles and rigid bodies. Prerequisite: MATH 1210, PHYS 2210 and MFET 2300.

MET 3150 - Engineering Technology Materials

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Material properties, processing and selection of materials for technological applications. Design parameters for material selection of metals and nonmetals. Mechanical behavior and service failures of metallic alloys and other engineering materials at high and low temperatures. Lecture plus laboratory work in materials testing. Prerequisite: CHEM 1110 and MFET 2300.

MET 3300 - Computer Programming Applications of Mechanical Engineering Technology

Credits: (3)
Typically taught:
Fall [Full Sem]

Applications of computer programming and computer software to problems in mechanical engineering technology. Lecture plus computer-based laboratory work. Prerequisite: MFET 2300.

MET 3400 - Machine Design

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Application of engineering technology fundamentals to machine design. Techniques involved in designing and selecting individual machine parts. Prerequisite: MFET 2300.

MET 3500 - Mechanical Measurements and Instrumentation

Credits: (3)
Principles of temperature, pressure, strain, flow, force, and vibration measurements. Techniques of computerized data acquisition and reduction. Students will learn how to specify instrumentation systems, take data and interpret the results. Lecture plus laboratory work in selected topics. Prerequisite: EET 1850 and MFET 2300.

MET 3700 - Testing and Failure Analysis

Credits: (3)
Typically taught:
Fall [Full Sem]

Mechanical testing of materials, fatigue, fracture, wear, corrosion, embrittlement, failure mechanisms and analysis, case studies of failures. Lecture plus laboratory work. Prerequisite: MET 3150 and MFET 2300.

MET 3890 - Cooperative Work Experience

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Provides academic credit for on-the-job experience. Grade and amount of credit will be determined by the department. Prior consent of the department chair and the employer are required. Prerequisite: Credit or concurrent enrollment in MET 3400.

MET 4200 - Mechanical Design with FEA

Credits: (3)
Typically taught:
Spring [Full Sem]

Application of engineering technology fundamentals in mechanical design using Finite Element Analysis. Lecture plus computer-based laboratory work. Prerequisite: MET 3400 and MFET 2300.

MET 4300 - Heating, Ventilating & Air Conditioning

Credits: (3)
Principles of heating, ventilating and air conditioning of buildings. Refrigeration systems, air and water distribution and solar energy. Indoor thermal environmental control. Prerequisite: Permission of instructor.

MET 4500 - Senior Project

Credits: (3)
Typically taught:
Fall [Full Sem]

A mechanical engineering technology project will be selected for team participation. Projects will require planning, analysis, design, development, production, testing and documentation. Prerequisite: MET 4200; AAS or AS Degree.

MET 4510 - Senior Project

Credits: (3)
Typically taught:
Spring [Full Sem]

A mechanical engineering technology project will be selected for team participation. Projects will require planning, analysis, design, development, production, testing and documentation. Prerequisite: MET 4500.

MET 4650 - Thermal Science

Credits: (3)
Typically taught:
Spring [Full Sem]

Fundamental principles of thermal science for mechanical engineering technology. Basic thermal science theory with an emphasis on technological applications and systems. Lecture plus laboratory work in selected thermal science topics. Prerequisite: MATH 1210, PHYS 2210 and CHEM 1110 or CHEM 1210.

MET 4800 - Individual Research in Mechanical Engineering Technology

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Special individual research and development projects in mechanical engineering technology. Credit and time determined by the student and the faculty project supervisor. Prerequisite: Permission of instructor.

MET 4830 - Directed Readings

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Directed individual readings in mechanical engineering technology. Topic selected in consultation with instructor. Prerequisite: Permission of instructor.

MET 4890 - Cooperative Work Experience

Credits: (1-3)
Typically taught:
Spring [Full Sem]

Provides academic credit for on-the-job experience. Grade and amount of credit will be determined by the department. Prior consent of the department chair and the employer are required. Prerequisite: MET 3400 and Permission of instructor.

MET 4920 - Short Courses, Workshops, Institutes, and Special Programs

Credits: (1-3)
Consult the semester class schedule for the current offering under this number. The specific title with the credit authorized for the particular offering will appear on the student transcript.

MET 4990 - Seminar in Mechanical Engineering Technology

Credits: (1)
Guest lectures from local industry, professionalism and engineering ethics, technology and society, and employment preparation. Prerequisite: MET 4500.

MFET 1150 - Pre-Professional Seminar in Manufacturing

Credits: (1)
Typically taught:
Fall [Full Sem]

An introductory course for students planning to major in Manufacturing Engineering Technology. An explanation of the Manufacturing Engineering Technology curriculum and its place in the occupational spectrum. Current job functions of manufacturing engineering technologists will be discussed by manufacturing engineers and technologists from industry.

MFET 1210 - Machining Principles Lecture/Lab I

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Introduction to machining processes through theory and practice including: setup and operation of the engine lathe & milling machine, machine and tool performance, inspection techniques, basic blueprint reading, and process planning. Students will utilize lab time to complete assignments as required. One lecture per week and two 3-hour labs per week are required.

MFET 1890 - Cooperative Work Experience

Credits: (1-3)
Typically taught:
Fall [Full Sem]

Open to all first year students in Manufacturing Engineering Technology. Department approval required before registration. Provides academic credit for on-the-job experience. Grade and amount of credit will be determined by the department.

MFET 2150 - Metal Forming, Casting and Welding

Credits: (2)
Typically taught:
Fall [Full Sem]

Introduction to industrial metal forming, casting and welding processes, equipment selection, design criteria, shop procedures and terminology. Two one-hour lectures per week and one two-hour lab Co-Requisite: MFET 2150L. (MFET 2150L) is required.

MFET 2150L - Metal Forming, Casting & Welding Lab

Credits: (1)
Typically taught:
Fall [Full Sem]

Lab application of theories taught in MFET 2150 by use of student projects. Co-Requisite: MFET 2150.

MFET 2151 - Metal Forming Lecture/Lab

Credits: (1)
Typically taught:
Fall [Full Sem]

Introduction to industrial metal forming processes, equipment selection, design criteria, shop procedures and terminology. Prerequisite: Instructor Approval.

MFET 2152 - Metal Casting Lecture/Lab

Credits: (1)
Typically taught:
Fall [Full Sem]

Introduction to industrial metal casting processes, equipment selection, design criteria, shop procedures and terminology. Prerequisite: Instructor Approval.

MFET 2153 - Metal Welding Lecture/Lab

Credits: (1)
Typically taught:
Fall [Full Sem]

Introduction to industrial metal welding processes, equipment selection, design criteria, shop procedures and terminology. Prerequisite: Instructor Approval.

MFET 2300 - Statics and Strength of Materials

Credits: (5)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Principles of forces, moments, resultants & static equilibrium of force systems, center of gravity, friction, and free body diagram analysis. Also concept of stress and strain, shear, bending moments, torsion, bending stresses in beams and stress resolution and shear. Five lectures per week. Prerequisite: PHYS 2010/L or PHYS 2210/L; MATH 1060 or MATH 1080 or MATH 1210.

MFET 2360 - Manufacturing Processes and Materials

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Survey of industrially important processes used to change material shape and condition for industrial use. Survey of industrially important materials and the principles of material behavior.

MFET 2410 - Quality Concepts and Statistical Applications

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This is the first course in a series of three designed to impart the Six Sigma body of knowledge. It integrates managerial, technological and statistical concepts across all functions of an organization to ensure that a product is fit for use. Provides a foundation in current quality paradigms and introduces students to software tools (MS Excel and Minitab) used to statistically analyze problems encountered in manufacturing firms. Three lectures per week. Prerequisite: MATH 1010 or higher level.

MFET 2440 - Computer Numeric Control (CNC) in Manufacturing

Credits: (2)
Typically taught:
Spring [Full Sem]

This course is designed for those who have little or no experience with CNC programming, setup or operations. Manual programming, APT programming, and Mazatrol (a conversational programming language) will be taught. In addition, an introduction to CAD/CAM will also be discussed. A three-hour lab, once a week is required. Prerequisite: MATH 1080 or MATH 1050 and MATH 1060; MFET 1210. Co-Requisite: MFET 2440L. May be repeated 3 times up to 6 credit hours.

MFET 2440L - CNC in Manufacturing Lab

Credits: (1)
Applications of the theory taught in MFET 2440. Introduction to the setup & operation of the CNC lathe and mill. One 3-hour lab per week. Co-Requisite: MFET 2440.

MFET 2550 - Basics of Quality Engineering

Credits: (2)
Typically taught:
Evening classes only.

Approaches quality from the perspective of the production technician using applied statistics, total quality concepts, inspection techniques and methods and nonconforming material control. Addresses sampling principles used in production management as well as a review of industry accepted standards. (ASQC Series)

MFET 2610 - Quality Improvement Principles and Techniques

Credits: (2)
This course assesses vital knowledge of quality tools and their uses by individuals, from non-traditional quality areas, who are involved in quality improvement projects. The course examines the rapid spread of quality principles and practices throughout organizations, and covers the essentials of quality management for individuals who manage quality programs, but who are not necessarily specialized in traditional quality areas. The course prepares students for the Certified Quality Improvement Associate examination administered by the American Society for Quality.

MFET 2670 - GMA, FCA and GTA Welding

Credits: (1)
Typically taught:
Spring [Full Sem]

Theory and skills course covering Gas Metal Arc Welding, Flux Core Arc Welding, and Gas Tungsten Arc Welding. Prerequisite: MFET 2150/MFET 2150L or MFET 2153. Co-Requisite: MFET 2670L.

MFET 2670L - GMA, FCA and GTA Welding Lab

Credits: (2)
Typically taught:
Spring [Full Sem]

A "hands on" lab that reinforces the theory and skills course (MFET 2670) covering Gas Metal Arc Welding, Flux Core Arc Welding, and Gas Tungsten Arc Welding. Prerequisite: MFET 2150/MFET 2150L. Co-Requisite: MFET 2670.

MFET 2830 - Directed Readings in Manufacturing Engineering Technology

Credits: (1-3)
Typically taught:
Fall [Full Sem]

Individual research on topics requested by industry or which meet special needs of Manufacturing Engineering Technology students. Prerequisite: Departmental approval.

MFET 2850 - CNC/CAM for Plastics and Composites Lecture/Lab

Credits: (3)
Typically taught:
Fall [Full Sem]

Traditional and nontraditional methods for machining organic-matrix and metal-matrix composites are reviewed. Traditional machining procedures are discussed together with the damage introduced into composites by these manipulations. Computer Numerical Control (CNC) codes and Computer Aided Manufacturing are covered, focusing on the production of plastic products and tooling. Machining concepts also including laser, water-jet, electrodischarge, electrochemical spark, and ultrasonic machining. Prerequisite: MFET 1210/L.

MFET 2860 - Plastics/Composites Materials & Properties

Credits: (3)
Typically taught:
Fall [Full Sem]

Coverage of the most common commercial plastics including their additives, fillers, and fibers; includes common physical tests used to determine material characteristics; writing intensive. Prerequisite: CHEM 1110.

MFET 2870 - Design of Plastics/Composites Products

Credits: (3)
Typically taught:
Spring [Full Sem]

Designing plastic parts utilizing CAD and CAE technologies for the design and for structural, dimensional, and process evaluation and optimization. A strong emphasis in design principles related to design of plastics products. Also analysis of functional requirements, structural properties, aesthetic qualities and cost relationships. The student will gain experience in product design and material evaluation. Prerequisite: DET 1160 and MFET 2860.

MFET 2890 - Cooperative Work Experience

Credits: (1-3)
Typically taught:
Fall [Full Sem]

Open to all second year students in Manufacturing Engineering Technology. A continuation of MFET 1890.

MFET 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-3)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. Prerequisite: Departmental approval.

MFET 3010 - Tool Design

Credits: (3)
Principles of workpiece control including: Geometric, dimensional, and mechanical control. Other topics include: process tolerance stacks, design of special tools and gauges, applications in the production of manufactured parts, tool drawings, specifications, and modular tooling. Three lectures per week. Prerequisite: MFET 1210; DET 1160.

MFET 3060 - Codes, Weld Inspection, and Quality Assurance

Credits: (3)
Typically taught:
Fall [Full Sem]

Study of ASME and AWS codes as relating to procedure qualification and welder qualification for fabrication of pressure vessels and structures, and how codes relate to quality assurance and ISO 9000. Prerequisite: MFET 2150/MFET 2150L or MFET 2153.

MFET 3310 - Material Selection and Heat Treat

Credits: (2)
Terminology, concepts and principles involved in the selection, specification and processing of engineering materials so they meet design criteria including load, life, and appearance. Testing methods to determine those properties and characteristics. Manual and computer assessing of material data. Two lectures per week. Prerequisite: MFET 1210/L, MFET 2300, CHEM 1110. Co-Requisite: MFET 3310L.

MFET 3310L - Material Selection and Heat treat Lab

Credits: (1)
Application of theory taught in MFET 3310. One 2-hour lab per week. Co-Requisite: MFET 3310.

MFET 3320 - Machine Design

Credits: (2)
Application of engineering fundamentals to the design of individual machine components such as shafts, couplings, springs, bearings, gears, fasteners, clutches, and breaks. Students will be required to complete a design project emphasizing manufacturing equipment. Two lectures per week. Prerequisite: MFET 2300.

MFET 3340 - Applied Fluid Power

Credits: (2)
Typically taught:
Fall [Full Sem]

Spring [Full Sem]

Principles of fluid mechanics and component operation as they apply to the design of hydraulic and pneumatic systems. Computer programs may be used to analyze and design systems. Two lectures per week. Prerequisite: MFET 2300 or ENGR 2010 and ENGR 2140; PHYS 2010/L or PHYS 2210/L. Co-Requisite: MFET 3340L.

MFET 3340L - Applied Fluid Power Lab

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Application of the theory taught in MFET 3340. One 2-hr lab per week. Co-Requisite: MFET 3340.

MFET 3350 - Plastic and Composite Manufacturing

Credits: (2)
Typically taught:
Fall [Full Sem]

Design and processing of plastic and composite materials for industrial applications. Two lectures per week. Prerequisite: CHEM 1110 or CHEM 1210. Co-Requisite: MFET 3350L.

MFET 3350L - Plastic and Composite Manufacturing Lab

Credits: (2)
Typically taught:
Fall [Full Sem]

Application of the theory taught in MFET 3350. Two 2-hr labs per week. Prerequisite/Co-requisite: MFET 3350.

MFET 3460 - Engineering Design using Solid Modeling

Credits: (2)
Typically taught:
Fall [Full Sem]

An advanced computer-aided design course using state-of-the-art solid modeling CAD/CAM software. Topics include: 3D parametric solid modeling, applications associativity, design-by-feature, assembly modeling, injection mold design, flat pattern development, design analysis using FEA, realistic rendering, and detailing. Prerequisite: DET 1010. Co-Requisite: MFET 3460L.

MFET 3460L - Engineering Design using Solid Modeling Lab

Credits: (1)
Typically taught:
Fall [Full Sem]

Lab assignments will include: Fundamentals of 3D parametric solid modeling, Extrude & Revolve Features, Sweep & Loft Features, Assembly Modeling, Injection Mold Design, Flat Pattern Development, Design Analysis using FEA, and others. Prerequisite: DET 1010 and ~~NTM~~WEB 1700. Co-Requisite: MFET 3460.

MFET 3510 - Basics of Supply Chain Management

Credits: (2)
Typically taught:
Evening classes only.

Introductory course for production and inventory management personnel which provides basic definitions and concepts for planning and controlling flow of materials into, through, and out of an organization. Explains fundamental relationships of supply chain from suppliers to customers. Addresses manufacturing systems, forecasting, master planning, material requirements planning, capacity management, production activity control, purchasing, inventory management, distribution, quality management, and Just-in-Time manufacturing. (APICS Series).

MFET 3550 - Manufacturing Supervision

Credits: (3)
Typically taught:
Fall [Online]
Spring [Full Sem]

The application of supervision skills. Students will gain an understanding of; motivation of subordinates, personal leadership theories, problem-solving and decision-making techniques, organizational communication, employee selection, evaluation and training process, and organizational structures. Topics will include; the American Disabilities Act, OSHA and environmental issues, Equal opportunity Employment, and Affirmative Action issues. Three lectures per week.

MFET 3560 - Advanced Quality Engineering

Credits: (2)
Typically taught:
Evening classes only.

Addresses the application of advanced quality techniques by personnel in positions of responsibility such as manufacturing leads and supervisors. Uses statistics, metrology, inspection methods, quality management concepts, and sampling principles to address process decisions involving both overall quality and costs. (ASQC Series). Prerequisite: MFET 2550.

MFET 3570 - Manufacturing Quality Auditing

Credits: (2)
Typically taught:
Evening classes only.

Utilizes auditing principles and quality management tools and techniques to prepare an individual to plan and

conduct, or prepare an organization, for a quality audit. Links directly to process associated with implementation of ISO 9000 standards. Two one-hour lectures per week. (ASQC Series). Prerequisite: MFET 2410 or equivalent.

MFET 3580 - Certified Mechanical Inspector

Credits: (2)
Typically taught:
Evening classes only.

Provides the student with terminology, concepts and tools needed to be professionally competent in advanced quality management. The course will also be helpful to those preparing to take the ASQC CMI Certification Exam. (ASQC Series).

MFET 3610 - Machining Processes Lecture/Lab II

Credits: (3)
The manufacture and assembly of precision and interchangeable parts using conventional lathes, mills, drills, and grinders. Introduction to geometric dimensioning & tolerancing (GD&T), and advanced inspection techniques. Students will utilize lab time to complete assignments as required. One lecture per week and two 3-hour labs per week are required. Prerequisite: MFET 1210.

MFET 3630 - Fusion Joining and Brazing Processes

Credits: (2)
Typically taught:
Fall [Full Sem]

Study of SAW, ESW, GMAW, EG, RW, PAW, PAC, Electron Beam, Laser, Friction, Brazing, and other welding processes. Prerequisite: MFET 2670/MFET 2670L. Co-Requisite: MFET 3630L.

MFET 3630L - Fusion Joining and Brazing Processes

Credits: (1)
Typically taught:
Fall [Full Sem]

A "hands-on" lab that reinforces the concepts taught in MFET 3630 of SAW, ESW, GMAW, EG, RW, PAW, PAC, Electron Beam, Laser, Friction, Brazing, and other welding processes. Prerequisite: MFET 2670/MFET 2670L. Co-Requisite: MFET 3630.

MFET 3650 - Quality Management Institute

Credits: (3)
This course consists of application process control and problem solving techniques including statistical process control (SPC), measurement systems analysis, and process capability analysis. Students will apply cause-and-effect diagrams, check sheets, sampling, line and bar charts, Pareto charts, scatter diagrams, variation, probability plots, x-R charts, gate repeatability and reproducibility (gage R & R) on course projects. Curriculum will include practical

application exercises. Prerequisite: MFET 2410, MATH 1010 Intermediate Algebra or equivalent, and Basic Statistics course (MATH 1040) or equivalent.

MFET 3710 - Computer Aided Manufacturing and Rapid Prototyping

Credits: (2)
Typically taught:
Spring [Full Sem]

This course will introduce and explain concepts behind Computer-Automated Manufacturing (CAM). It will define elements, terms, and concepts involved with CAM. Elements of rapid prototyping will also be covered from conceptual design in solids to production of tooling and parts. This course is designed for those who have the basic understanding of the setup and operation of CNC machine tools and programming. Software will be used to perform the CAM operations, such as part generation and post processing. Prerequisite: MFET 2440/MFET 2440L, DET 1010, DET 1160 or MFET 3460. Co-Requisite: MFET 3710L.

MFET 3710L - Computer Aided Manufacturing and Rapid Prototyping Lab

Credits: (1)
Typically taught:
Spring [Full Sem]

A "hands-on" lab that reinforces the concepts taught in MFET 3710. Students will learn how to transfer CNC part programs from a PC to the CNC machine controller. Testing, editing and running their part programs on the CNC machines will also be covered. May be repeated twice up to 3 credit hours.

MFET 3750 - Welding Metallurgy I

Credits: (2)
Typically taught:
Fall [Full Sem]

Metallurgical principles applied to welding and weldability of ferrous metals. Prerequisite: MFET 2150/MFET 2150L or MFET 2153, CHEM 1110 or CHEM 1210. Co-Requisite: MFET 3750L.

MFET 3750L - Welding Metallurgy I Lab

Credits: (1)
Typically taught:
Fall [Full Sem]

A "hands-on" lab that reinforces the concepts taught in MFET 3750 of metallurgical principles applied to welding and weldability of ferrous metals. Prerequisite: MFET 2150/MFET 2150L, CHEM 1110. Co-Requisite: MFET 3750.

MFET 3760 - Welding Metallurgy II

Credits: (2)
Typically taught:

Spring [Full Sem]

Metallurgical principles applied to welding and weldability of nonferrous metals. Prerequisite: MFET 3750/MFET 3750L. Co-Requisite: MFET 3760L.

MFET 3760L - Welding Metallurgy II Lab

Credits: (1)
Typically taught:
Spring [Full Sem]

A "hands-on" lab that reinforces the concepts taught in MFET 3760 of metallurgical principles applied to welding and weldability of nonferrous metals. Prerequisite: MFET 3750/MFET 3750L. Co-Requisite: MFET 3760.

MFET 3810 - Statistical Process Control and Reliability

Credits: (3)
Typically taught:
Fall [Full Sem]

This is the second course in the Quality series for the MFET program. The course will focus on statistical techniques used in industrial process control charting, acceptance sampling, reliability practices and preventative maintenance. Course will utilize Minitab and Microsoft Excel Spreadsheet software. Three lectures per week. Prerequisite: MFET 2410.

MFET 3820 - Nondestructive Testing

Credits: (3)
Typically taught:
Spring [Full Sem]

Fundamental concepts relating to liquid penetrant, magnetic particle, ultrasonics, and radiography and other NDT processes. Prerequisite: MATH 1210 and PHYS 2010 or PHYS 2210.

MFET 3830 - Reinforced Plastics/Advanced Composite Lecture/Lab

Credits: (3)
Typically taught:
Spring [Full Sem]

Polymer and reinforcement systems; material testing; mold design and development; laboratory involvement in reinforced plastics production processes. Prerequisite: MFET 3350/MFET 3350L and MFET 2860.

MFET 3870 - Mold Design and Process Strategies Lecture/Lab

Credits: (3)
Typically taught:
Fall [Full Sem]

Overview of mold design and the development of strategies and techniques integrating CAD and CAE technologies for optimizing part quality, moldability, and productivity. Additional study on design and construction of various types of production molds that are used for processing plastics in final shape. Product design in relationship to molding techniques and various techniques and materials used to construct the molds are the major units of study. Prerequisite: MFET 2860.

MFET 3890 - Cooperative Work Experience

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Open to all third year students in Manufacturing Engineering Technology. A continuation of MFET 1890.

MFET 3910 - Six Sigma Methods and Tools in Manufacturing

Credits: (4)
Typically taught:
Spring [Full Sem]

This is the third and final course in the Quality series for the MFET program. Six Sigma methods use statistical tools to bring about continual improvement of quality in manufactured goods and services and to document that positive change has occurred. These tools include: Failure Mode and Effects Analysis (FMEA), Measurement Systems Analysis, Control Charts, Multi-Vari and Multivariate charts, Process Capability Analysis, and Design of Experiments. Students will learn and apply these methods and tools through class participation and completion of required projects. Course will utilize Minitab and Microsoft Excel spreadsheet software. Prerequisite: MFET 3810.

MFET 4050 - Detailed Scheduling and Planning I

Credits: (2)
Typically taught:
Evening classes only.

Techniques and practices of detailed scheduling and planning of inventory management including order review methodologies, policies and functions of inventory. Covers lot sizing, safety stock techniques, demand, and Just-in-Time as they relate to detailed scheduling and planning. Prerequisite: MFET 3510 or equivalent. (APICS series).

MFET 4090 - Welding Power Sources

Credits: (2)
Typically taught:
Fall [Full Sem]

Study of power sources used to generate and control voltage and amperage for welding. Two lectures per week. Prerequisite: EET 1850.

MFET 4150 - Execution and Control of Operations

Credits: (2)
Typically taught:
Evening classes only.

Focuses on prioritizing and sequencing work, executing work plans, implementing controls, reporting activity results, and evaluating and providing feedback on performance. Eval. Prerequisite: MFET 3510 or equivalent. (APICS Series).

MFET 4200 - Manufacturing Processes

Credits: (2)
Typically taught:
Evening classes only.

Manufacturing processes define the methods that companies use in designing, producing, and delivering goods and services required by customers. The manufacturing processes provide the execution component to the other activities of the integrated manufacturing system. Beginning with customer requirements and needs, they design, build, operate, upgrade, and maintain a manufacturing process which is most supportive of and consistent with those needs and requirements. To achieve these objectives, manufacturing processes draw on three different but very interrelated subsystems: industrial facilities management, process design and development, and manufacturing. (APICS Series)

MFET 4210 - Cost Estimating and Engineering Economics

Credits: (2)
Production cost structure, operation costing, break-even analysis, make buy decision, and capital equipment justification. Computer aids are used to analyze cost data. Three lectures per week. Prerequisite: MATH 1080; ~~NTM~~WEB 1700. Co-Requisite: MFET 4610.

MFET 4250 - Detailed Scheduling and Planning

Credits: (2)
Typically taught:
Evening classes only.

Detailed explanation of inventory management including order review methodologies, policies and functions of inventory. Covers material requirements planning (MRP) and other material planning and capacity requirements planning techniques. Includes concepts, principles, interfaces, desired characteristics, applications, and supplier relations. Prerequisite: MFET 3510 or equivalent. (APICS Series)

MFET 4300 - Design of Experiments

Credits: (2)
A step-by-step description of procedures used to organize, conduct and evaluate industrial experiments. Emphasizes the usefulness of results and the decision criteria for choosing the proper design. Prerequisite: MFET 2410

MFET 4310 - Corrosion and Corrosion Control

Credits: (2)
Typically taught:
Spring [Full Sem]

Analysis of corrosion mechanisms for ferrous metals, nonferrous metals, and nonmetallic materials, as well as the control of corrosion. Prerequisite: CHEM 1110 and MATH 1080.

MFET 4315 - Welding Robotics

Credits: (2)
Typically taught:
Spring [Full Sem]

This course is designed to introduce students to welding robot programming and applications. Students will demonstrate skills learned in welding robot programming in applied labs. They will learn parameters, terms and nomenclature and obtain knowledge of applications and configurations in industry settings. Prerequisite: MFET 2670, MFET 2670L.

MFET 4350 - Principles of Lean Manufacturing

Credits: (2)
Typically taught:
Spring [Online]

This course introduces students to lean manufacturing and waste reduction concepts such as work standardization, visual manufacturing & workplace organization, value stream mapping, setup reduction & batch size reduction, quality at the source, point of use storage, total productive maintenance, pull systems/kanbans, tack time calculation and cellular/synchronous manufacturing design concepts. A combination of lectures, videos and hands on exercise will be used.

MFET 4550 - Advanced Quality Principles

Credits: (2)
Typically taught:
Evening classes only.

Provides advanced study in all aspects of the application of quality principles to a production environment. The course will involve case study and application of quality theory. Students should have a broad knowledge of organizational structure and planning, quality techniques, customer satisfaction and focus, project management, and human resource management. Cooperative experience in a business/industry is recommended. (ASQC Series) Prerequisite: MFET 2410 or equivalent.

MFET 4580 - Process Automation

Credits: (1)
Typically taught:
Fall [Full Sem]

A study of the elements used in the automation of manufacturing processes including: programmable logic

controllers, robotics (servo and non-servo), vision systems, and material handling devices. One 1-hour lecture per week. Prerequisite: EET 1110 or EET 1850. Co-Requisite: MFET 4580L.

MFET 4580L - Process Automation Lab

Credits: (2)
Typically taught:
Fall [Full Sem]

Students duplicate demonstration sequence of automation equipment and develop new routines in: Controlling servo and non-servo robots, computer-aided manufacturing systems and CIM cell, programmable logic controllers, and other devices used in process automation. Co-Requisite: MFET 4580.

MFET 4590 - ~~Production Planning & Process Control~~Lean Manufacturing

Credits: (3)
Typically taught:
Fall [Full Sem]

This course addresses the organization, design, and management of production systems through lean manufacturing, constrain management and mrp/MRPII systems. This course introduces students to work standardization, visual manufacturing, workplace organization, value stream mapping, setup reduction and batch size reduction, total productive maintenance, pull systems/kanbans, and cellular manufacturing design concepts. Students will also be introduced to plant layout concepts, equipment specification issues and related ergonomics/OSHA issues.

MFET 4610 - Senior Project Planning & Estimating

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This is designed as a capstone course for students and is to be taken in the senior year of their program. The course will teach students fundamental principles in Project Management, Cost Estimating, and Engineering Economics that will be necessary to successfully complete their Senior Project experience. Students must apply and gain departmental approval before entering Senior Project. Approval is based on an interview with department faculty and fulfilling the prerequisites listed on the "Senior Project Requirements Sheet" available from the department secretary. All students approved for Senior project will register for this course regardless of individual project group assignments. Prerequisite: AAS or AS Degree. Co-Requisite: MFET 4610L for manufacturing students or DET 4600 for design graphics students.

MFET 4610L - Senior Project Lab

Credits: (2-2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Must apply for senior project before March 1 of the previous year. Must have department approval. Approval is based

on an interview with department faculty and fulfilling the prerequisites listed on the "Senior Project Requirements Sheet" available from the department secretary. Time: as required to complete the project. Two consecutive semesters. Co-Requisite: MFET 4610 (with MFET 4610L only).

MFET 4620L - Senior Project Lab

Credits: (2-2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Must apply for senior project before March 1 of the previous year. Must have department approval. Approval is based on an interview with department faculty and fulfilling the prerequisites listed on the "Senior Project Requirements Sheet" available from the department secretary. Time: as required to complete the project. Two consecutive semesters.

MFET 4650 - Software Quality Engineering Principles

Credits: (2)
This course prepares the student to incorporate quality development and implementation as a software design team member. The course provides instruction on concepts, principles and techniques to develop a comprehensive understanding of software inspection, testing, verification, and validation. Participants will learn to implement software development and maintenance processes and methods. This course also prepares the student for the Certified Systems Quality Engineer examination administered through American Society for Quality.

MFET 4670 - Reliability Engineering Principles

Credits: (2)
This course prepares the student to work as a design team member to incorporate reliability considerations into a basic design. Course provides information on application of proven techniques to achieve quality product results. This course also prepares the student for the Certified Reliability Engineer examination administered through American Society for Quality.

MFET 4750 - Master Planning of Resources

Credits: (2)
Typically taught:
Evening classes only.

Explore processes used to develop sales and operations plans, forecast internal and external demand, create the master schedule consistent with business policies, objectives and resource constraints. (APICS series). Prerequisite: MFET 3510.

MFET 4770 - Strategic Management of Resources

Credits: (2)
Typically taught:
Evening classes only.

The relationship of existing and emerging processes and technologies to manufacturing strategy and supply chain related functions. Addressing aligning resources with strategic plan, integrating operating processes to support the strategic plan, and implementing change. Prerequisite: MFET 3510 and be familiar with concepts addressed in all other APICS courses. (APICS series).

MFET 4800 - Individual Research in Manufacturing Technology

Credits: (1-3)
Special individual research and development projects in Manufacturing and Engineering Technology. Credit and time determined by the student and the faculty project supervisor. Prerequisite: Permission of instructor.

MFET 4830 - Directed Readings in Manufacturing Engineering Technology

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Must have department approval.

MFET 4850 - Integration of Automated Systems

Credits: (3)
Typically taught:
Spring [Full Sem]

An Advanced Automation course designed to give the student both theory and practical application in control and integration issues dealing with automated equipment. Selected topics include motor controllers, PID's, data collection and transfer devices, vision systems, and systems integration issues. Prerequisite: MFET 4580/MFET 4580L.

MFET 4890 - Cooperative Work Experience

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Open to all fourth year students in Manufacturing Engineering Technology. A continuation of MFET 1890.

MFET 4920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-3)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. Juniors and Seniors only. Faculty approval required.

MFET 4995 - Certified Manufacturing Technologist (CMfgT) Exam Review

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course is designed to provide a structured review for the student to take the Certified Manufacturing Technologist (CMfgT) Exam.

MFET 5050 - Gateway to Technology

Credits: (5)
Gateway to Technology is a course designed specifically and only for current high school teachers who have been assigned by districts to teach the related Project Lead the Way course in their respective schools. Gateway to Technology introduces the Project Lead the Way series of courses covering the principles of engineering and technology. The course promotes an understanding of the field of technology and covers the continuous evolution of technology, the positive and negative impact of technology on our society, and career opportunities in technology. This course will utilize a train the trainer approach, meaning that the high school teachers will learn both technical content as well as the teaching methodologies they will use in the presentation of the course at their high schools.

MFET 5100 - Introduction to Engineering Design (IED)

Credits: (5)
IED provides students with opportunities to be creative and to apply their decision-making and problem-solving skills to design problems. Students use powerful computer hardware and software (Inventor) to develop 3-D models or solid renderings of objects. Using a Computer Aided Design System, students learn the product design process through creating, analyzing, rendering and producing a model. The course meets for a total of 75 hours over a two-week period and focuses on the content as well as teaching methods appropriate for the course. This course is designed specifically and only for current high school teachers who have been assigned by their schools and districts to teach the Project Lead the Way courses in their respective schools. These courses carry graduate credit for those teachers who would use them as part of a master's degree program or for recertification.

MFET 5300 - Principles of Engineering (POE)

Credits: (5)
POE is designed to help students understand the field and the career possibilities of engineering and engineering technology. Students work on the problem-solving skills that are used at the college level and in the workplace, and they explore engineering systems and manufacturing processes. Students learn how engineers address concerns about the social and political consequences of technological change. The course meets for a total of 75 hours over a two-week period and focuses on the content as well as teaching methods appropriate for the course. This course is designed specifically and only for current high school teachers who have been assigned by their schools and districts to teach the Project Lead the Way courses in their respective schools. These courses carry graduate credit for those teachers who would use them as part of a master's degree program or for recertification.

MFET 5400 - Computer Integrated Manufacturing (CIM)

Credits: (5)
CIM is a course that applies principles of prototyping, robotics, and automation. It builds on the solid modeling skills developed in Introduction to Engineering Design. Students use computer-controlled equipment to solve problems by constructing models of their three-dimensional designs. Students are also introduced to the fundamentals of robotics

and to how this equipment is used in an automated environment. Students evaluate their design solutions using various techniques and modifications before they produce the prototype. The course meets for a total of 75 hours over a two-week period and focuses on the content as well as teaching methods appropriate for the course. This course is designed specifically and only for current high school teachers who have been assigned by their schools and districts to teach the Project Lead the Way courses in their respective schools. These courses carry graduate credit for those teachers who would use them as part of a master's degree program or for recertification.

MFET 5500 - Engineering Design and Development (EDD)

Credits: (5)
In this course, students work on a team with one or two others to design and construct the solution to an engineering problem. The problems involve a wide range of engineering applications (e.g., a school robo-mascot, automated solar water heater, remote control hover craft). The course serves as a capstone course where students apply the principles they developed in previous courses. A journal is part of each student's portfolio. Each team is responsible for delivering progress reports and making final presentations to an outside review panel. The course meets for a total of 75 hours over a two-week period and focuses on the content as well as teaching methods appropriate for the course. This course is designed specifically and only for current high school teachers who have been assigned by their schools and districts to teach the Project Lead the Way courses in their respective schools. These courses carry graduate credit for those teachers who would use them as part of a master's degree program or for recertification.

MGMT 2400 - Project Management

Credits: (3)
Typically taught:
Not currently being offered

Strategies and techniques for managing a project from inception to completion to meet all schedule, cost, and technical objectives. Knowledge and skills learned in this course prepare students to perform successfully the role of a project manager in any construction, engineering, health, information technology, business, or research and development project, although emphasis will be on project management within the Department of Defense. Topics include organizational structures, project planning and evaluation, cost estimating, quantitative methods in schedule and cost management, project information systems, communication skills, and conflict resolution.

MGMT 3010 - Organizational Behavior and Management

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem, Full Sem Online]

Focus of the course is on individual and group behavior in an organizational setting and on decision processes. Examples of topics included are motivation, group behavior, organizational design and development, organizational culture, and decision making theory.

MGMT 3200 - Managerial Communications

Credits: (3)
Typically taught:

~~Fall [Full Sem]~~
~~Spring [Full Sem]~~Not currently being offered

Study of corporate communication methods to improve communication in organizations. Written and oral reports tailored to achieve strategic goals contingent upon business situations. Prerequisite: ENGL 1010, ENGL 2010.

MGMT 3300 - Human Resource Management

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Study of principles and methods in managing specific aspects of human resources, either as an operating manager or as a human resource specialist. Topics include: legal constraints in managing human resources, strategic planning of human resources, recruitment, selection, orientation, performance evaluation, employee/ labor relations and communication programs, safety and health, and work scheduling. The computer will be used for analysis in certain areas studied. Prerequisite: ~~Business Foundations;~~ BSAD 2899; MGMT 3010.

MGMT 3350 - Employment and Labor Law

Credits: (3)
Typically taught:
Fall [Full Sem]

This course will focus on legal and ethical issues most closely associated with Human Resource Management. Title VII of the Civil Rights Act of 1964, ADEA, and ADA form the heart of this course. Other topics include FLSA, OSHA, ERISA, sexual harassment, drug testing and privacy. Labor law issues include preventing unionization, and dealing effectively with a union. Prerequisite: ~~Business Foundations;~~ BSAD 2899; MGMT 3300.

MGMT 3400 - International Business

Credits: (3)
Typically taught:
Fall [Full Sem]

An exploration of the role of multi-national corporations in worldwide economic development and an analysis of the management processes of such corporations. Prerequisite: ~~Business Foundations;~~ BSAD 2899.

MGMT 3450 - Business Studies Abroad-International Management

Credits: (3)
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~
~~**Summer [Full Sem]**~~

An exploration of the internationalization of economies and the analysis of international decision-making. Focus is

internationalization as the central challenge for management. This course is taught at Fachhochschule Hof, Germany during each fall semester. Students enrolled in this course have to participate in the Study Abroad Program (Contact: Doris Geide-Stevenson, ext. 7634, dgsteven@ weber.edu). Prerequisite: ~~Business Foundations;~~ BSAD 2899, MGMT 3010. May be repeated 3 times for credit.

MGMT 3550 - The Cultural Environment of International Business

Credits: (3)
This course considers issues in communication, negotiation and culture in international business relations. Topics include the role of language and nonverbal communication, contrasting cultural values and using sources of information on the culture of international business. Prerequisite: ~~Business Foundations;~~ BSAD 2899.

MGMT 4300 - Leadership and Group Effectiveness

Credits: (3)
Typically taught:
Fall [~~Full Sem~~1st Blk]
Spring [~~Full Sem~~1st Blk]
Summer [1st Blk]

This course is about getting things done through the use of influence. The course emphasizes influencing others and influencing a situation. Power and other forms of influence are studied in-depth. Topics also include an examination of group behavior in work setting and the management of work groups. All stages of group development are studied from the forming stage of a group to its development as a high performance, self managed team. Prerequisite: MGMT 3010.

MGMT 4310 - Compensation and Benefits

Credits: (3)
Typically taught:
Spring [Full Sem]

This course is intended to provide the student with a basic working knowledge of compensation and benefits as an important part of the broader Human Resources field. The topics to be covered include: benefits management, job analysis, job evaluation, performance appraisal and recognition, and different approaches to employee compensation. The course is also designed to assist the student in their preparation for professional certification examinations in related areas. Prerequisite: ~~Business Foundations;~~ BSAD 2899~~;~~, MGMT 3300.

MGMT 4320 - Staffing Organizations

Credits: (3)
Typically taught:
Fall [Full Sem]

Designed to provide students with the knowledge and skills necessary to effectively analyze and project organizational staffing requirements, recruit and select candidates, and effectively place employees in today's complex organizations. Includes treatment of legal aspects of staffing process. Prerequisite: ~~Business Foundations;~~ BSAD 2899~~;~~, MGMT 3300.

MGMT 4350 - Training

Credits: (3)
Typically taught:
Spring [Full Sem]

This course is designed to provide prospective human resource managers with an understanding of the applicable theory and with the "tools" required to effectively manage the training function within an organization. Prerequisite: ~~Business Foundations;~~ BSAD 2899, MGMT 3300.

MGMT 4400 - Advanced Organizational Behavior

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

An in-depth study of leadership and organizational behavior. Focus is on the structural and behavioral variables that are most significant for organizational effectiveness. Both theory and application are emphasized. Prerequisite: MGMT 3010.

MGMT 4650 - Negotiations

Credits: (3)
Typically taught:
Spring [Full Sem]

This course provides an opportunity for management students to obtain an understanding of negotiation concepts and to develop management negotiation skills. Because the objective is skill building, the course emphasizes hands-on experience through negotiation simulations. These role playing exercises are designed to simulate the situations and issues commonly faced in management/organizational settings (e.g., labor negotiations, contract provisions, vendor arrangements). Prerequisite: ~~Business Foundations;~~ BSAD 2899~~, MGMT 3300~~.

MGMT 4800 - Independent Research

Credits: (1-3)
Directed research and study on an individual basis. Prerequisite: ~~Business Foundations;~~ BSAD 2899; Senior Standing; Written Instructor Approval. May be repeated until a total of 4 hours credit is accumulated.

MGMT 4810 - Experimental Courses

Credits: (1-3)
Experimental or one-time courses designed to fill a need in the community or investigate interesting and unusual topics. May be repeated 5 times with a maximum of 6 credit hours with different topics.

MGMT 4850 - Management Study Abroad

Credits: (1-3)
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~
~~**Summer [Full Sem]**~~

This course is designed for students who wish to explore management theory and practice in countries other than the U.S. Students will study international business as offered through a partner university (or other university with department chair approval). Prerequisite: BSAD 2899. May be repeated once up to 6 credits.

MGMT 4860 - Management Internship

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

A structured professional-level field experience. The student will be counseled and supervised as he/she applies and integrates the knowledge and skills obtained through the Management program courses. Students receiving credit in this course cannot also receive credit in MGMT 4865. Prerequisite: ~~Business Foundations;~~ BSAD 2899~~; Senior Standing~~; Instructor approval.

MGMT 4865 - Human Resource Internship

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

A structured professional-level field experience. The student will be counseled and supervised as he/she applies and integrates the knowledge and skills obtained through the Human Resource or Management program. Students receiving credit in this course cannot receive credit for MGMT 4860. Prerequisite: ~~Business Foundations;~~ BSAD 2899~~; Senior Standing~~; Instructor approval.

MHA 6000 - Health Systems & the Healthcare Economy

Credits: (3)
Typically taught:
Fall [1st Blk]

In-depth analysis and synthesis of all aspects of the health care delivery system emphasizing improvement of health care delivery and access. Examines the complex organizational dynamics and structures that predicate the interaction among major components of the U. S. health care system, including service provider settings in which care is provided. The course surveys the funding systems and regulatory structures for financing healthcare delivery and resource management in health services organizations. Current reform debates will be challenged.

MHA 6100 - Leading & Managing People in Health Care

Credits: (3)
Typically taught:
Fall [1st Blk]

The course content emphasizes visionary leadership and management of diverse healthcare professionals in complex organizational structures. Individual leadership talents in handling various organizational challenges, such as leading organization change, building strong culture, developing effective teams, resolving conflicts, implementing effective motivational systems, and nurturing a learning organization are investigated.

MHA 6140 - Long-term Care Administration

Credits: (3)
Typically taught:
Fall [2nd Blk]
Spring [1st Blk]

Seminar analysis of effect of chronic conditions and aging on delivery of health services, nursing homes and alternatives, mental health facilities and agencies, and rehabilitation facilities and services. Field trips and individual research projects.

MHA 6160 - Medical Group Management

Credits: (3)
Typically taught:
Fall [2nd Blk]

Theory and principles of practice management. Emphasis on the fundamentals of organizing, staffing, and controlling a physician practice. Financial applications and resource consumption.

MHA 6180 - Health Care Entrepreneurship

Credits: (3)
Typically taught:
Summer [2nd Blk]

Develops an understanding of entrepreneurship, its importance for a health care organization and the health economy, and the challenges associated with promoting entrepreneurship within healthcare organizations.

MHA 6200 - Health Behavior and Managerial Epidemiology

Credits: (3)
Typically taught:
Fall [2nd Blk]

The course addresses the integration of epidemiology into strategic planning and managerial decision-making in health services organizations. Epidemiological principles and tools of investigation from clinical and managerial perspectives are addressed. Course work includes environmental analysis of health behaviors and lifestyle that impact demand on health care delivery systems. The student will evaluate models for integration of health services,

preventive programs, demand management, and policy issues affecting continuity of care. Prerequisite: MHA 6000 (may be taken concurrently)or Instructor Approval.

MHA 6240 - Human Resources Management in Healthcare

Credits: (3)
Typically taught:
Fall [2nd Blk]

Human resources management in healthcare organizations including recruitment and selection of employees, benefits and compensation management, privileging and credentialing of health professionals, performance evaluation, staffing plans, labor relations and labor law relevant to health care organizations.

MHA 6249 - Accounting and Finance Principles for Healthcare Managers

Credits: (3)
Typically taught:
Spring [1st Blk]

The first course in a two-course sequence addressing the accounting and finance knowledge and skills required of successful healthcare managers. It emphasizes the understanding of accounting and finance functions, use and interpretation of documents, reports, and statements, and the ability to work with the accounting and finance professionals in one's organization. Prerequisite: MHA 6000.

MHA 6250 - Health Care Finance

Credits: (3)
Typically taught:
Spring [2nd Blk]

Application of financial management techniques to decision making for health care providers. Financial management functions and organizations, financial statement analysis, working capital management, present value analysis, capital budgeting, cost of capital, variance analysis, financing techniques, and financial analysis case studies. Prerequisite: MHA 6000.

MHA 6300 - Quality Improvement and Risk Management in Health Services Organizations

Credits: (3)
Typically taught:
Spring [1st Blk]

A study of the effects of sophisticated quality and health outcome measures as used by individuals, employers and insurers to compare the results of various providers. The course will cover the forces of the smarter external customers and internal pressures to justify costs, continuous quality improvement, risk management, and changes demanding creative health care marketing techniques. Course content will include JCAHO and NCQA accreditation standards and processes, Life safety and fire code requirements, and handling of biohazards such as blood borne pathogens. Prerequisite: MHA 6000 or Instructor Approval.

MHA 6310 - Managed Care vs. Managed Health

Credits: (3)
Typically taught:
Not currently offered

Examination of factors that influence future direction of managed care. Changing relationships among major stakeholders. Broad areas of discussion including market dynamics, product characteristics, reimbursement methodologies, contracting issues, management information systems, government initiatives, legal and ethical issues, demand management strategies, and future trends.

MHA 6320 - Health Policy and Economics

Credits: (3)
Typically taught:
Fall [2nd Blk]

Economic analysis applied to health services sector; concept of efficiency applied to production and distribution of health services, health insurance, government programs, health care personnel, and health services organizations; current public policy issues; emphasis on student application of economic principles to health care issues.

MHA 6350 - Decision Making for Health Care Leaders

Credits: (3)
Typically taught:
Fall [1st Blk]

The exploration and application of both quantitative and qualitative data analysis in healthcare organizations. How top level healthcare leaders use the myriad data that comes across their desks to work toward, and to achieve, their organization's mission.

MHA 6360 - Comparative International Health Systems

Credits: (3)
Typically taught:
Spring [2nd Blk]

Analysis of key attributes of health care policy in selected countries and comparisons with the US health care system. This course includes an international field trip and appropriate travel expenses will be required of the students. Please check with the course instructor for more details.

MHA 6370 - Executive Leadership Seminars in Healthcare

Credits: (3)
Via a series of in-depth seminars, dialogues, interactions, and/or lectures with top level clinical leaders and healthcare executives, this course will explore complex and timely healthcare topics and issues of the day from the perspective of successful leaders in the healthcare industry, exploring and analyzing their implementation and application of management and leadership theory and practice as put into effect in a variety of healthcare settings and facilities.

MHA 6380 - Patient Services Staff Management

Credits: (3)
Typically taught:
Not currently offered

The course addresses and analyzes the roles and responsibilities of clinical administrators. Strategies and methodologies for leading and managing clinical professionals are discussed. The interface and communication challenges between clinical managers and administrative services managers will be addressed.

MHA 6400 - Strategic Health Planning and Marketing

Credits: (3)
Typically taught:
Spring [2nd Blk]

Various planning approaches, styles and theories are considered from a corporate decision-making perspective within the unique governance structures of health service organizations. Issues covered include strategic planning and resource allocation within integrated health systems. Environmental analysis explores national health care delivery policy, unique financing structures such as third party payment systems, and open vs. regulated markets and development of comprehensive marketing plans. Prerequisite: MHA 6100 and MHA 6200.

MHA 6440 - Health Ethics and Law

Credits: (3)
Typically taught:
Fall [1st Blk]

Selected legal principles and their application to health field. Legal aspects of corporate liability, medical malpractice, admission and discharge processes, medical staff bylaws, informed consent, nursing, patients' rights, medical records, and governmental regulation of personnel and health facilities.

MHA 6450 - Managing Health Information

Credits: (3)
Typically taught:
Spring [~~1st~~2nd Blk]

Introductory course that provides basic vocabulary and principles of modern information architectures. Computer networking and communication technologies needed to support modern information infrastructures. Differences between integrated and quilted systems are examined. Emphasis on management and use of information to support management decision making.

MHA 6500 - Field Work

Credits: (3)
Typically taught:
Spring [Full Sem]
Summer [Full Sem]

This course provides a capstone experience where the student synthesizes theory learned the classroom and applies it real world problem solving in health care organizations. Designed to integrate the knowledge gained in other graduate courses into an applied management project. The project will have enterprisewide applicability to a health services organization. The Student will develop and present a deliverable product that could be implemented by management to improve their organizational performance, specifically with analysis and recommendations for policy and strategic improvements. Prerequisite: MHA 6000, MHA 6200, MHA 6300, MHA 6400.

MHA 6830 - Directed Study

Credits: (1-3)
Directed individual study and research on special topics related to health care. May be repeated for a cumulative total of three credits. Prerequisite: Approval of MHA program and instructor.

MICR 1113 LS - Introductory Microbiology

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem, Full Sem Online, 1st Blk Online, 2nd Blk Online]

An introduction to microorganisms, their biology, and their relationships to health, technology, and the environment, with practical applications. Three lecture/demonstrations per week.

MICR 1153 LS - Elementary Public Health

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem, Full Sem Online, 1st Blk Online, 2nd Blk Online]

Principles and practices of public health, emphasizing prevention and control of communicable and degenerative diseases, and environmental health problems. Three lectures/demonstrations per week.

MICR 1370 LS - Principles of Life Science

Credits: (3)
Typically taught:
Spring [Full Sem]

A survey course for elementary education majors. Course content includes cells, cell chemistry, genetics, plant and animal anatomy, plant and animal classification, physiology, immune systems, evolution and ecology. Unifying concepts of all living things will be emphasized. Two hours of lecture and one 3-hour laboratory per week. Cross-listed with BTNY 1370 and ZOOL 1370.

MICR 2054 LS - Principles of Microbiology

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [1st Blk]

Study of the morphology, reproduction, cultivation, metabolism, genetics, and ecology of microorganisms, along with many applications. This introductory microbiology course is designed for science majors and consists of three one-hour lectures and one two-hour lab per week. Prerequisite: CHEM 1210 or CHEM 1110 or CHEM 1200 or equivalent.

MICR 2600 - Laboratory Safety

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An interdisciplinary, team-taught course that will be an overview of the major chemical, biological and physical safety issues related to science laboratories and field work. Class will meet once per week and will be taught in a lecture/demonstration format.

MICR 2890 - Cooperative Work Experience

Credits: (1-5)
Open to all students in the Microbiology Department who meet the minimum Cooperative Work Experience requirements of the department. Provides academic credit for on-the-job experience. Grade and amount of credit will be determined by the department.

MICR 2920 - Short Courses, Workshop, Institutes and Special Programs

Credits: (1-3)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated up to 10 times for credit.

MICR 3012 - Microbiology and Global Public Health

Credits: (2)
Typically taught:
Spring [Full Sem]

This course focuses on microbial diseases that are major causes of morbidity and mortality worldwide (e.g. HIV, tuberculosis, malaria, influenza etc.), diseases that are classified as emerging diseases (e.g. Ebola) and diseases that are being eliminated or eradicated, including certain Neglected Tropical Diseases. This course will analyze the pathogenesis, life cycles, epidemiology and societal impacts of these diseases, while emphasizing preventative interventions such as vaccinations, water and sewage treatment, and elimination and eradication strategies. The role of various agencies (e.g. WHO and CDC) in improving global health will also be discussed. Prerequisite: MICR 1113~~,~~ or MICR 1153 or MICR 2054 or permission of the instructor. (Two one hour lectures per week).

MICR 3053 - Microbiological Procedures

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Microscopy, staining methods, preparation of media, sterilization, preservation and maintenance of cultures, culture identification, enumeration methods, instrumentation. Two lectures and one 2-hour lab per week. Prerequisite: MICR 2054 and MATH 1050 or MATH 1080 or MATH 1210.

MICR 3154 - Microbial Ecology

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Factors determining the growth and distribution of microorganisms in their natural habitats. Microbial diversity and their interactions with other living organisms and their surroundings. Microbial activities in nature, including biogeochemical cycles. Three lectures and one three-hour lab. Prerequisite: MICR 2054.

MICR 3203 - The Immune System in Health & Disease

Credits: (3)
Typically taught:
Fall [Full Sem Online]
Spring [Full Sem Online]
Summer [Full Sem Online]

This course will focus on the study of the human immune system and its role in health and disease. The course topics include the innate and adaptive immune responses and their role in host defense as well as immunodeficiency and hypersensitivity responses. Manipulation of the immune system through pharmacological means, vaccination or transplantation will also be studied. Three lectures per week. This course is intended for the student studying Medical Lab Sciences or someone who wants to know more about the human immune system and who has already taken a course in Biology Microbiology. This course is not intended as a first course in biology nor can it be used as a Microbiology elective course for Microbiology majors.

MICR 3254 - Immunology

Credits: (4)
Typically taught:
Fall [Full Sem]

The study of the immune response in mammals. Three lectures and one 3 hour lab per week. Prerequisite: MICR 2054 or consent of instructor.

MICR 3305 - Medical Microbiology

Credits: (5)
Typically taught:
Spring [Full Sem]

Characteristics of pathogenic microorganisms and mechanisms by which they cause disease in higher animals. Three lectures and two two-hour labs per week. Prerequisite: MICR 3254.

MICR 3340 - Information Resources in the Life Sciences

Credits: (2)
A practical introduction to the literature and information resources of the life sciences. Students will expand their research skills and be able to develop effective research strategies to find and synthesize information available in academic libraries. Two lecture hours per week. Prerequisite: ENGL 2010. Cross listed in Botany, Library Sciences and Zoology.

MICR 3403 - Tropical Diseases

Credits: (3)
Typically taught:
Fall [Full Sem]

Study of tropical diseases, caused by viral, bacterial, protozoan, fungal, and helminthic agents, including their transmission, disease course, pathogenesis, treatment, prevention and control using a multi-disciplinary approach integrating case studies, labs, epidemiology, immunopathology as well as microbiology. Two hours of lecture, one 3 hour laboratory per week. Prerequisite: MICR 2054.

MICR 3484 - Environmental Microbiology

Credits: (4)
Typically taught:
Spring [Full Sem]

Applied, environmental microbiology and biotechnology including transport of microorganisms through environment, microbial pathogens and toxins in environment. Biodeterioration, contamination control, and biosafety. Pollution microbiology, environmental management, bioremediation, waste treatment, biological insecticides. Microbiology of man-made environments. Three lectures and one three-hour lab per week. Prerequisite: MICR 2054.

MICR 3502 - Environmental Health

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Air and water quality, solid and hazardous waste management, food protection, environmental inspection and testing. Two lectures per week. Prerequisite: MICR 1113 or MICR 2054 or consent of instructor.

MICR 3570 - Foundations of Science Education

Credits: (3)
A thorough investigation of research in science learning and curricular standards at the state and national levels. Foundations of the philosophy of science and scientific inquiry as applicable to science teaching at the secondary level. This course serves as a foundation to a pre-service science teacher's education coursework.

MICR 3603 - Advanced Microbiology for the Health Professions

Credits: (3)
Typically taught:
Fall [Full Sem Online]
Spring [Full Sem Online]
Summer [Full Sem Online]

Characteristics of microorganisms and parasites - emphasizing mechanisms by which they cause disease in humans. Intended for students in the Clinical Laboratory Sciences program and those working that field. Cannot be used as a Microbiology elective course for Microbiology majors.

MICR 3753 - Geomicrobiology

Credits: (3)
Typically taught:
Fall [Full Sem] odd years

Geomicrobiology is the study of the interactions between microorganisms and minerals. This course will explore 1. geological change mediated by microorganisms, 2. microbial evolution driven by geologically diverse habitats, and 3. applications of geomicrobiology, including understanding the evolution of life on earth, the study of life in extreme environments, and industrial applications of geomicrobiology. This team-taught course includes classroom discussion, laboratories, and field trips. Prerequisite: CHEM 1210 or approval of the instructor. Cross-listed with GEO 3753.

MICR 3853 - Food Microbiology

Credits: (3)
Typically taught:
Fall [Full Sem]

Role of microorganisms in food production, preservation, and spoilage. Two lectures and one 2-hour lab per week. Prerequisite: MICR 2054.

MICR 4054 - Microbial Physiology

Credits: (4)
Typically taught:
Fall [Full Sem]

Structure, function, and metabolism of microorganisms, with emphasis upon the bacteria. Three lectures and one 3-hour lab per week. Prerequisite: MICR 2054 and completion of or concurrent registration in CHEM 3070.

MICR 4154 - Microbial Genetics

Credits: (4)
Typically taught:
Spring [Full Sem]

Genetics of microorganisms and its applications, including mutation, gene transfer systems, recombination, plasmids, recombinant DNA technology, and transposons. Three lectures and one 3-hour lab per week. Prerequisite: MICR 2054. CHEM 3070 recommended.

MICR 4252 - Cell Culture

Credits: (2)
Typically taught:
Fall [Full Sem]

Basic methods and applications for culturing plant and animal cells in vitro. Two 2-hour combined lecture and laboratory sessions per week. Prerequisite: MICR 2054 or BTNY 2104 and BTNY 2121. (cross-listed with Botany)

MICR 4354 - Industrial Microbiology and Biotechnology

Credits: (4)
Typically taught:
Spring [Full Sem]

Beneficial and detrimental involvement of microorganisms in industrial processes, microbial products, biotechnology, contamination control, and antimicrobial agents including antibiotics. Three lectures and one 3-hour lab per week. Prerequisite: MICR 2054, CHEM 2310 or CHEM 3070. MICR 3053 recommended.

MICR 4554 - Virology

Credits: (4)
Typically taught:
Spring [Full Sem]

Virus structure, classification, genetics, replication and other interactions with the host, with emphasis on bacteriophage and animal viruses. Three lectures and one 3-hour lab per week. Prerequisite: MICR 2054.

MICR 4570 - Secondary School Science Teaching Methods

Credits: (3)
Acquaintance and practice with various teaching and assessment methods. Development of science curricula including lesson and unit plans. It is recommended that this course be completed immediately before student teaching. Prerequisite: Admission to the Teacher Education Program.

MICR 4800 - Directed Research

Credits: (1-2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Independent research under the advisement of a faculty member. No more than 3 credit hours of 4800 and no more than 2 credit hours of 4830 may count toward the major. Prerequisite: consent of instructor and a minimum of 6 credits of upper division microbiology course work. May be repeated up to 10 times for credit.

MICR 4830 - Directed Readings

Credits: (1-2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Independent readings on advanced special topics under the direction of a faculty member. No more than 3 credit hours of 4800 and no more than 2 credit hours of 4830 may count toward the major. Prerequisite: consent of instructor and a minimum of 6 credits of upper division microbiology course work. May be repeated up to 10 times for credit.

MICR 4890 - Cooperative Work Experience

Credits: (1-5)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Open to all students in the Microbiology Department who meet the minimum Cooperative Work Experience requirements of the department. Provides academic credit for on-the-job experience. Grade and amount of credit will be determined by the department. May be repeated up to 10 times for credit.

MICR 4920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-3)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated up to 10 times for credit.

MICR 4991 - Microbiology Seminar

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Current topics in Microbiology. One hour per week. Prerequisite: Previous upper division courses in the department.

MICR 5034 - Microbiology for Teachers

Credits: (4)
Science content course for teachers in the MEd Science Emphasis Program.

MILS 1010 - Introduction to the Army and Critical Thinking

Credits: (3)
Typically taught:
Fall [Full Sem]

Introduces cadets to the personal challenges and competencies critical for effective leadership. Cadets learn how the personal development of life skills such as critical thinking, time management, goal setting, stress management and comprehensive fitness relate to leadership and the Army profession. A three hour weekly leadership lab is included, as well as one weekend field training exercise during the semester. Participation in weekly physical fitness training is expected and should be taken as MILS 2400.

MILS 1020 - Introduction to Profession of Arms

Credits: (3)
Typically taught:
Spring [Full Sem]

Introduces cadets to the personal challenges and competencies that are critical for adaptive leadership. Cadets learn the basics of the communications process and the importance for leaders to develop the essential skills to effectively communicate in the Army. Students will examine the Army profession and what it means to be a professional in the U.S. Army. A three-hour weekly leadership lab is included as well as one weekend field training exercise during the semester. Participation in weekly physical fitness training is expected and should be taken as MILS 2400.

MILS 2010 - Innovative Team Leadership

Credits: (3)
Typically taught:
Fall [Full Sem]

Builds on previous leadership instruction enhancing student skills in land navigation, small unit tactics, written and oral communication, event planning, group coordination and effectiveness and first aid. During this course, students develop basic skills for leading others in a tactical environment. A three-hour weekly leadership lab is included as well as one weekend field training exercise during the semester. Participation in weekly physical fitness training is expected and should be taken as MILS 2400.

MILS 2020 - Foundations of Tactical Leadership

Credits: (3)
Typically taught:
Spring [Full Sem]

This course focuses on leader effectiveness. Course content includes analysis of selected historical leaders and battles using the principles of war and other tenets. Student led discussions highlight lessons learned relative to leadership and organizational success. Oral communications skills are central to this course. A three-hour weekly leadership lab is included as well as one weekend field training exercise during the semester. Participation in weekly physical fitness training is expected and should be taken as MILS 2400.

MILS 2400 - Physical Readiness

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A physical conditioning course that employs U.S. Army principles of fitness. Subjects include: body composition, nutrition, cardiorespiratory fitness, muscle endurance and strength, circuit training and drills. Students registered for MILS 1010, MILS 1020, MILS 2010, or MILS 2020 are encouraged to enroll in this course to gain the full perspective of the physical demands required to be an Army officer. May be repeated 3 times with a maximum of 4 credit hours.

MILS 2600 - Leadership Under Fire

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course will explore both functional and dysfunctional behavior in leadership roles. Using examples from military and civilian leadership, this course will teach leadership techniques essential for future managers and leaders that will be of great value to both civilian and military leaders. It will focus on ethical/moral, historical, and social influences and examine outlook, styles, skills, and behavior essential for providing successful leadership. This will culminate in a hands-on team-building exercise. No prerequisites. Students are NOT required to be enrolled in a ROTC course, nor to do so in the future.

MILS 2830 - Directed Readings, Projects and Research

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Independent reading/research on topic(s) of military interest under the supervision of a Military Science faculty member. Prerequisite: Requires instructor permission. May be repeated 2 times with a maximum of 3 credit hours.

MILS 2921 - ~~ROTC Leader's~~Cadet Initial Entry Training ~~Course~~

Credits: (3)
Typically taught:

Summer [Full Sem]

A four-week leadership camp conducted at Fort Knox, Kentucky. Designed to introduce students to basic military skills and leadership requirements. Training includes rappelling, marksmanship, small unit tactics, physical fitness, leadership, and adventure training. Credit/no credit grade only. Prerequisite: Requires instructor permission.

MILS 2922 - Northern Warfare

Credits: (2)
Typically taught:
Summer [Full Sem]

A two week course conducted in Alaska. Provides training in cold weather survival and small unit tactics. Credit/no credit grade only. Prerequisite: include the completion of the basic course and instructor permission.

MILS 2923 - Air Assault

Credits: (2)
Typically taught:
Summer [Full Sem]

A two week course conducted at an Army installation in the continental U.S. Provides students training in helicopter operations to include sling loading and rappelling. Credit/ no credit grade only. Prerequisite: include successful completion of the basic course and instructor approval.

MILS 3010 - Adaptive Team Leadership

Credits: (4)
Typically taught:
Fall [Full Sem]

Develops leadership skills within the framework of the U.S. Army. This course focuses on theory and application of decision making, planning, organizing, management control and communications. The course also emphasizes small unit tactics and advanced land navigation skills; it includes a three-hour weekly leadership lab. Students must participate in up to three, one-hour physical fitness sessions per week, which may be taken as MILS 4400, to satisfy requirements of the Military Science minor. One weekend field training exercise is required during the semester.

MILS 3020 - Leadership in Changing Environments

Credits: (4)
Typically taught:
Spring [Full Sem]

Focuses on theory and application of small unit tactics, leadership and land warfare. Subjects include preparing and issuing combat orders, organizing for combat, unit and individual movement techniques, communications and security. A three-hour weekly leadership lab is included. Students must participate in up to three, one-hour physical fitness sessions per week, which may be taken as MILS 4400, to satisfy requirements of the Military Science minor. One weekend field training exercise is required during the semester.

MILS 4010 - Mission Command and the Army Profession, Part 1

Credits: (4)
Typically taught:
Fall [Full Sem]

This course focuses on the functions and roles of the commander/ leader and the staff. Subject matter includes problem solving, planning techniques and procedures, written and oral communications, training management and evaluation systems. A three-hour weekly leadership lab to enhance leadership skills and apply classroom instruction to hands on training and execution is included. Students must participate in up to three, one-hour physical fitness sessions per week, which should be taken as MILS 4400, to satisfy requirements of the Military Science minor. One weekend field training exercise is required during the semester.

MILS 4020 - Mission Command and the Army Profession, Part 2

Credits: (4)
Typically taught:
Spring [Full Sem]

A conference course addressing future roles and responsibilities of junior Army officers. Subject matter includes the world environment and future threats to U.S. security, the spectrum of Army requirements, Army modernization initiatives, the laws of war, joint operations and other issues designed to complete the cadet-to-lieutenant process. A three-hour weekly leadership lab to enhance leadership skills and apply classroom instruction to hands-on training and execution is included. Students must participate in up to three, one-hour physical fitness sessions per week, which should be taken as MILS 4400, to satisfy requirements of the Military Science minor. One weekend field training exercise is required during the semester.

MILS 4400 - Advanced Physical Readiness

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course provides advanced instruction in physical fitness employing Army techniques and procedures. Students assist Military Science faculty in the planning/conduct of physical fitness training activities performed by lower division students. Prerequisite: Requires instructor permission. (Students must be enrolled in one of the following courses: MILS 3010, MILS 3020, MILS 4010, or MILS 4020.) May be repeated 3 times with a maximum of 8 credit hours.

MILS 4830 - Directed Readings, Projects and Research

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Independent reading/research on topics of military interest under the supervision of a Military Science faculty

member. For each credit awarded the student will read approximately 1000 pages and prepare a written review or summary. Prerequisite: Requires instructor permission. May be repeated for a maximum of 6 credit hours.

MILS 4921 - ~~ROTC~~Cadet Leadership ~~Development and Assessment~~ Course (CLC)

Credits: (3)
Typically taught:
Summer [Full Sem]

A five week leadership camp conducted at Fort Lewis, Washington. The Advanced Camp environment stresses small unit leadership under varying and challenging conditions. Credit/no credit grade only. Prerequisite: Requires instructor approval. Open only to students who have successfully completed basic course requirements, MILS 3010 and MILS 3020.

MILS 4922 - Airborne Operations

Credits: (2)
Typically taught:
Summer [Full Sem]

A three week course conducted at Fort Benning, Georgia. Provides students training in military sky diving techniques with practical applications. Credit/no credit grade only. Prerequisite: Requires instructor approval. Prerequisite includes completion of the basic course.

MILS 4923 - Cadet Troop Leader Training

Credits: (2)
Typically taught:
Summer [Full Sem]

A two week course conducted at an Army installation in the continental U.S. or overseas. Provides first hand experience in an Army unit. Students learn about military life and the duties of a lieutenant. Credit/no credit grade only. Prerequisite: include completion of MILS 3010, MILS 3020 and Advanced Camp. Requires instructor approval.

MKTG 3010 - Marketing Concepts and Practices

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [1st Blk, Full Sem~~,~~ Online]

This course includes planning, implementation, and control of the marketing process; consumer behavior; marketing research; segmentation and target marketing; and consideration of price, place, and promotion.

MKTG 3100 - Consumer Behavior

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring ~~[Online]~~
~~Summer~~ [Full Sem]

The application of psychological, sociological, and anthropological findings to the purchase and consumption of goods and services by ultimate and industrial consumers. Prerequisite/Co-requisite: Prerequisite or concurrent enrollment: MKTG 3010.

MKTG 3200 - Selling and Sales Management

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Theory, methods, and techniques of personal selling in professional settings including analysis of buyer behavior, the delivery of customer satisfaction, and integration of personal selling with other marketing communication tools. Sales management includes managing the sales force, salesperson selection, deployment, compensation, training, field supervision and industrial marketing management. Prerequisite: MKTG 3010.

MKTG 3450 - Promotion Management

Credits: (3)
Typically taught:
Fall ~~[Full Sem]~~
~~Spring~~ [Full Sem]

Strategic development of advertising, sales, sales management, public relations, and sales promotion programs. Prerequisite: ~~Business Foundations;~~ BSAD 2899, MKTG 3010. Prerequisite or concurrent enrollment: MKTG 3100.

MKTG 3500 - ~~Retail and~~ Services and Sports Marketing

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Fall [Online]**~~
~~**Spring [Online]**~~

~~Consideration of issues concerning the establishment and management of retail institutions. Prerequisite: Business Foundations; BSAD 2899; MKTG 3010.~~
Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Marketing education has traditionally focused on the marketing of goods. However, services account for the majority of the economic activity in the United States and much of the developed world. In order to successfully develop and manage service products, marketers must understand the characteristics that differentiate them from conventionally manufactured goods. This course aims to systematically study these characteristics and the challenges they present to

marketers in service organizations. The latter half of the course will focus on sports marketing as a special form of services marketing. Prerequisite: BSAD 2899, MKTG 3010.

MKTG 3600 - International Marketing

Credits: (3)
Typically taught:
~~**Fall [Full Sem]**~~
Spring [Full Sem Online]

In this course students will learn the problems and procedures of marketing in foreign countries, including effects of foreign cultures and marketing systems on the design of marketing programs. Prerequisite: ~~Business Foundations;~~ BSAD 2899; MKTG 3010.

MKTG 3700 - Business Studies Abroad - International Marketing

Credits: (3)
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~
~~**Summer [Full Sem]**~~

Basic principles of international marketing. Fundamentals of international market research including macro and micro-level analysis. Discusses international marketing as part of a global strategy. This course is taught at Fachhochschule Hof, Germany during each fall semester. Students enrolled in this course have to participate in the Study Abroad Program (Contact: Doris Geide-Stevenson, ext. 7634, dgsteven@weber.edu). Prerequisite: ~~Business Foundations;~~ BSAD 2899, MKTG 3010.

MKTG 4200 - Internet Marketing

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course is an elective course for Information Systems & Technologies and Marketing majors. The course deals with the steps used in developing a marketing plan, orienting the plan to developing an Internet presence, and developing a World-Wide Web site to implement the on-line components of the plan. Prerequisite: ~~Business Foundations;~~ BSAD 2899~~, IST 3110~~, MKTG 3010.

MKTG 4400 - Marketing Strategy

Credits: (3)
Typically taught:
Fall [Online]
Spring [Online]

This course centers on gaining and sustaining competitive advantages. It entails analyzing customers, competitors,

and internal capabilities; then making appropriate product, pricing, promotion, and distribution decisions. Prerequisite: ~~Business Foundations;~~ BSAD 2899; ACTG 2020; MGMT 3200 or ~~NTM~~NET 3250; MKTG 3010.

MKTG 4800 - Independent Research

Credits: (1-3)
Directed research and study on an individual basis. May be repeated until a total of 4 hours credit is accumulated. Prerequisite: ~~Business Foundations;~~ BSAD 2899; Senior Standing; Written Instructor Approval.

MKTG 4850 - Marketing Study Abroad

Credits: (1-3)
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~
~~**Summer [Full Sem]**~~

This course is designed for students who wish to explore marketing theory and practice in countries other than the U.S. Students will study international marketing as offered through a partner university (or other university with department chair approval). Prerequisite: BSAD 2899. May be repeated once up to 6 credits.

MKTG 4860 - Marketing Internship

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

A structured professional-level field experience. The student will be counseled and supervised as he/she applies and integrates the knowledge and skills obtained through the Marketing courses. Prerequisite: ~~Business Foundations;~~ BSAD 2899~~; Senior Standing~~; Instructor approval.

MLS 1001 - Online Orientation for AAS Degree

Credits: (1)
Typically taught:
Fall [Full Sem Online]
Spring [Full Sem Online]
Summer [Full Sem Online]

This course is designed to prepare the student for the online environment and specifics of the MLS program. Course components include: study and computer skills, learning styles, MLS student handbook, library tutorial, faculty introductions, contact and troubleshooting information, and academic advisement tailor-made specifically for AAS degree MLS students online.

MLS 1003 - Introduction to Clinical Immunology

Credits: (1)
Typically taught:
~~Spring [Online]~~Not currently offered

Principles and applications for laboratory testing including safe practices for laboratory practitioner, specimen quality assurance, basic concepts in clinical immunology, and clinical approaches to immunological testing. Prerequisite: This course requires the older number, MLS 1000. *Acceptance into the MLS AAS Program required

MLS 1010 - Core Clinical Laboratory Skills

Credits: (4)
Typically taught:
Fall [Full Sem Online]
Spring [Full Sem Online]

The MLS 1010 course is designed to teach core clinical laboratory skills to individuals from various health care professions. The curriculum will focus on basic laboratory methods in quality control, quality assurance, information recording and transfer, normal and abnormal laboratory values, and problem recognition. Students will receive basic technical instruction in laboratory safety, microscopy, phlebotomy, specimen collection and processing, and laboratory instrumentation in the areas of hematology, serology, urinalysis, and clinical chemistry and microbiology. Students must have the support of a clinical laboratory to fulfill the laboratory requirement. The laboratory component will address applications with a focus on Point of Care testing (POCT). Students will be required to spend a minimum of 4 unpaid hours per week working on laboratory competency. Upon successful completion of the course students will receive a Certificate of Completion from the Dr. Ezekiel R. Dumke College of Health Profession's Clinical Laboratory Assistant (CLA) program. Prerequisite: Departmental Approval.

MLS 1113 - Introduction to Medical Laboratory Practices

Credits: (4)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [~~1st Blk,~~Full Sem Online]

Principles and applications to laboratory testing including safe practices for the laboratory practitioner, specimen quality assurance, phlebotomy, urinalysis, basic concepts in clinical immunology, clinical chemistry, and clinical microbiology. Laboratory session addresses the principles and applications involved in medical laboratory assisting to include safety, microscopy, specimen processing, quality assurance, phlebotomy, and urinalysis; with a focus on Point of Care testing (POCT) in clinical immunology, clinical chemistry, and clinical microbiology.
*Acceptance into the MLS AAS Program required

MLS 1114 - Principles of Hematology and Hemostasis

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem, Full Sem Online]
Summer [~~2nd Blk,~~Full Sem Online]

Fundamental theories of hematopoiesis, routine laboratory evaluation of blood components using standard instrumentation and microscopic methods, including safety and quality control. Fundamental theories of hemostasis

and introduction to abnormal hematology. Introduction to routine laboratory methods in hemostasis. At least one semester of chemistry and one semester of anatomy/physiology is recommended prior to taking this course. Prerequisite: MLS 1113. *Acceptance into the MLS AAS Program required.

MLS 2003 - Applied Laboratory Mathematics and Laboratory Statistics

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Summer [Full Sem Online]

A discipline-specific course which tailors applied laboratory mathematics and clinical statistics to all areas of the medical laboratory with emphasis in clinical chemistry. Topics to include reagent preparation, specimen dilution protocols, quality assurance and quality control, practical applications of common statistical tests, and statistical analysis using Microsoft Excel. The course is designed to complement the mathematics component of Clinical Chemistry MLS 2211 and MLS 2213.

MLS 2210 - Principles of Immunohematology

Credits: (5)
Typically taught:
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

Lecture and laboratory covering the theory and principles of Immunohematology relevant to blood group serology, antibody detection and identification, compatibility testing, component preparation and therapy in blood transfusion service, quality controls, donor screening and phlebotomy, transfusion reactions and hemolytic disease of the newborn. Prerequisite: MLS 1113. *Acceptance into the MLS AAS Program required.

MLS 2211 - Principles of Clinical Chemistry I

Credits: (5)
Typically taught:
Fall [Full Sem, Full Sem Online]
Summer [Full Sem Online]

Basic concepts and techniques in clinical chemistry and quality control utilizing manual and automated laboratory procedures. Emphasis on blood and body fluid assessments of carbohydrates, bilirubin, non-protein nitrogen testing and electrolyte acid/base balance. Prerequisite: CHEM 1110 and CHEM 1120 or CHEM 1210 and CHEM 1220. *Acceptance into the MLS AAS Program required

MLS 2212 - Principles of Clinical Microbiology I

Credits: (4)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem Online]

This course provides an in-depth coverage of clinically significant pathogenic cocci and Gram negative rods, including

epidemiology, pathogenicity, and procedures for traditional laboratory identification. Prerequisite/Co-requisite: Pre/Co-requisite: MICR 1113 or MICR 2054. *Acceptance into the MLS AAS Program required.

MLS 2213 - Principles of Clinical Chemistry II

Credits: (5)
Typically taught:
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

Continuation of MLS 2211 with the introduction to methods for the assessment of proteins, lipids, enzymology, therapeutic drug monitoring, toxicology and basic endocrinology. Prerequisite: MLS 2211. *Acceptance into the MLS AAS Program required

MLS 2214 - Principles of Clinical Microbiology II

Credits: (4)
Typically taught:
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

This course is a continuation of MLS 2212 including, antimicrobial testing, clinical mycology, virology, parasitology and miscellaneous clinical bacteria including Gram positive bacteria, mycobacteria, and anaerobes. Prerequisite: MLS 2212. *Acceptance into the MLS AAS Program required.

MLS 2256 - Supervised Clinical Experience I

Credits: (1)
Typically taught:
Spring [Full Sem]

Off campus supervised clinical experiences administered in conjunction with clinical faculty in WSU affiliated health care institutions. Offered CR/NC only. Co-Requisite: MLS 2257. Online students receive credit for clinical experience. *Acceptance into the MLS AAS Program required

MLS 2257 - Supervised Clinical Experience II

Credits: (1)
Typically taught:
Spring [Full Sem]

Off campus supervised clinical experiences administered in conjunction with clinical faculty in WSU affiliated health care institutions. Offered CR/NC only. Co-Requisite: MLS 2256. Online students receive credit for clinical experience. *Acceptance into the MLS AAS Program required

MLS 2830 - Directed Reading

Credits: (1-3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem, Full Sem Online]

Topics in Laboratory Medicine under the direction of departmental faculty advisor. May be repeated for a maximum of 6 hours. *Acceptance into the MLS AAS Program required

MLS 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated twice for a maximum 3 credit hours. *Acceptance into the MLS AAS Program required

MLS 3301 - Online Orientation for BS Degree

Credits: (1)
Typically taught:
Fall [Full Sem Online]
Spring [Full Sem Online]
Summer [Full Sem Online]

This course is designed to prepare the student for the online environment and specifics of the MLS program. Course components include: study and computer skills, learning styles, MLS student handbook, library tutorial, faculty introductions, contact and troubleshooting information, academic advisement, Power Point Presentations, Access Database, and short referenced paper writing and using library resources tailor-made specifically for BS degree MLS students online.

MLS 3302 - Biostatistics, Research Methods, and Laboratory Practices

Credits: (4)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem Online]
Summer [Full Sem Online]

Advanced theory to include laboratory instrument systems comparison, evaluation, and CLIA 88 validation procedures with emphasis on scientific research design and statistical analysis. Interrelated topics in the medical laboratory sciences to include educational strategies for laboratory personnel, approaches to work-load management, budgeting and marketing strategies for laboratory services. Students also learn about and evaluate the new diagnostic technology available to medical laboratories, as well as learning how to select, evaluate, design, perform, and document CLIA-88 acceptable validations studies on new chemistry instrumentation or analytical methods. Interrelated topics in the medical laboratory to include workload management, designing and implementing

standards for quality assurance, budgeting laboratory operations, and investigative concepts related to new method and instrument evaluation, selection, and validation. **Acceptance into the MLS BS Program required

MLS 3310 - Advanced Immunohematology

Credits: (4)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem Online]

Advanced blood banking theory and specialized procedures as they pertain to transfusion, quality assurance and regulatory issues pertaining to Transfusion Medicine.

MLS 3312 - Clinical Laboratory Immunology and Virology

Credits: (4)
Typically taught:
Fall [Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

This course provides MLS students with clinical immunology theory and simulated laboratory experience necessary to prepare students for a career in a clinical laboratory setting. The course will be divided into four sections: basic concepts in immunology, clinical immunology techniques, immune related disease states, and diagnostic virology and will focus heavily on clinical immunology laboratory methods as well as in-depth clinical immunology techniques applicable for the clinical laboratory sciences student. Course requirements include acceptance into the MLS BS program.

MLS 3313 - Advanced Hematology and Hemostasis

Credits: (4)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem Online]

Correlation of medical laboratory hematology and hemostasis with emphasis on hematopathology specialized procedures and hematological abnormalities in human cellular components. Routine and specialized coagulation procedures will also be used to detect hemorrhagic and thrombotic problems. **Acceptance into the MLS BS Program required

MLS 3314 - Advanced Clinical Chemistry

Credits: (3)
Typically taught:
Fall [Full Sem Online]
Spring [Full Sem, Full Sem Online]

This problem-solving oriented course presents the correlation of clinical chemistry test results to organ-related

diseases, such as renal, hepatic, and endocrine diseases. The students will learn how to use clinical correlation as a quality assurance tool to detect patient testing errors. Students also learn about and evaluate the new diagnostic technology available to medical laboratories, as well as learning how to select, evaluate, design, perform, and document CLIA-88 acceptable validations studies on new chemistry instrumentation or analytical methods. Interrelated topics in the medical laboratory to include workload management, designing and implementing standards for quality assurance, budgeting laboratory operations, and investigative concepts related to new method and instrument evaluation, selection, and validation. Additionally, Therapeutic Drug Monitoring and Toxicology studies are presented. Prerequisite: MLS 3302. **Acceptance into the MLS BS Program required

MLS 3316 - Advanced Clinical Microbiology and Molecular Diagnostics

Credits: (4)
Typically taught:
Fall [Full Sem Online]
Spring [Full Sem, Full Sem Online]

This course begins with a comprehensive review of introductory clinical bacteriology and mycology, along with a culture site approach to clinical bacteriology for the laboratory identification of pathogens by traditional manual methods. Diagnostic molecular biology of infectious microorganisms will also be covered and will include background of nucleic acid chemistry along with current molecular methodologies of detection. Pre/Co-requisite: MICR 3305 or MICR 3603. Prerequisite: MLS 2212 and MLS 2214. **Acceptance into the MLS BS Program required

MLS 4409 - Clinical Correlation

Credits: (1)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem Online]
Summer [Full Sem Online]

This course will enable students to better integrate material from all the major medical laboratory science disciplines including Blood Bank, Chemistry, Hematology, Immunology, Microbiology, and Urinalysis. The case studies presented will also include information about the pathophysiology, etiology and epidemiology. Students will correlate results with disease states, and develop problem solving and critical thinking skills based on real scenarios. Students will also develop skills on how to write and present a case study of their own based on an assigned disease, which will include data gathered from all disciplines and will be presented to the class. Course requirements include acceptance into the MLS B.S. program.

MLS 4410 - Interdisciplinary Health Care Teams

Credits: (3)
Typically taught:
Spring [Full Sem, Full Sem Online]
Summer (Full Sem Online]

This course provides an interdisciplinary experience with the team concept as a priority. The students learn the role of the health care team members, each with their different skills and objectives. The course teaches students to practice an interdisciplinary approach as they research, interact, and learn in the interdisciplinary environment of a health care setting. Prerequisite: Course requirements include acceptance into the MLS BS program.

MLS 4411 - MLS Simulated Laboratory I

Credits: (4)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem Online]

Foundational principles for establishing a simulated working laboratory in which students refine technical skills, problem identification and solving, refine work-load management and decision-making skills, development of strategies for managing and implementing the rules and regulations that govern medical laboratory testing. Prerequisite/Co-requisite: MLS 3302. **Acceptance into the MLS BS Program required

MLS 4412 - MLS Simulated Laboratory II

Credits: (4)
Typically taught:
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

A continuation of project-based applications set forth in MLS 4411. Students staff a simulated medical laboratory and assume responsibilities associated with all facets of laboratory operations. Clinical and academic faculty serve as advisors/managers to each team of students. The process develops team building skills critical to the modern health care setting. MLS 4411 expands to examine issues that cross all health care disciplines. Prerequisite: MLS 4411. **Acceptance into the MLS BS Program required

MLS 4415 - Laboratory Teaching and Supervision I

Credits: (3)
Typically taught:
Fall [Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

On Campus: Students will learn basic instructional and pedagogical theory as it applies to the field of medical laboratory science. Theory will be applied through collaborative learning and short presentations, as well as laboratory employee in-service training projects. Basic principles and applications of running a medical laboratory to include system approaches to management, leadership of groups, human resource management, and technical supervision will also be covered. Concepts will be reinforced through case study analysis and online discussions. Campus students will also participate as laboratory assistants in at least two lower division MLS courses, assisting the faculty in the administration of laboratory instruction, and applying instructional skills one-on-one with students entering the MLS program.

Online: Students fulfill the laboratory requirement by completing a series of management projects specifically designed for the laboratory provided in their clinical rotation. Prerequisite: **Acceptance into the MLS BS Program required.

MLS 4453 - Supervised Clinical Experience I

Credits: (1)
Typically taught:

Spring [Full Sem]

Off campus supervised clinical experiences administered in conjunction with clinical faculty in WSU affiliated health care institutions. Emphasis on experiences associated with laboratory administrative functions. Offered CR/NC only. Co-Requisite: MLS 4454. Online students receive credit for clinical experience. **Acceptance into the MLS BS Program required

MLS 4454 - Supervised Clinical Experience II

Credits: (1)
Typically taught:
Spring [Full Sem]

Off campus supervised clinical experiences administered in conjunction with clinical faculty in WSU affiliated health care institutions. Emphasis on experiences associated with laboratory administrative functions. Offered CR/NC only. Co-Requisite: MLS 4453. Online students receive credit for clinical experience. **Acceptance into the MLS BS Program required

MLS 4800 - Special Problems

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Prerequisite: Consent of instructor prior to registration. May be repeated twice for a maximum 3 credit hours. **Acceptance into the MLS BS Program required

MLS 4803 - Research Projects in Medical Laboratory Sciences I

Credits: (2)
Typically taught:
Fall [Full Sem, Full Sem Online]

In this first of two courses, students will identify a significant laboratory related research question and develop an original research design to address that question. Students will work closely with faculty mentors and will prepare a grant application for funding of supplies and reagents, and write an IRB (Institutional Review Board) application. Actual research will be conducted spring semester in the course MLS 4804. Prerequisite/Co-requisite: Pre/Co-requisite: MLS 3302. **Acceptance into the MLS BS Program required.

MLS 4804 - Research Projects in Medical Laboratory Sciences II

Credits: (2)
Typically taught:
Spring [Full Sem, Full Sem Online]

This course is a continuation of MLS 4803, Research Projects in MLS I. Students will continue working on their original research project that was initiated fall semester. After completing the project, students will present their research findings in poster and oral formats, along with preparing a formal manuscript for publication in the university undergraduate research journal ERGO and possibly in other appropriate scientific journals. Prerequisite: MLS 4803. **Acceptance into the MLS BS Program required.

MLS 4830 - Directed Readings

Credits: (1-3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem, Full Sem Online]

Advance topics related to the correlation of medical laboratory data to disease processes. Students may work as a group or independently with academic or clinical faculty. Consent of instructor prior to registration. May be repeated twice for a maximum 3 credit hours.

**Acceptance into the MLS BS Program required.

MLS 4850 - Study Abroad

Credits: (1-6)
Variable Title
Typically taught:
~~(variable and semesters offered)~~Check with Department

The purpose of this course is to provide opportunities for students in health professions to experience a study abroad program that is designed to explore healthcare, culture, and clinical experience. May be repeated 5 times with a maximum 6 credit hours.

MLS 4920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated twice for a maximum 3 credit hours.

**Acceptance into the MLS BS Program required.

MLS 5101 - Applications in Clinical Chemistry in Medical Laboratory Sciences

Credits: (4)
Typically taught:
Fall [Full Sem Online]

Spring [Full Sem Online]
Summer [Full Sem Online]

Concepts, methods and clinical correlation of clinical chemistry tests are presented. Emphasis is on testing methods and quality control practices covering carbohydrates, bilirubin, non-protein nitrogen, electrolytes, proteins, lipids, enzymes, therapeutic drug monitoring, toxicology, and endocrinology. These topics will include clinical correlation with diseases, allowing students to understand conditions in which abnormal results and or data might be obtained.

MLS 5102 - Clincal Applications in Hematology and Hemostasis

Credits: (3)
Typically taught:
Fall [Full Sem Online]
Spring [Full Sem Online]
Summer [Full Sem Online]

This course covers the concepts, analytical methods, and clinical correlation of hematology and hemostasis as it applies to the medical laboratory. In addition to normal functions, the topics will include clinical correlation with various hematological and hemostatic disease processes. Current testing and instrumentation will be included as well as regulatory and competency information. Prerequisite: For medical laboratory personnel.

MLS 5103 - Clinical Laboratory Microbiology I

Credits: (3)
Typically taught:
Fall [~~Online]~~
~~Spring [~~Full Sem Online]

This course provides an in-depth coverage of clinically significant pathogenic cocci and Gram negative rods, including epidemiology, pathogenicity, procedures for traditional laboratory identification. Prerequisite: For medical laboratory personnel.

MLS 5104 - Clinical Laboratory Microbiology II

Credits: (3)
Typically taught:
~~Campus -~~ Spring [Full Sem Online] not offered~~; Online - Spring~~ on Campus

This course is a continuation of MLS 5103, including antimicrobial testing clinical mycology, virology, parasitology and miscellaneous clinical bacteria including Gram positive bacteria, mycobacteria, and anerobes. Prerequisite: MLS 5103; for medical laboratory personnel.

MLS 5105 - Clinical Immunohematology

Credits: (3)
Typically taught:
Spring [Full Sem Online]
Summer [Full Sem Online]

This course covers the theory and principles of immunohematology relevant to blood group serology, antibody detection and identification, compatibility testing, component preparation and therapy in blood transfusion service, quality control parameters, donor screening and phlebotomy, transfusion reactions and hemolytic disease of the newborn. This non-laboratory course is for MLS or MLT professionals who would like to update their didactic skills and knowledge in immunohematology as it is practiced in today's hospitals and clinics. Additionally, the course may also be of interest to individuals with a BS/BA degrees in non-medical laboratory science who wish to obtain current education in clinical immunohematology. Prerequisite: For medical laboratory personnel.

MPC 5080 - Intercultural Communication

Credits: (3)
Typically taught:
Fall [Full Sem]

Explores theoretical perspectives in intercultural communication. Through analysis of various intercultural theories, students will become aware of cultural influences on communication in both international and domestic cultures. This course may not apply toward graduate degree requirements if an undergraduate course of the same name or content has been used for undergraduate credit.

MPC 5090 - Gender and Communication

Credits: (3)
Typically taught:
Spring [Full Sem]

This course is designed to help students understand the influence that communication has upon the shaping of gender and the influence that gender has in shaping communication interactions. Students become aware of, sensitive to, and more experienced in the issues, implications and skills necessary to successfully and meaningfully communicate with males and females, and about males and females in a wide range of communication contexts. This course may not apply toward graduate degree requirements if an undergraduate course of the same name or content has been used for undergraduate credit. Prerequisite: Permission of MPC program director.

MPC 5100 - Small Group Facilitation and Leadership

Credits: (3)
Typically taught:
Spring [Full Sem]

Theories and practical communication processes are examined and applied to develop fundamental attitudes and skills for facilitating and leading effective groups. This course may not apply toward graduate degree requirements if an undergraduate course of the same name or content has been used for undergraduate credit. Prerequisite: Permission of MPC program director.

MPC 5220 - Editing

Credits: (3)
Typically taught:
Fall [Online]

Develops editing knowledge and skills for print and online publications. Covers copy editing, content editing and page editing. This course may not apply toward graduate degree requirements if an undergraduate course of the same name or content has been used for undergraduate credit. Prerequisite: Permission of MPC program director.

MPC 5440 - Public Relations Media and Campaigns

Credits: (3)
Typically taught:
Spring [Full Sem]

Apply communication principles to internal and external publics; research, plan and evaluate social interrelationships; study of the controlled and uncontrolled media and their role in public relations; prepare a major public relations campaign for a selected client. This course may not apply toward graduate degree requirements if an undergraduate course of the same name or content has been used for undergraduate credit.

MPC 5500 - Topics in Communication

Credits: (3)
variable title
The study and application of communication in contemporary society is dynamic and ever changing. This course will provide students with opportunities to explore specialized topics in contemporary journalism, electronic mediated communication, human communication studies, and public relations in a seminar format. This course may be taken twice with different designations (topics). This course may not apply toward graduate degree requirements if an undergraduate course of the same name or content has been used for undergraduate credit. Prerequisite: Permission of MPC program director.

MPC 5550 - Organizational Communication

Credits: (3)
Typically taught:
Fall [Full Sem]

Study of communication organizations from various theoretical perspectives with an emphasis on the organizational culture perspective. Includes topics such as communicating with external audiences, decision-making, conflict resolution, and power relationships. This course may not apply toward graduate degree requirements if an undergraduate course of the same name or content has been used for undergraduate credit. Prerequisite: Permission of MPC program director.

MPC 5650 - Communication Law

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

First Amendment origins, interpretations and philosophy underlying regulation of the mass media. This course may not apply toward graduate degree requirements if an undergraduate course of the same name or content has been used for undergraduate credit. Prerequisite: Permission of MPC program director.

MPC 5820 - Persuasive Communication

Credits: (3)
Typically taught:
Fall [Full Sem]

Study of theories and principles of persuasion from classical to modern times. Examines persuasion as a means of influence in interpersonal communication, public speaking, advertising, politics, and other contexts. This course may not apply toward graduate degree requirements if an undergraduate course of the same name or content has been used for undergraduate credit. Prerequisite: Permission of MPC program director.

MPC 5850 - Advertising

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A practical and theoretical study of advertising. Course is designed for students planning careers in advertising, as well as for those who are simply lifelong consumers of advertising and want to understand its role in the economic system. This course may not apply toward graduate degree requirements if an undergraduate course of the same name or content has been used for undergraduate credit. Prerequisite: Permission of MPC program director.

MPC 6010 - Introduction to Graduate Study and Communication Theory

Credits: (3)
This course provides a survey of major theoretical perspectives in the field of communication with an emphasis on how theory can be applied in interpersonal, group, organizational and mass communication contexts. Students also learn about the logic of communication inquiry, the nature and expectations of graduate study, and techniques for conducting literature searches and writing literature reviews.

MPC 6100 - Team Building and Facilitation

Credits: (3)
Creating, facilitating and coaching effective work groups and teams is one of the hardest soft skills for organizational professionals to master. This course examines the impact that different structures and communication processes have on group and team collaboration effectiveness, as well as the central role competent communication plays in effective group and team facilitation. It investigates structural and process issues of team building, interpersonal and group communication, and effective problem solving and decision-making skills in collaborative environments. Students should have a greater understanding of their own collaborative teaming abilities upon completion. The purpose of this course is to teach-and have students experience-strategies and tactics for building, working effectively within, and facilitating collaborative teams in the work place. Prerequisite: MPC 6010 or permission of MPC program director.

MPC 6150 - Writing for Professional Communicators

Credits: (3)
Good writing skills are critical to achieving a professional image. Individuals and organizations are judged by the

quality of written documents they produce. In this course, students learn to plan and organize, to write clearly, concisely and correctly, and to develop polished final projects. Students undergo an intensive review of basic writing and editing principles and then apply them to specific writing projects. Genres of writing may include funding proposals, yearly reports, executive plans, organizational descriptions, Web sites, social networking messages, and marketing materials.

MPC 6210 - Presentational Speaking in the Workplace

Credits: (3)
The professional work environment benefits from the communication competency of its members. This course is designed to enhance the communication skills required by the professional communicator across a broad set of communication media: oral presentations, written texts, and digitial interactions. Primary emphasis will be placed on combining strategic thinking with powerful writing to produce a variety of effective messages aimed at different audiences. In addition, students will develop a broad-based understanding of how each of these modes of communications function both separately and interdependently to produce a coherent organizational message. Prerequisite: MPC 6010 or permission of MPC program director.

MPC 6250 - Interviewing

Credits: (3)
This course will explore various types of interviews conducted in work and personal situations: Recruiting, Performance Appraisals, Informational, Survey, Persuasion, Counseling, and Health Care. While core communication skills are important across types of interviews, interviewing strategies can differ greatly based on different contexts, specific situations, and personalities of interviewers and interviewees.

MPC 6300 - New Media in Professional Communication

Credits: (3)
New media allow all individuals and organizations to effectively interact with their audiences on an ongoing basis. This course addresses how new and emerging media technologies such as social networks, social media, blogs, podcasts, video sites, search engine management tools, and even virtual worlds can be leveraged by communication professionals in order to further meaningful relationships with their internal and external audiences. This course will give students greater understanding of new media required to allow a rethinking of the overall communication process. As a result students will develop effective communication strategies specifically geared toward the needs of their organization or field of interest. Prerequisite: MPC 6010 or permission of MPC program director.

MPC 6350 - Visual Communication in the Workplace

Credits: (3)
Visual messages are a powerful way to inform, persuade and educate. Within the workplace, the ability to effectively communicate goals, ideas and client information through combinations of visual and textual elements is an invaluable skill. This course introduces students to philosophical and theoretical perspectives that enable effective visual presentation in the organization. It also exposes them to practical design principles, skills and tactics that generally guide effective screen and print design. Additionally, students will learn how to critically analyze visual communication materials and aids according to standards that reflect sensitivity to fairness, diversity, good ethics and effectiveness.

MPC 6400 - Leadership Communication

Credits: (3)
Communication is the core of organizational leadership. This course is designed to explore both the theoretical and practical aspects of leader- and followership embedded in complex environments with an emphasis on recognizing and managing change. Leadership in organizations will be examined from a variety of perspectives including historical, ethical and critical. Key topics include leadership traits and skills, leadership roles and behaviors, power and influence, theories of leadership, leading change, ethical leadership, and developing leadership skills. The course includes experiential activities using cases, role plays, and action learning projects to develop relevant skills. Prerequisite: MPC 6010 or permission of MPC program director.

MPC 6450 - Advanced Organizational Communication

Credits: (3)
This course provides a graduate-level overview and introduction to the discipline of organizational communication in a global world. Class readings and discussions will include topics such as organizational structure/process, rationality and decision-making, (sub)cultures and socialization, individual and collective identities, networks, leadership, teams, power/control, conflict, change, technologies, and ethics. Case studies from current events and guest speakers will be used to apply theoretical concepts to actual organizational life.

MPC 6500 - Topics in Professional Communication

Credits: (3)
variable title
The study and application of professional communication in contemporary society is dynamic and ever changing. This course will provide students with opportunities to explore specialized topics in a seminar format. This course may be taken twice as elective credit with different titles and topics. Prerequisite: MPC 6010 or permission of MPC program director.

MPC 6600 - Strategic Communication

Credits: (3)
Effective strategic communication and planning is essential to any organization. This course helps students to understand and develop skills to create and manage internal and external messages for different situations, industries, and locations. Students prepare for effective strategic communication by asking and answering the right questions about the goals of the organization, its members, stakeholders and others who impact its operation, such as regulatory bodies. Effective strategic communication and its planning consist of the optimal use of people, budgets, tactical elements, and media in a chaotic, changing world. Prerequisite: MPC 6010 or permission of MPC program director.

MPC 6620 - Conflict Resolution and Mediation

Credits: (3)
Communication is at the center of any negotiation or mediation process. It is in and through communication that resolution becomes possible. This class will explore the key interpersonal skills that are central to managing the processes of conflict resolution and mediation competently.

MPC 6700 - Research Methods for Professional Communication

Credits: (3)
Communication must be measured in order to evaluate its effectiveness, to refine and improve results, and to demonstrate value to an organization. This course reviews methods available to professional communicators to measure and evaluate research regarding the performance of a particular communication medium or an integrated communication campaign. Students receive instruction on commonly used professional research methodologies such as focus groups, surveys, usability studies and test-and-control methods to learn how to run studies on a "shoestring budget." For projects with research budgets, students learn what to look for when hiring a research firm and how to evaluate and implement the research findings. Prerequisite: MPC 6010 or permission of MPC program director.

MPC 6900 - Thesis/Project I

Credits: (3)
Typically taught:
Fall [Full Sem]

In this course students will begin their theses or projects under the direction and with the support of their faculty committees. They will write, present and have their thesis or project proposal approved. Prerequisite: MPC 6010 or permission of MPC program director. May be repeated 2 times for a maximum of 9 credit hours. **Please note that students who, for any reason, do not finish their thesis or project or program of courses within the two-year framework suggested in this program, must pay continuing enrollment and tuition the semester they defend their thesis or project.*

MPC 6950 - Thesis/Project II

Credits: (3)
Typically taught:
Spring [Full Sem]

This course will allow students to complete their workplace project or traditional academic thesis. Students will prepare, present and defend their projects or theses during this semester for review and approval. This course is repeatable for a total of two times for a total of nine credit hours of which only three will apply to degree completion. Prerequisite: MPC 6010 or permission of MPC program director. **Please note that students who, for any reason, do not finish their thesis or project within the two-year framework suggested in this program, must pay continuing enrollment and tuition the semester they defend their thesis or project.*

MSAT 6080 - Research Methods I

Credits: (3)
Typically taught:
Fall [Full Sem]

This course explores the process and methods of scientific inquiry and interpretation of research findings in athletic training. Students will gain familiarity with the major elements of research including literature review, quantitative and qualitative methodology, design, evaluation of research, statistical analysis, presentation of data, and ethical considerations. This course also provides an overview of statistics including descriptive and inferential statistics and one-way ANOVA. Students should have a basic understanding of conducting library and Internet information searches prior to taking this course.

MSAT 6085 - Research Methods II

Credits: (3)
Typically taught:
Spring [Full Sem]

This course is designed to help students develop a master's thesis research project proposal that is carefully researched and professionally written. Students will prepare an introduction, literature review, detailed methodology, and IRB proposal. Prerequisite: MSAT 6080.

MSAT 6090 - Research Methods III

Credits: (3)
Typically taught:
Fall [Full Sem]

This course is designed to help students complete a master's thesis research project. Basic statistical analysis will be reviewed and advanced statistics will be introduced. Students will collect and analyze data and synthesize results. At the completion of the course, students will submit a full manuscript, suitable for publication, along with an abstract and a professional poster. Prerequisite: MSAT 6085.

MSAT 6095 - Research Methods IV

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

This course allows students to choose one of the following options: 1) complete their masters thesis requirements from MSAT 6090; 2) prepare a manuscript for publication or formal oral presentation for a professional conference, or 3) participate in additional research above and beyond the masters thesis. May be taken twice up to 9 credit hours.

MSAT 6200 - Psychology of Sport, Injury & Rehabilitation

Credits: (3)
Typically taught:
Summer [2nd Blk]

This course is designed to provide a basic understanding of the psychology of sport, injury, and rehabilitation. Topics covered include emotion, motivation, mental skills training and use, psychological antecedents of injury, psychology of injury and rehabilitation, using mental skills with injured athletes, career transition and termination, disabilities, rehabilitation/exercise adherence, eating disorders, alcohol and drug/substance abuse, gender and cultural diversity, and research methods related to psychology of sport, injury and rehabilitation. The graduate student will get an advanced approach, including in-depth application of psychological interventions with injured athletes and a more comprehensive investigation of psychosocial aspects. Prerequisite: PSY 1010.

MSAT 6300 - Orthopedic Assessment of Musculoskeletal Injuries: Lower Extremities

Credits: (3)
Typically taught:

Summer [2nd Blk]

Content of this course addresses evaluation techniques and care for musculoskeletal injuries to the trunk and lower extremities for graduate-level athletic training students. The student must integrate knowledge of anatomical structures, physiology principles and evaluative techniques to provide a basis for critical decision-making in an injury management environment. Prerequisite: ZOOL 2100.

MSAT 6301 - Orthopedic Assessment of Musculoskeletal Injuries: Upper Extremities

Credits: (3)
Typically taught:
Fall [Full Sem]

Content of this course addresses evaluation techniques and care for musculoskeletal injuries to the head, face and upper extremities for graduate-level athletic training students. The student must integrate knowledge of anatomical structures, physiology principles and evaluative techniques to provide a basis for critical decision-making in an injury management environment. Prerequisite: MSAT 6300.

MSAT 6350 - General Medical Conditions and Advances in Athletic Training

Credits: (3)
Typically taught:
Fall [Full Sem]

Discusses general medical disorders and conditions pertaining to sports medicine and inquire into the latest research of related issues.

MSAT 6400 - Basic Therapeutic Modalities for Musculoskeletal Injuries

Credits: (3)
Typically taught:
Fall [Full Sem]

Through lecture, discussion, and laboratory experience, the scientific basis of musculoskeletal rehabilitation involving therapeutic modalities will be examined. This course is designed to introduce students to the contemporary usage and basic foundation of therapeutic modalities, transmission of energy, infrared, and mechanical therapy. Two lecture and 2 lab hours per week. Prerequisite: MSAT 6300 and ZOOL 2200 or HTHS 1110 and HTHS 1111.

MSAT 6401 - Advanced Therapeutic Modalities for Musculoskeletal Injuries

Credits: (3)
Typically taught:
Spring [Full Sem]

Through lecture, discussion, and laboratory experience, the scientific basis of musculoskeletal rehabilitation involving therapeutic modalities will be examined. This course is designed to build upon the basic foundations of therapeutic modalities established in MSAT 6400. Topics for discussion include the application of electrotherapy devices, ultrasound, light therapy, and short-wave diathermy. Two lecture and 2 lab hours per week. Prerequisite: MSAT 6400.

MSAT 6430 - Principles of Athletic Training

Credits: (3)
This course is designed to give graduate-level athletic training students an overview of athletic training principles. Students will gain knowledge in the areas of musculoskeletal injuries, environmental risk factors, mechanisms and characteristics of sports trauma, and the cooperative sports medicine team. Prerequisite: HLTH 2300 or AT 2300.

MSAT 6431 - Orthopedic Taping, Wrapping, & Bracing

Credits: (1)
Typically taught:
Summer [2nd Blk]

This course is designed to give graduate athletic training students a basic understanding of athletic training taping, wrapping, bracing, padding, and splinting techniques. Students will also learn how to properly fit and repair athletic protective equipment. Students will apply a variety of techniques to support all areas of the body.

MSAT 6450 - Basic Rehabilitation of Musculoskeletal Injuries

Credits: (3)
Typically taught:
Spring [Full Sem]

Content of this course provides basic understanding of therapeutic exercise as it relates to the rehabilitation process of musculoskeletal injuries. Course provides basic concepts and hands-on techniques used in the rehabilitation of the athlete/patient from an injury state to a highly competitive state. Prerequisite: MSAT 6300 and MSAT 6301.

MSAT 6451 - Advanced Rehabilitation of Musculoskeletal Injuries

Credits: (3)
Typically taught:
Fall [Full Sem]

Content of this course provides advanced understanding of therapeutic exercise as it relates to the rehabilitation process of musculoskeletal injuries. This course provides advanced instruction and hands-on techniques in the rehabilitation of an athlete/patient from an injury state to a highly competitive state. Prerequisite: MSAT 6450.

MSAT 6500 - Introduction to Graduate Athletic Training (First Semester)

Credits: (2)
Typically taught:
Summer [2nd Blk]

Provides an opportunity for students to observe the function of an athletic training facility and become aware of the various duties performed by a Certified Athletic Trainer. Orients students to the graduate athletic training program.

MSAT 6501 - Graduate Practicum I

Credits: (2)
Typically taught:
Fall [Full Sem]

Provides an opportunity for graduate-level athletic training students to receive skill proficiency testing in the areas of ~~acute care of injury and illnesses.~~taping, bracing, splinting; lower extremity evaluation, football equipment fitting and removal, and environmental illness. Prerequisite: MSAT 6500.

MSAT 6502 - Graduate Practicum II

Credits: (3)
Typically taught:
Spring [Full Sem]

Provides an opportunity for graduate-level athletic training students to receive skill proficiency testing in the areas of orthopedic assessment (upper extremity) and basic therapeutic modalities. Prerequisite: MSAT 6301, MSAT 6400, MSAT 6501.

MSAT 6503 - Graduate Practicum III

Credits: (3)
Typically taught:
Fall [Full Sem]

Provides an opportunity for graduate-level athletic training students to receive skill proficiency testing in the areas of emergency response, CPR/AED, basic therapeutic exercise, sport psychology, pharmacology, nutrition, and strength and conditioning. Prerequisite: MSAT 6200, MSAT 6450, MSAT 6502.

MSAT 6504 - Graduate Practicum IV

Credits: (3)
Typically taught:
Spring [Full Sem]

Provides an opportunity for graduate-level athletic training students to receive skill proficiency testing in the areas of advanced therapeutic exercise, advanced therapeutic modalities, and general medical conditions and disabilities. Prerequisite: MSAT 6503, MSAT 6401, MSAT 6451, MSAT 6350.

MSAT 6600 - Administration and Management in Athletic Training

Credits: (3)
Typically taught:
Spring [Full Sem]

Provides an overview of the necessary policies, procedures, maintenance, and daily operation of athletic training facilities. Applies principles of facility design and planning, information management, legal and ethical considerations in health care, and professional development as it relates to athletic training. Prerequisite: MSAT 6502.

MSAT 6700 - Advanced Diagnostic Imaging for the Athletic Training Profession

Credits: (1)
Typically taught:
Spring [Full Sem]

This course provides an opportunity for students to gain exposure to the diagnostic imaging techniques commonly used by the medical community in diagnosis of injury in the athlete. Upon completion of the course, students will be able to identify anatomy and understand terminology used by health professionals when discussing diagnostic images and have an advanced understanding of indications, contraindications, and clinical implications. Prerequisite: MSAT 6350.

MSAT 6750 - Evidence-Based Evaluation and Treatment of the SI Joint and Spine

Credits: (2)
Typically taught:
Spring [1st Blk]

This course will focus on evidence-based evaluation and management of the spine and pelvis, including the cervical spine, thoracic spine, lumbar spine and the sacroiliac joints. The student must integrate anatomical structures, physiology principles, and evaluative techniques to provide a basis for critical decision-making and management for these pathologies. Prerequisite: MSAT 6300, MSAT 6301.

MSAT 6998 - Master's Board of Certification (BOC) Exam Preparation

Credits: (1)
This course prepares Graduate Athletic Training students to take the Athletic Trainer Board of Certification (BOC) Exam. This course will review content from all courses in the Master of Science in Athletic Training program as well as content from the program's prerequisite courses. Prerequisite: MSAT 6450. May be repeated 2 times up to 3 credit hours.

MSAT 6999 - Critical Thinking for Musculoskeletal Injury Management

Credits: (1)
Typically taught:
Spring [Full Sem]

Content of this course addresses evaluation techniques, rehabilitation processes and return to play guidelines for specific orthopedic injuries to the upper and lower extremities. The student must integrate anatomical structures, physiology principles, rehabilitation principles, and evaluative techniques to provide a basis for critical decision-making and care in a musculoskeletal injury management environment. Prerequisite: MSAT 6401 and MSAT 6451.

MSN 6100 - Research Methods

Credits: (3)
This course prepares the student to critically appraise, compare, and evaluate published quantitative and qualitative research reports to develop and maintain an evidence-based environment within the nurse administration and nurse

education setting. Appraisal of the strengths and weaknesses of the reported research designs will be emphasized. Co-Requisite: MSN 6141, MSN 6180 or permission of instructor.

MSN 6120 - Research and Statistics

Credits: (3)
This course focuses on the development of the knowledge and skill required to evaluate numerical data in support of an evidence-based environment for nursing administration and nursing education. Skills related to utilization of parametric and non-parametric methods of statistical analysis of quantitative data will be emphasized. Prerequisite: MSN 6100, MSN 6141, MSN 6180. Co-Requisite: MSN 6160 or permission of instructor.

MSN 6141 - Advanced Nursing Theory

Credits: (3)
This course is intended to introduce the student to the multiple patterns of knowing within nursing and the processes associated with the development of nursing knowledge and theory. These processes include the varied yet interdependent activities of critical reflection, validation, confirmation, and utilization of nursing knowledge. In addition, the student will explore the utilization of nursing theory and knowledge to his or her own experiences and everyday nursing practice. Co-Requisite: MSN 6100, MSN 6180.

MSN 6160 - Evidence-Based Practice

Credits: (3)
This course provides students the knowledge and skill required to develop and implement evidence-based processes within the professional settings of the nurse administrator and the nurse educator. Prerequisite: MSN 6100, MSN 6141, MSN 6180. Co-Requisite: MSN 6120.

MSN 6180 - Improving Patient Care and Nursing Practice through Information Systems

Credits: (3)
This course provides students the knowledge and skill required to effectively apply the principles of information technology within the healthcare setting. Course content includes the utilization of information technology to analyze healthcare data for the improvement of nursing decision-making and to support quality in nursing administration and nursing education settings. Co-Requisite: MSN 6100, MSN 6141.

MSN 6200 - Theoretical Foundations of Nursing Administration

Credits: (3)
This course focuses upon the knowledge and skills required to utilize established theoretical and concepts frameworks to critically analyze clinical and non-clinical leadership issues and apply theory-based principles within the nursing administration setting. Prerequisite: MSN 6100, MSN 6141, MSN 6180.

MSN 6300 - Quality Improvement, Patient Safety and Risk Issues in Patient Care Delivery

Credits: (3)
This course focuses upon the nurse administrator's responsibility to develop and maintain a culture of safety, reduce

and prevent harm to patients, and reduce institutional risk and liability issues through the utilization of healthcare outcomes measurement and application of sound principles and practices associated with quality improvement. Prerequisite: MSN 6100, MSN 6120, MSN 6141, MSN 6160, MSN 6180, MSN 6200, MSN 6324, MSN 6340, MSN 6360. Co-Requisite: MSN 6380,MSN 6400.

MSN 6324 - Financial Issues in Nursing Administration

Credits: (3)
This course provides a conceptual foundation for the nurse administrator's accountability to provide fiscal resource planning, forecasting and resource allocation, strategic planning that addresses future trends, oversight of all nursing related operating aspects, and the achievement of the financial goals of the healthcare organization. Prerequisite: MSN 6100, MSN 6120, MSN 6141, MSN 6160, MSN 6180, MSN 6200. Co-Requisite: MSN 6340, MSN 6360.

MSN 6340 - Compliance with Legal and Regulatory Systems in Patient Care Delivery

Credits: (3)
This course focuses upon the nurse administrator's responsibility to develop and maintain a healthcare environment that fulfills the compliance standards and criteria established by both state and national legal and regulatory systems. Prerequisite: MSN 6100, MSN 6120, MSN 6141, MSN 6160, MSN 6180, MSN 6200. Co-Requisite: MSN 6324, MSN 6360.

MSN 6360 - Scope and Practice of Nursing Administration

Credits: (3)
This course addresses the nurse administrator's responsibility for the overall administration of patient care delivery services and representation of nursing services at the highest level of the organization and across a wide variety of settings. Prerequisite: MSN 6100, MSN 6120, MSN 6141, MSN 6160, MSN 6180, MSN 6200. Co-Requisite: MSN 6324, MSN 6340.

MSN 6380 - Retaining and Developing a Competent Workforce in Nursing

Credits: (3)
This course addresses the overall operational management and administration functions related to staffing, staff development, and managerial issues including coaching, discipline and employee support. Processes related to labor relations within healthcare is addressed. Prerequisite: MSN 6100, MSN 6120, MSN 6141, MSN 6160, MSN 6180, MSN 6200, MSN 6324, MSN 6340, MSN 6360. Co-Requisite: MSN 6300, MSN 6400.

MSN 6400 - Nurse Administrator Residency

Credits: (3)
This on-site practicum is designed to prepare the student for a career in nursing administration and leadership. The student will participate in focused participative learning activities with nurse leaders at either the executive, director or manager level. A variety of focused nursing administrator residency areas will be available. The student, faculty, and assigned nurse administrator residency preceptor will collaboratively design the residency experience. Prerequisite: MSN 6100, MSN 6120, MSN 6141, MSN 6160, MSN 6180, MSN 6200, MSN 6324, MSN 6340, MSN 6360. Co-Requisite: MSN 6300, MSN 6380.

MSN 6500 - Theoretical Foundations in Nursing Education

Credits: (3)
This course focuses upon the knowledge and skills required to utilize established teaching and learning theories developed to enhance the nursing educational process. The practical utility of these teaching and learning theories in diverse nursing education learning environments will be emphasized. Prerequisite: MSN 6100, MSN 6141, MSN 6180.

MSN 6520 - Curriculum Development for Nursing Educators

Credits: (3)
This course focuses on the concepts and organizing frameworks for curriculum design, course development and desired outcomes, standards of nursing education and practice, continuing education, and health care educational programs. . Issues related to program accreditation and related social and legal issues will be examined. Prerequisite: MSN 6100, MSN 6120, MSN 6141, MSN 6160, MSN 6180, MSN 6500. Co-Requisite: MSN 6540, MSN 6560.

MSN 6540 - Measurement of Competence and Outcomes in Nursing Education

Credits: (3)
This course focuses upon established theories of measurement and evaluation coupled with strategies for implementing evaluation of student learning, program outcomes, and faculty performance targets. Accurate interpretation of evaluation data to support an evidence-based response to student and program evaluation results will be emphasized. Prerequisite: MSN 6100, MSN 6120, MSN 6141, MSN 6160, MSN 6180, MSN 6500. Co-Requisite: MSN 6520, MSN 6560.

MSN 6560 - Socialization in the Role of Nursing Educator

Credits: (3)
This course prepares the student to function proficiently in the nurse educator role within a variety of learning environments and social settings. The development of professional and personal adaptive strategies will be emphasized. Prerequisite: MSN 6100, MSN 6120, MSN 6141, MSN 6160, MSN 6180, MSN 6500. Co-Requisite: MSN 6520, MSN 6540.

MSN 6580 - Clinical Nursing Instruction in Higher Education and Community Settings

Credits: (3)
This course prepares the student to apply teaching and learning theories within the practice laboratory and clinical settings. The clinical application component of this course will provide the student the opportunity to participate, with supervision, in a practice laboratory and/or clinical instruction environment. Prerequisite: MSN 6100, MSN 6120, MSN 6141, MSN 6160, MSN 6180, MSN 6520, MSN 6540, MSN 6560. Co-Requisite: MSN 6600, MSN 6700.

MSN 6600 - Nursing Instruction in Higher Education and Community Settings

Credits: (3)
This course prepares the student to apply teaching and learning theories within both the traditional and non-traditional classroom setting. Teaching strategies designed to support student learning across varied settings and modalities will be emphasized. Prerequisite: MSN 6100, MSN 6120, MSN 6141, MSN 6160, MSN 6180, MSN 6500, MSN 6520, MSN 6540, MSN 6560. Co-Requisite: MSN 6580, MSN 6700.

MSN 6700 - Nurse Educator Residency

Credits: (3)
This on-site practicum is designed to prepare the student for a career in nursing education and scholarship. The student will participate in focused participative learning activities with advanced prepared nurse educators at an academic and/or healthcare service educational setting. A variety of nurse educator residency areas will be available. The student, faculty, and assigned nurse educator residency preceptor will collaboratively design the residency experience. Prerequisite: MSN 6100, MSN 6120, MSN 6141, MSN 6160, MSN 6180, MSN 6500, MSN 6520, MSN 6540, MSN 6560. Co-Requisite: MSN 6580, MSN 6600.

MSN 6800 - MSN Project Development and Implementation

Credits: (1-4)
Self-directed study under the guidance of the MSN Project Committee. Completion of the MSN project is a graduation requirement for the Master of Science in Nursing degree. Prerequisite: MSN 6100 and MSN 6120. May be repeated 3 times with a maximum of 4 credit hours.

MSN 6850 - MSN Project Development and Implementation Extension Course

Credits: (1)
For students who have completed all course requirements for MSN, but have not completed the MSN project requirement. Students must register for a minimum of 1 credit of MSN 6850 to remain enrolled in the MSN program. Prerequisite: MSN 6800 (4 credit hours), faculty approval. May be repeated two (2) times with a maximum of 2 credit hours.

MSN 6900 - Social Epidemiology, Global Health Issues and Cultural Competency

Credits: (3)
Typically taught:
This course is not currently offered

MSN 6920 - Evidence Based Practice II

Credits: (3)
Typically taught:
This course is not currently offered

MSNP 6205 - Transitions to Advanced Practice

Credits: (1)
Typically taught:
Fall [Full Sem]

This course is designed to present a foundation for understanding nursing theory and the relationship of theory and research to evidence based practice and conceptual models of advanced practice nursing. Prerequisite: Admission to a MSN Family Nurse Practioner Program.

MSNP 6210 - Advanced Pathophysiology

Credits: (2-3)
Typically taught:
Fall (Full Sem]
Spring [Full Sem]
Summer [Full Sem]

This course is a core graduate level course. This course is designed to teach the master level nursing and nurse practitioner student frequently seen alterations in physiology. The course will focus on modifiable risk factors, exposures, physiological mutations, and presenting signs and symptoms. Students will utilize evidence-based practice and research to identify, analyze and evaluate disease pathology across the lifespan. Prerequisite: Faculty permission.

MSNP 6215 - Advanced Pharmacology

Credits: (2-3)
Typically taught:
Fall (Full Sem]
Spring [Full Sem]
Summer [Full Sem]

This course presents the pharmacokinetics and pharmacodynamics of medication management. Nurse practitioners students are prepared to safely prescribe and monitor medication regimens for patients across the lifespan. The course will include ethical and legal parameters surrounding prescriptive practice. This course meets the basic accreditation criteria for graduate nursing pharmacology. Prerequisite: Faculty permission.

MSNP 6220 - Physical Assessment & Diagnostic Reasoning

Credits: (2-3)
Typically taught:
Fall (Full Sem]
Spring [Full Sem]
Summer [Full Sem]

This course lays the groundwork for students to perform comprehensive and holistic health histories, review of systems, and physical examinations for patients across the lifespan. The nurse practitioner students will be guided in the development of the cognitive skills necessary for complex diagnostic reasoning. The classroom, nursing practice lab, and select clinical sites are used in presenting and practicing assessment and diagnostic reasoning. Prerequisite: Faculty permission.

MSNP 6225 - Adult Skills Practicum

Credits: (1)
Typically taught:
Summer [Full Sem]

This laboratory course provides opportunities for the nurse practitioner student to learn and practice ambulatory care skills used to diagnose and manage adult health care issues. Prerequisite: MSNP 6220 - Physical Assessment & Diagnostic Reasoning. Co-Requisite: MSNP 6235 - Advanced Practice Nursing: Adult, MSNP 6236 - Advanced Practice Nursing Clinical: Adult.

MSNP 6230 - Women's Health and Pediatric Skills Practicum

Credits: (2)
Typically taught:
Fall [Full Sem]

The laboratory course provides opportunities for the nurse practitioner students to learn and practice ambulatory care skills used to diagnose and manage specific women's health and pediatric health care issues. Prerequisite: MSNP 6220 - Physical Assessment & Diagnostic Reasoning. Co-Requisite: MSNP 6245 - Advanced Practice Nursing: Newborn - Adolescent, MSNP 6246 - Advanced Practice Nursing Clinical: Newborn - Adolescent.

MSNP 6235 - Advanced Practice Nursing: Adult

Credits: (3)
Typically taught:
Summer [Full Sem]

This is the theory companion course to MSNP 6236 Advanced Practice Nursing Clinical: Adult. This course is designed to provide advanced theoretical knowledge and emphasis on adult healthcare for the nurse practitioner student. The course will prepare the student to manage prevalent healthcare concerns encountered across the lifespan of an adult. The course will also focus on the inclusion of families in patient health promotion, assessment, intervention, follow-up and evaluation of adults in healthcare. Co-Requisite: MSNP 6236 - Advanced Practice Nursing Clinical: Adult.

MSNP 6236 - Advanced Practice Nursing Clinical: Adult

Credits: (3)
Typically taught:
Summer [Fall Sem]

This is the clinical companion course to MSNP 6236 Advanced Practice Nursing: Adult. This course is designed for the nurse practitioner student to deliver high quality healthcare to adults. The course prepares students to apply acquired skills, magnify diagnostic reasoning through psychomotor, affective and cognitive domains. This course also requires students to diagnose and determine best practice to treat illness and prevent disease. Co-Requisite: MSNP 6235 - Advanced Practice Nursing: Adult.

MSNP 6240 - Advanced Practice Nursing: Older Adult

Credits: (2)
Typically taught:
Summer [Full Sem]

This is the theory companion course to MSNP 6241 Advanced Practice Nursing Clinical: Adult & Older Adult. This course is designed to provide advanced theoretical knowledge and emphasis on older adult healthcare for the nurse practitioner student. The course will prepare the student to manage prevalent healthcare concerns for older adults in the community and a variety of health care settings. The course will also focus on the various health issues for older adults, including health promotion, functional ability, chronic disease management, polypharmacy, palliative

intervention, and end-of-life care. Co-Requisite: MSNP 6241 - Advanced Practice Nursing Clinical: Adult & Older Adult.

MSNP 6241 - Advanced Practice Nursing Clinical: Adult & Older Adult

Credits: (1)
Typically taught:
Summer [Full Sem]

This is the clinical companion course to MSNP 6240 Advanced Practice Nursing: Older Adult. This course is designed for the nurse practitioner student to deliver high quality healthcare to adults and older adults in a variety of community settings. The course prepares students to apply acquired skills, magnify diagnostic reasoning through psychomotor, affective and cognitive domains. This course also requires students to diagnose and determine best practice to treat illness and prevent disease. Co-Requisite: MSNP 6240 - Advanced Practice Nursing: Older Adult.

MSNP 6245 - Advanced Practice Nursing: Newborn - Adolescent

Credits: (3)
Typically taught:
Fall [Full Sem]

This is the theory companion course to MSNP 6246 Advanced Practice Nursing Clinical: Newborn-Adolescent. This course is designed to provide advanced theoretical knowledge centered on the unique health care needs of newborns, pediatrics, adolescents and families specific to the nurse practitioner role. The course will prepare students to manage health concerns across the pediatric lifespan associated with genetics, development and development stages. The course will focus on health promotion and disease prevention across the lifespans of the newborn, pediatric and adolescent, as well as the management of associated family. Co-Requisite: MSNP 6246 - Advanced Practice Nursing Clinical: Newborn - Adolescent.

MSNP 6246 - Advanced Practice Nursing Clinical: Newborn - Adolescent

Credits: (2)
Typically taught:
Fall [Full Sem]

This is the clinical companion course to MSNP 6245 Advanced Practice Nursing: Newborn - Adolescent. This course is designed for the nurse practitioner student to deliver high quality healthcare to children and adolescents. The course prepares students to apply acquired skills, magnify diagnostic reasoning through psychomotor, affective and cognitive domains. This course also requires students to diagnose and determine best practice to treat illness and prevent disease. Co-Requisite: MSNP 6245 - Advanced Practice Nursing: Newborn - Adolescent.

MSNP 6250 - Advanced Practice Nursing: Women's Health

Credits: (2)
Typically taught:
Fall [Full Sem]

This is the theory companion course to MSNP 6251 Advanced Practice Nursing Clinical: Women's Health. This course is designed to prepare the nurse practitioner student to gain knowledge centered on the unique health care needs of

women. The course will prepare students to manage prevalent health care concerns of women, including; maturation, sexuality, family planning, contraception, perinatal care (preconception through pregnancy), and menopause. Concepts will focus on strategies for health promotion and disease prevention through the lifespan of a woman, as well as management of selected issues related to fertility, pregnancy, and aging. Co-Requisite: MSNP 6251 - Advanced Practice Nursing Clinical: Women's Health.

MSNP 6251 - Advanced Practice Nursing Clinical: Women's Health

Credits: (1)
Typically taught:
Fall [Full Sem]

This is the clinical companion course to MSNP 6250 Advanced Practice Nursing: Women's Health. This course is designed for the nurse practitioner student to deliver high quality healthcare to women. The course prepares students to apply acquired skills, magnify diagnostic reasoning through psychomotor, affective and cognitive domains. This course requires students to diagnose and determine best practice to treat illness and prevent disease in the assigned women's health care practice environment. Co-Requisite: MSNP 6250 - Advanced Practice Nursing: Women's Health.

MSNP 6255 - Leadership and Accountabilities in Advanced Nursing

Credits: (3)
Typically taught:
Fall (Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

Master's prepared nurses are valued members and leaders of healthcare teams and are employed in a variety of settings. The purpose of this course is to provide graduate nursing students with an overview of personal, organizational and systems leadership. At the conclusion of this course, students will be able to apply leadership skills and ethical decision making as it relates to healthcare policy, legal regulation, quality improvement and patient safety.

MSNP 6260 - Advanced Practice Nursing Clinical Practicum

Credits: (4)
Typically taught:
Spring [Full Sem]

This is the final clinical course of the FNP Program. This course is designed for the nurse practitioner student to evaluate individual and system effectiveness in delivery of quality healthcare to patients across the lifespan. The course evaluates the student's ability to apply acquired skills, magnify diagnostic reasoning through psychomotor, affective and cognitive domains. This course also evaluates the student's ability to diagnose and determine best practice to treat illness and prevent disease. Prerequisite: MSNP 6236 - Advanced Practice Nursing Clinical: Adult, MSNP 6241 - Advanced Practice Nursing Clinical: Adult & Older Adult, MSNP 6246 - Advanced Practice Nursing Clinical: Newborn - Adolescent, MSNP 6251 - Advanced Practice Nursing Clinical: Women's Health.

MSRS 6100 - Research Methods

Credits: (3)
Typically taught:
Fall [Full Sem]

This course assists students to critique, evaluate, and use research within their health science education careers. The research process including the theoretical/conceptual basis of health sciences research, methods, and critique strategies are examined in detail. There is a focus on evaluation of published research reports to evaluate the appropriateness of application of findings to clinical practice. This course is cross-listed with MSN 6100.

MSRS 6120 - Research and Statistics

Credits: (3)
Typically taught:
Spring [Full Sem]

This course focuses on the development of research skills used to evaluate data in support of the utilization of findings in clinical practice. Skills related to statistical analysis of quantitative data will be emphasized. Parametric and non-parametric methods of statistical analysis will be discussed. This course is cross-listed with MSN 6120.

MSRS 6130 - Functional Hemodynamics

Credits: (3)
Typically taught:
Spring [Full Sem]

This course offers the fundamental principles and indications for invasive hemodynamic monitoring. The indications, possible contraindications and possible complications involved with the insertion of central Venous lines, arterial lines, Pulmonary artery catheters and ICP monitoring with the expected CVP, RV, PAP, PCWP, CO and CI reading, waveforms and troubleshooting.

MSRS 6140 - Clinical Laboratory Correlation

Credits: (3)
Typically taught:
Spring [Full Sem]

This course covers the concepts, analytical methods and clinical correlation of laboratory values as they relate to radiographic imaging, pathology and patient history.

MSRS 6200 - Health Behavior and Managerial Epidemiology

Credits: (3)
Typically taught:
Fall [Full Sem]

The course addresses the integration of epidemiology into strategic planning and managerial decision-making in health services organizations. Epidemiological principles and tools of investigation from clinical and managerial perspectives are addressed. Course work includes environmental analysis of health behaviors and lifestyle that impact demand on health care delivery systems. The student will evaluate models for integration of health services,

preventive programs, demand management, and policy issues affecting continuity of care. This course is cross-listed with MHA 6000.

MSRS 6403 - Evaluation of the Osseous System

Credits: (3)
Typically taught:
Fall [Full Sem]

Imaging evaluation of pathological conditions, abnormalities and anomalies of the osseous system.

MSRS 6413 - Evaluation of the Chest

Credits: (3)
Typically taught:
Spring [Full Sem]

Imaging evaluation of pathological conditions, abnormalities and anomalies of the chest.

MSRS 6423 - Evaluation of the Abdomen and G I System

Credits: (3)
Typically taught:
Fall [Full Sem]

Imaging evaluation of pathological conditions, abnormalities and anomalies of the abdomen and gastrointestinal system.

MSRS 6433 - Evaluation of the Genitourinary System

Credits: (3)
Typically taught:
Fall [Full Sem]

Imaging evaluation of pathological conditions, abnormalities and anomalies of the genitourinary system.

MSRS 6443 - Clinical Pathways

Credits: (3)
Typically taught:
Spring [Full Sem]

Studying clinical pathways for patients based on disease processes and trauma.

MSRS 6450 - Managing Health Information

Credits: (3)
Typically taught:
Fall [Full Sem]

Introductory course that provides basic vocabulary and principles of modern information architectures. Computer networking and communication technologies needed to support modern information infrastructures. Differences between integrated and quilted systems are examined. Emphasis on management and use of information to support management decision making. This course is cross-listed with MHA 6450.

MSRS 6453 - Evaluation/CNS and Facial Structures

Credits: (3)
Typically taught:
Spring [Full Sem]

Imaging evaluation of pathological conditions, abnormalities and anomalies of the central nervous system and facial structures.

MSRS 6463 - Problem Patient Management

Credits: (3)
Typically taught:
Fall [Full Sem]

Determination of pathological conditions utilizing problem-solving case studies.

MSRS 6473 - Vascular Non-Invasive Imaging Procedures

Credits: (3)
Typically taught:
Fall [Full Sem]

Patient preparation and performance of medical imaging vascular non-invasive procedures are presented.

MSRS 6860 - Clinical Preceptorship

Typically taught:
Spring [Full Sem]

Experience in a radiology department. Consent of instructor needed.

MSRS 6861 - Clinical Preceptorship

Credits: (3)
Typically taught:
Fall [Full Sem]

Continuation of MSRS 6860.

MSRS 6862 - Clinical Preceptorship

Credits: (3)
Typically taught:
Spring [Full Sem]

Continuation of MSRS 6861.

MSRS 6863 - Vascular Invasive Imaging Procedures

Credits: (3)
Typically taught:
Fall [Full Sem]

Patient preparation and performance of medical imaging vascular invasive procedures are presented.

MSRS 6900 - Capstone: Clinical Fellowship & Portfolio

Credits: (3)
Typically taught:
Spring [Full Sem]

Experience in a radiology department and interventional Radiology coordinated by Weber State University under the supervision of a radiologist or other Medical Practitioner. Review and evaluation of student competencies, clinical performance and professional development as required by certification.

MSRS 6999 - Master's Thesis in Radiologic Sciences

Credits: (3)
Typically taught:
Spring [Full Sem]

Students will enroll for this course as they complete their Masters thesis under the direction of a departmental graduate advisor. Departmental seminars and readings may also be assigned as part of this course. Students will finish their Master of Science in Radiologic Sciences degree by first completing a course of classroom or didactic study, then writing an original research monograph for their thesis. This course is to be used during the time the student is writing the thesis and getting approval for the thesis.

MSRT 6010 - Medical Writing, Research Methods & Design

Credits: (3)
Typically taught:
Fall [Full Sem]

This course will assist students in developing writing skills that meet professional journal requirements. Students will

learn how to write research reports, abstracts, clinical case reports and scientific posters. Students will develop skills in effective editing, reviewing and proofreading. They will also develop skills that allow them to critically read published research articles in order to understand the validity and implications of the study results. Prerequisite: Acceptance into MSRT program.

MSRT 6020 - Medical Pathophysiology/Cardiopulmonary Case Reviews

Credits: (3)
Typically taught:
Fall [Full Sem]

Advanced-practice pathology of the heart and lungs presented in case study format for articulating a working diagnosis, treatment, and follow-up care based on an abundance of patient assessment techniques including patient history/physical, signs, symptoms, and ancillary radiographic evidence. Medical information gathered from research database articles are presented to enhance a decision-making rationale for the treatment of cardiopulmonary diseases. Prerequisite: Acceptance into MSRT program.

MSRT 6030 - Adult Learning Theory & Simulation Strategies

Credits: (3)
Typically taught:
Spring [Full Sem]

An application of teaching and learning theories for adult learners across variable clinical, laboratory, simulation lab, and in face-to-face interactions are explored within both traditional and non-traditional classroom settings. Teaching strategies and simulation designs are designed to support student learning for future respiratory therapy educators and clinical instructors. Prerequisite: Acceptance into MSRT program.

MSRT 6130 - Evidence-based Practice

Credits: (3)
Typically taught:
Spring [Full Sem]

This course explores research-based evidence of best practices for advanced respiratory care practitioners (RCP's) by identifying important questions, i.e., medication, ventilation strategies, protocols, etc. in the evaluation, diagnosis, or treatment of patients suffering abnormalities of the cardiopulmonary system. A methodological approach to evaluate practice is explored through a systematic literature search whereby the evidence manifest through particular treatments of a population can be expected. Prerequisite: Acceptance into MSRT program.

MSRT 6140 - Applied Research in Respiratory Care

Credits: (3)
Typically taught:
Spring [Full Sem]

Research is a fundamenal part of healthcare. This course will explore research opportunities specifically in the field of respiratory care. Basic statistical concepts will be reviewed. Nominal, ordinal, and continuous methods will also be

studied. Publishing the findings through an original research paper, an abstract, case report, and poster presentation will be a main focus for this course. Prerequisite: Acceptance into MSRT program.

MSRT 6410 - Certified Pulmonary Function Technologist (CPFT)

Credits: (3)
Typically taught:
Fall [Full Sem]

Evaluation and assessment of pulmonary disease is an important skill for the advanced-practice respiratory care practioner (RCP). Requisite to making an accurate diagnosis, practitioners must understand diagnostic measurements and recommend treatment of patients with specific pulmonary diseases. This course is essential to gain knowledge to pass the CPFT (NBRC) exam for Certified Pulmonary Function Technologists. Prerequisite: Acceptance into MSRT program.

MSRT 6420 - Sleep Disorders Specialty (SDS)

Credits: (3)
Typically taught:
Spring [Full Sem]

This course is essential to gain knowledge in the evaluation and treatment of sleep disorders in the context of a polysomnography lab and to pass the SDS (NBRC) credential for sleep disorder specialists. Prerequisite: Acceptance into MSRT program.

MSRT 6460 - Neonatal Pediatric Specialty (NPS)

Credits: (3)
Typically taught:
Spring [Full Sem]

This course prepares the advanced-practice respiratory care practitioner (RCP) to optimally participate in the assessment, management, and care of newborn and pediatric populations. The course includes development, common disease pathology, pharmacology, and management of neonatal patients, emergency treatment, and evaluation of conditions and abnormalities of the cardiopulmonary systems. This course wil prepare the practitioner for a national neonatal and pediatric specialty examination (NPS). Prerequisite: Acceptance into MSRT program.

MSRT 6470 - Adult Critical Care Specialty (ACCS)

Credits: (3)
Typically taught:
Spring [Full Sem]

This course prepares the advanced-practice respiratory care practitioner (RCP) to effectively evaluate, assess, manage and provide appropriate care to critically ill adult patients. This course extensively covers advanced airway and cardiovascular management, mechanisms of respiratory failure, analysis of laboratory and imaging results, specialty medical gasses and pharmacological agents, management of patients with infectious disease and sepsis, assisting and performing advanced procedures, and end-of-life care in the adult population. This course will prepare the practioner

for an advanced critical care specialty credentialing examination (ACCS). Prerequisite: Acceptance into MSRT program.

MSRT 6480 - Asthma Educator Specialty Credential (AE-C)

Credits: (3)
Typically taught:
Spring [Full Sem]

This course prepares the advanced-practice respiratory care practitioner (RCP) to optimally educate patients and family members of patients suffering with asthma. The course includes disease pathophysiology, assessment, pharmacology, classification, and management of asthma based on severity, emergency treatment and evaluation of treatment programs. This course will prepare the practitioner for a national asthma education certification examination (AE-C). Prerequisite: Acceptance into MSRT program.

MSRT 6700 - Capstone Project

Credits: (6)
Typically taught:
Spring [Full Sem]

This course is designed to be self-directed, faculty supervised culminating project specific to the eduational track that the student has chosen within the MSRT program (Education, Research or Health Administration). The student will demonstrate their firm grasp of their educational track and their mastery of professional/scientific writing through the development of a research paper. This course requires that the student develop a research question, prepare a learning contract that outlines their approach to the research question, and complete 40 hours of documented time with a mentor(s) who have a minimum of a Master's degree in a related area or in performing original research. The student will also assemble a formative committee to act as a resource as the student develops the research project and summative committee to evaluate and validate the student's research. The formative and summative committees each consist of three professionals with a minimum of a Master's degree. The student will complete a Masters level research paper that is a minimum of 40-50 pages in APA format. Prerequisite: Acceptance into MSRT program.

MTAX 6400 - Tax Research & Communication

Credits: (3)
Typically taught:
Fall [Full Sem]

Techniques in effective tax research, planning and communication. Also includes a discussion of tax policy.

MTAX 6405 - Accounting for Income Taxes

Credits: (3)
Typically taught:
~~Fall~~Spring [Full Sem]

Cash and accrual methods of accounting, inventories, accounting for book/tax disparities, income statement tax provision, original issue discount, depreciation methods, amortization, long-term contracts, changes in methods of

accounting, accounting periods, capitalization vs. expense, and other topics critical to bridging financial accounting and tax accounting.

MTAX 6410 - International Taxation

Credits: (3)
Typically taught:
Spring [Full Sem]

Principles of U.S. taxation applicable to inbound and outbound international transactions. Also covers issues related to international tax treaties.

MTAX 6430 - Advanced Individual Taxation

Credits: (3)
Typically taught:
Fall [Full Sem]

In-depth coverage of advanced individual tax issues such as alternative minimum tax, loss limitations, real estate transactions, stock options, employment taxes, tax credits, charitable contributions, interest classification, related-party transactions, and timing of income/loss recognition.

MTAX 6435 - State & Local Taxation/Federal Tax Practice

Credits: (3)
Typically taught:
Spring [Full Sem]

State income taxation, nexus, multijurisdictional operations, constitutional limitations, sales tax, excise tax, property tax; federal tax procedure, handling IRS audits, appeals, petitions to U.S. Tax Court, and other issues related to tax practice.

MTAX 6445 - Gifts, Estates, Trusts and Exempt Organizations

Credits: (3)
Typically taught:
Summer [Full Sem]

Principles of estate & gift taxation, exclusions, deductions, valuation issues, the unified credit, wills and intestate succession, income in respect of a decedent, income taxation of estates and trusts, income and estate/gift issues affecting donations to charity, nonprofit corporations, public charities, private foundations, excise taxes, unrelated business income, and compliance issues for tax-exempt entities.

MTAX 6450 - Real Estate Taxation

Credits: (3)
Typically taught:
Spring [Full Sem]

In-depth study and analysis of the taxation of real estate transactions. Covers topics such as like-kind exchanges, personal residences, real estate development, passive loss rules, involuntary conversions, casualty losses, and real estate investment trusts.

MTAX 6460 - Advanced Corporate Taxation

Credits: (3)
Typically taught:
Spring [Full Sem]
Summer [Full Sem]

Income taxation of corporations and shareholders. Includes in-depth analysis of tax issues related to corporate formations, operations, distributions and liquidations. Also covers the taxation of S corporations.

MTAX 6470 - Advanced Partnership Taxation

Credits: (3)
Typically taught:
Fall [Full Sem]
Summer [Full Sem]

Income taxation of partnerships and partners. Includes in-depth analysis of tax issues related to partnership formations, operations, distributions and liquidations. Also covers issues related to limited liability companies.

MTAX 6480 - Retirement Planning & Employee Benefits

Credits: (3)
Typically taught:
Fall [Full Sem]

Consideration of tax, insurance, investment and estate planning principles from a retirement perspective. Includes discussion of sources of retirement income and anticipated retirement expenses.

MTAX 6490 - Mergers, Acquisitions and Consolidations

Credits: (3)
Typically taught:
Summer [Full Sem]

In-depth coverage of advanced corporate tax topics such as tax-free corporate reorganizations, taxable stock acquisitions, taxable asset acquisitions, affiliated groups, consolidated returns, and corporate tax shelters. Prerequisite: (Recommended) MTAX 6460.

MTAX 6495 - Graduate Tax Internship

Credits: (1-3)
Typically taught:

Various

A significant professional-level field experience in the area of accounting or taxation. The student will be counseled and supervised as he/she applies and integrates the knowledge and skills obtained through MAcc/MTax courses. Credit/No Credit. Prerequisite: Admission to the Macc or MTax program; approval by department chair and program director. Can be repeated once up to six credit hours.

MTHE 3010 - Methods and Technology for Teaching Secondary Mathematics

Credits: (3)
Typically taught:
Spring [Full Sem]

Basic topics in secondary mathematics are taught to prospective teachers using a variety of methods of presentation and up-to-date technology, including the use of graphing calculators and computers. Prerequisite: MATH 1220 and at least 6 credit hours of MATH courses numbered 3000 or above.

MTHE 3020 - Methods and Technology for Teaching Advanced Secondary Mathematics

Credits: (3)
Aspects of teaching advanced mathematics in a high school setting, including methods of presentation, exploration, assessment and classroom management. An emphasis is placed on the use of computers, graphing calculators, and other technology. Prerequisite: MTHE 3010.

MTHE 3060 - Probability and Statistics for Elementary Teachers

Credits: (3)
Typically taught:
Spring [Full Sem]

Basic probability and statistics with an emphasis on topics and methods pertinent to prospective elementary school teachers. Prerequisite: MATH 2010 and MATH 2020.

MTHE 3070 - Geometry for Elementary Teachers

Credits: (3)
Typically taught:
Fall [Full Sem]

Basic Geometry with an emphasis on the topics and methods pertinent to prospective elementary school teachers. Prerequisite: MATH 2010 and MATH 2020.

MTHE 3080 - Number Theory for Elementary Teachers

Credits: (3)
Typically taught:
Spring [Full Sem]

Survey of elementary number theory concepts with applications to topics of interest plus teaching suggestions. Prerequisite: MATH 2010 and MATH 2020.

MTHE 4010 - Capstone Mathematics for High School Teachers

Credits: (3)
Typically taught:
Fall [Full Sem]

Prospective high school teachers revisit mathematics topics from the secondary school curriculum and examine them from an advanced perspective. The major emphasis is on topics from algebra and geometry. Prerequisite: MATH 3110 and MATH 3120.

MTHE 4020 - Capstone Mathematics for High School Teachers II

Credits: (3)
Prospective high school teachers revisit mathematics topics from the secondary school curriculum and examine them from an advanced perspective. The major emphasis is on topics from geometry. Prerequisite: MTHE 4010.

MTHE 4040 - Mathematical Problem Solving for Elementary Teachers

Credits: (3)
Typically taught:
Spring [Full Sem]

Mathematical problem solving, discussion of process, writing solutions, and writing extensions. Prerequisite: MATH 2010 and MATH 2020.

MTHE 4100 - Intuitive Calculus for Elementary Teachers

Credits: (3)
Prerequisite: MATH 2010 and MATH 2020.

MTHE 4700 - Senior Project in Elementary Mathematics Teaching

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Projects in preparing, teaching and revising sequential mathematics lessons for elementary students. Prerequisite: MATH 2010 and MATH 2020.

MTHE 5010 - Methods and Technology for Teaching Secondary Mathematics

Credits: (3)
Topics in secondary mathematics are taught to in-service teachers using a variety of methods and technology to make them better prepared for teaching secondary mathematics. Expository presentations about a current mathematics education research area are expected.

MTHE 5210 - Calculus with Analytic Geometry

Credits: (4)
Analytic geometry, differentiation, integration, and applications. Prerequisite: MATH 1050 and MATH 1060 or MATH 1080 or placement test.

MTHE 5220 - Calculus with Analytic Geometry

Credits: (4)
Transcendental functions, techniques of integration, conic sections, polar coordinates, infinite series, introduction to partial derivatives. Prerequisite: MTHE 5210.

MTHE 5230 - Mathematics Computer Laboratory

Credits: (1)
Computer solution of mathematics problems. Prerequisite: Approval of instructor. May be taken concurrently with any lower division mathematics course.

MTHE 5310 - Multivariable and Vector Calculus

Credits: (4)
Vectors, vector valued functions, motion in space, multivariable functions, partial derivatives, multiple integrals, integration in vector fields. Prerequisite: MTHE 5220.

MTHE 5350 - Linear Algebra and Differential Equations

Credits: (4)
Introduction to Linear Algebra and Differential Equations. Systems of linear equations, matrices, vector spaces, eigenvalues. First and second order differential equations and models, higher order linear equations, linear systems. Prerequisite: MTHE 5220.

MTHE 6120 - Euclidean and Non-Euclidean Geometry

Credits: (3)
Axiomatic development of geometry; Euclidean and non-Euclidean. Prerequisite: MTHE 5220.

MTHE 6160 - Number Theory

Credits: (3)
An overview of beginning number theory including the integers, modulo arithmetic, congruencies, Fermat's theorem and Euler's theorem. Prerequisite: MTHE 5210.

MTHE 6350 - Linear Algebra

Credits: (3)
Theory and applications of linear algebra including abstract vector spaces and canonical forms of matrices. Prerequisite: MTHE 5350.

MTHE 6410 - Probability and Statistics

Credits: (3)
The mathematical content of probability and statistics at the undergraduate post calculus level. An understanding of the application of probability and statistics is also stressed. Co-Requisite: MTHE 5310 or prerequisite of MTHE 5220 and consent of instructor.

MTHE 6420 - Probability and Statistics

Credits: (3)
The mathematical content of probability and statistics at the undergraduate post calculus level. An understanding of the application of probability and statistics is also stressed. Prerequisite: MTHE 6410

MTHE 6550 - Introduction to Mathematical Modeling

Credits: (3)
Formulation, solution and interpretation of mathematical models for problems occurring in areas of physical, biological and social science. Prerequisite: MTHE 5310 and 5350.

MTHE 6610 - Graph Theory

Credits: (3)
Principles of Graph Theory including methods and models, special types of graphs, paths and circuits, coloring, networks, and other applications. Prerequisite: MTHE 5210.

MTHE 6620 - Enumeration

Credits: (3)
Principles of Enumeration including counting principles, generating functions, recurrence relations, inclusion-exclusion, and applications. Prerequisite: MTHE 5210.

MTHE 6630 - Boundary Value Problems

Credits: (3)
Series solutions, Fourier series, separation of variables, orthogonal functions. Prerequisite: MTHE 5350.

MTHE 6640 - Differential Equations II

Credits: (3)
Matrix approach to linear systems, nonlinear systems, Laplace transforms. Prerequisite: MTHE 5350.

MTHE 6650 - Complex Variables

Credits: (3)
Analysis and applications of a function of a single complex variable. Analytic function theory, path integration, Taylor and Laurent series and elementary conformal mapping are studied. Prerequisite: MTHE 5310 and MTHE 5350.

MTHE 6660 - Modern Algebra I

Credits: (3)
Logic, sets, and the study of algebraic systems including groups, rings, and fields. Prerequisite: MTHE 5350.

MTHE 6670 - Modern Algebra II

Credits: (3)
Continuation of MATH 4110: advanced topics from groups, rings, and fields including the Sylow theorems and Galois theory. Prerequisite: MTHE 6660.

MTHE 6680 - Introductory Real Analysis

Credits: (3)
Develop the analysis underlying calculus. In-depth study of limits, continuity, integration, differentiation, sequences and series. Other topics may include Lebesgue measure and integration and Fourier Analysis. Prerequisite: MTHE 5310 and MTHE 5350

MTHE 6690 - Introductory Real Analysis

Credits: (3)
Develop the analysis underlying calculus. In-depth study of limits, continuity, integration, differentiation, sequences and series. Other topics may include Lebesgue measure and integration and Fourier Analysis. Prerequisite: MTHE 6680

MTHE 6700 - Topology

Credits: (3)
Introduction to point-set topology, including metric and topological spaces, continuity, homeomorphisms, compact and connected spaces, and complete metric spaces. Other topics may include the Baire Category Theorem and Tietze Extension Theorem. Prerequisite: MTHE 5310 and MTHE 5350.

MTHE 6710 - Numerical Analysis

Credits: (3)
Introduction to numerical methods. Use of the digital computer in solving otherwise intractable problems. Prerequisite: MTHE 5350 and CS 1410 or other approved programming language

MTHE 6720 - Numerical Analysis

Credits: (3)
Introduction to numerical methods. Use of the digital computer in solving otherwise intractable problems. Prerequisite: MTHE 6710

MTHE 6730 - Partial Differential Equations

Credits: (3)
First order equations, characteristics and classifications, Green's identities, models, transforms. Prerequisite: MTHE 6630.

MTHE 6740 - Mathematics for Teaching - Numbers and Operations

Credits: (3)
Provides teachers a deeper understanding of our number system and relate its structure to computation, arithmetic, algebra and problem solving. Course topics will include number, number sense, computation, and estimation and instructional strategies to facilitate the instruction of this content for elementary teachers. Prerequisite: A Bachelor's degree and at least one year of experience teaching elementary or junior high school mathematics.

MTHE 6750 - Mathematics for Teaching - Rational Numbers and Proportional Reasoning

Credits: (3)
Provides practicing teachers a deeper understanding of rational numbers, operations with rational numbers, and proportionality, and instructional strategies to facilitate the instruction of this content for elementary students. Prerequisite: A Bachelor's Degree and at least one year of teaching experience in an elementary or junior high school.

MTHE 6760 - Mathematics for Teaching - Algebraic Reasoning

Credits: (3)
Provides practicing teachers a deeper understanding of algebraic expressions, equations, functions, real numbers, and instructional strategies to facilitate the instruction of this content for elementary students. Prerequisite: A Bachelor's Degree and at least one year of teaching experience in an elementary or junior high school.

MTHE 6770 - Mathematics for Teaching - Geometry and Measurement

Credits: (3)
Provides practicing teachers a deeper understanding of the geometry and measurement content that exists in the state core and instructional strategies to facilitate the instruction of this content. Prerequisite: A Bachelor's Degree and at least one year of teaching experience in an elementary or junior high school.

MTHE 6780 - Mathematics for Teaching - Problem Solving and Data Analysis

Credits: (3)
This course will develop a firm problem-solving foundation. Using skills and strategies applied in mathematical contexts practicing teachers will learn to think, work with others, present solutions, and facilitate problem solving instruction in the classroom. This course will also provide practicing teachers a deeper understanding of probability and statistics content in the state core and instructional strategies to facilitate the instruction of this content. Prerequisite: A Bachelor's degree and at least one year of teaching experience in an elementary or junior high school.

MUSC 1006 - Concert Attendance I

Credits: (0)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

To be a successful musician, it is essential to develop excellent listening skills. Professional musicians are familiar with a wide variety of genres and styles. This course provides music students with opportunities to become familiar with the diversity of music that exists in our world. With this in mind, music majors and minors are expected to attend concerts and recitals on a regular basis. During the first two years of study, concert attendance is required and tracked by the department office staff. Students must concurrently enroll in applied music lessons. Credit/No Credit grading. May be repeated once.

MUSC 1010 CA - Introduction to Music

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

An introduction to music, its elements, language, and historical development. The course focuses on European and American music with components of jazz, world, and popular genres. Concert attendance outside of regularly scheduled class time is required. Not available to music majors.

MUSC 1020 - What Makes Us Human?: Creativity and the Humanities

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

This course will provide a broad Introduction to the Arts and Humanities as seen through the lenses of Plato's "Big Three": The Good, The True and The Beautiful. The perspective of the Good will be taken to look at the Arts and Humanities in society (their Role), that of the True to explore their scientific side (their Nature), and that of the Beautiful to investigate our interior, personal experience (their Meaning).

MUSC 1030 CA - Introduction to Jazz

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

A survey of jazz in America, including blues, ragtime, Dixieland, swing, bebop, cool, and fusion. Concert attendance outside of regularly scheduled class time is required.

MUSC 1033 CA - Introduction to American Music

Credits: (3)
Typically taught:
Fall [Online]
Spring [Full Sem]

Survey of music in America, including classical, jazz, rock, folk, and ethnic, within the context of American history.

MUSC 1035 CA - History of Rock and Roll

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]

This course is a survey of Rock Music styles from ca. 1950 to the present. We also discuss pre- and proto- rock styles such as Jazz, Blues, and popular song, reaching back into the late nineteenth century. In the course we will not only study the changing history of rock music (which requires discussion of non-rock music as well), but also the cultural forces that gave rise to those changes. Because of this historical perspective, our approach will be largely chronological, with an eye toward how various styles influenced one another.

MUSC 1040 CA/DV - Music of World Cultures

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Online]

An introduction to the music of cultures around the world, including India, Middle East, China, Japan, Indonesia, Sub-Saharan Africa, Europe, Latin America, Caribbean, Native American music, and Ethnic North America. The course discusses the influence of music on, and its relationship to, the various cultures and populations.

MUSC 1043 HU - Music, the Arts & Civilizations

Credits: (3)
Typically taught:
Fall [Full Sem]

This course is a chronological introduction to mostly western music that also explores its relationship to the other arts.

MUSC 1063 CA - Music in Religion

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]

An introduction to music in world religions and how it has shaped the history of man. Specific religious works and specific composers from numerous world denominations will be discussed: Judaism, Christianity, Islam, Hinduism, Sikhism, and Buddhism. Major religious works from European art music will be explored.

MUSC 1100 - Fundamentals of Music

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Melody, harmony, rhythm, notation, ear training, and sight-singing skills needed to meet entrance requirements for MUSC 1110 & MUSC 1130.

MUSC 1110 - Music Theory I

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Elementary harmony, primary and secondary triads with inversions, non harmonic tones, and modulation. Prerequisite: Complete Theory Placement exam with a score of 70% or higher or MUSC 1100 with a grade of "C" or higher. Must be taken concurrently with MUSC 1130, MUSC 1140. Music Majors and Minors only

MUSC 1120 - Music Theory II

Credits: (3)
Typically taught:
Spring [Full Sem]
Summer [Full Sem]

Elementary harmony, primary and secondary triads with inversions, non harmonic tones, and modulation. Must be taken concurrently with MUSC 1130, MUSC 1140. Music Majors and Minors only

MUSC 1130 - Sight-Singing & Aural Skills I

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Development of aural skills needed to function as a musician and teacher. Emphasis on progressively advancing aural perception using the "fixed do" system. Prerequisite: Complete Theory Placement exam with a score of 70% or higher or MUSC 1100 with a grade of "C" or higher. Must be taken concurrently with MUSC 1110, MUSC 1120. Music Majors and Minors only

MUSC 1140 - Sight-Singing & Aural Skills II

Credits: (1)
Typically taught:
Spring [Full Sem]
Summer [Full Sem]

Development of aural skills needed to function as a musician and teacher. Emphasis on progressively advancing aural perception using the "fixed do" system. Must be taken concurrently with MUSC 1110, MUSC 1120. Music Majors and Minors only

MUSC 1143 - Music Theory for Musical Theatre

Credits: (4)
Typically taught:
Fall [Full Sem]

Development of aural and vocal skills as they pertain to the Musical Theatre performer and practitioner. Emphasis on harmony, melody, rhythm, notation and applicable keyboard skills.

MUSC 1150 - Class Piano I

Credits: (1)
Typically taught:
Fall [Full Sem]

Beginning piano instruction with emphasis on reading, technical facility and sound musicianship. Prerequisite: Complete Theory Placement exam with a score of 70% or higher or MUSC 1100 with a grade of "C" or higher. Music Majors and Minors only

MUSC 1160 - Class Piano II

Credits: (1)
Typically taught:
Spring [Full Sem]
Summer [Full Sem]

Beginning piano instruction with emphasis on reading, technical facility and sound musicianship. Music Majors and Minors only

MUSC 1321 - Basic Piano for Adults

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Beginning instruction in keyboard for non-music majors and minors. Students must have access to a piano for practice.

MUSC 1500 - Beginning & Intermediate Classical Guitar

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Beginner and intermediate class instruction in classical guitar, including technique, repertoire, and history of the instrument. May be repeated up to 10 times for credit.

MUSC 1501 - Modern Guitar Styles

Credits: (1)
This entry-level course offers instruction in pick-style guitar. Styles covered include folk, rock, jazz, and popular. Special emphasis on note reading and basic musicianship.

MUSC 1502 - Violin Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1503 - Viola Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1504 - Cello Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1505 - String Bass Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1506 - Guitar Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1507 - Harp Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1510 - Trumpet Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1511 - French Horn Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1512 - Trombone Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1513 - Euphonium/Tuba Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1520 - Percussion Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1530 - Voice Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1540 - Flute Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1541 - Oboe Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1542 - Clarinet Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1543 - Saxophone Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1544 - Bassoon Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1601 - Private Instruction

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Individual lessons, vocal or instrumental. For those students not pursuing a major or minor in music. May be repeated ~~29~~19 times with a maximum of ~~30~~20 credit hours. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors.

MUSC 1610 - Applied Keyboard: Piano

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music Majors or Minors with a Keyboard Emphasis only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours~~. Music Majors and Minors only~~.

MUSC 1611 - Applied Keyboard: Organ

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours~~. Music Majors and Minors only~~.

MUSC 1620 - Applied Voice

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours~~. Music Majors and Minors only~~.

MUSC 1630 - Applied Woodwinds: Flute

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours~~. Music Majors and Minors only~~.

MUSC 1631 - Applied Woodwinds: Oboe

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours~~. Music Majors and Minors only~~.

MUSC 1632 - Applied Woodwinds: Clarinet

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours~~. Music Majors and Minors only~~.

MUSC 1633 - Applied Woodwinds: Saxophone

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours~~. Music Majors and Minors only~~.

MUSC 1634 - Applied Woodwinds: Bassoon

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours~~. Music Majors and Minors only~~.

MUSC 1640 - Applied Brass: Trumpet

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours~~. Music Majors and Minors only~~.

MUSC 1641 - Applied Brass: French Horn

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours~~. Music Majors and Minors only~~.

MUSC 1642 - Applied Brass: Trombone

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours~~. Music Majors and Minors only~~.

MUSC 1643 - Applied Brass: Euphonium/Tuba

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours~~. Music Majors and Minors only~~.

MUSC 1650 - Applied Strings: Violin

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours~~. Music Majors and Minors only~~.

MUSC 1651 - Applied Strings: Viola

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours~~. Music Majors and Minors only~~.

MUSC 1652 - Applied Strings: Violoncello

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours~~. Music Majors and Minors only~~.

MUSC 1653 - Applied Strings: String Bass

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours~~. Music Majors and Minors only~~.

MUSC 1654 - Applied Strings: Guitar

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours~~. Music Majors and Minors only~~.

MUSC 1655 - Applied Strings: Harp

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours~~. Music Majors and Minors only~~.

MUSC 1660 - Applied Percussion

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours~~. Music Majors and Minors only~~.

MUSC 1673 - Private Instruction

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~All performance areas. Two hours~~Music majors and minors only. For vocal or instrumental students. Two hours of instruction/week. Minimum of 18 hours/week practice required. One-half hour special assignment. By consent of instructor only. May be taken for credit up to three times in any area of specialization.~~ Music Majors and Minors only~~ Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors.

MUSC 1730 - Keyboard Ensemble

Credits: (1)
Training in piano ensemble situations to develop fluency in reading. Keyboard majors and minors only. Fulfills the major ensemble requirement for music majors. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1740 - Weber State Concert Choir

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Fulfills the major ensemble requirement for music majors and minors. Membership by audition or consent of instructor. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1741 - Chamber Choir

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A highly select group of approximately 24 singers performing the entire range of small choir literature. Fulfills the chamber ensemble requirement for music majors. By audition only. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1743 - Vocal Chamber Ensemble

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Training in small vocal groups such as trios, quartets, and sextets. Fulfills the chamber ensemble requirement for music majors. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1744 - Musical Theatre

Credits: (1-2)
Rehearsal and performance of musical theatre productions. By audition only. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1745 - Weber State Community Choir

Credits: (1)
Typically taught:
(Evening only.)

Membership by audition or consent of instructor. Does not fulfill any ensemble requirement for music majors or minors. May be repeated 7 times with a maximum of 8 credit hours. Note: This course is not currently active.

MUSC 1750 - Symphonic Band

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Membership by audition or consent of instructor. Emphasis is on the study and preparation of modern symphonic band literature. Fulfills the major ensemble requirement for music majors and minors. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1751 - Wind Ensemble

Credits: (1)
Typically taught:
Spring [Full Sem]

Membership by audition or consent of instructor. Emphasis is on study and performance of literature for selected wind and percussion ensembles of varying size. Participants may be required to participate in symphonic band. Fulfills the major ensemble requirement for music majors and minors. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1752 - Marching Band

Credits: (2)
Typically taught:
Fall [Full Sem]

By audition and/or consent of the director to students on flags, rifles, and band instruments. Fulfills the major ensemble requirement for music majors and minors. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1753 - Jazz Ensemble

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Membership by audition or consent of instructor. Fulfills the chamber ensemble requirement for music majors. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1754 - Percussion Ensemble

Credits: (1)
Typically taught:

Spring [Full Sem]

Membership by audition or consent of instructor. Fulfills the chamber ensemble requirement for music majors. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1755 - Instrumental Chamber Ensemble

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Training in instrumental chamber ensembles such as trios, quartets, quintets, and sextets. Fulfills the chamber ensemble requirement for music majors. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1756 - Pep Band

Credits: (1)
Typically taught:
Spring [Full Sem]

Plays at athletic functions using contemporary jazz, rock, and popular music. By audition. Does not fulfill any ensemble requirement for music majors or minors. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1760 - Weber State Symphony Orchestra

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Membership by audition or consent of instructor. Full symphony orchestra instrumentation. Fulfills the major ensemble requirement for music majors and minors. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1761 - Chamber Orchestra

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Membership by audition or consent of instructor. Fulfills the chamber ensemble requirement for music majors. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1762 - Theatre Orchestra

Credits: (1-2)
Membership by audition or consent of instructor. Instrumentation determined by the music production being

presented. Does not fulfill any ensemble requirement for music majors or minors. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1763 - Guitar Ensemble

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Membership by audition or consent of instructor. Fulfills the major ensemble requirement for music majors and minors. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 1901 - Music: The First-Year Experience

Credits: (1)
Typically taught:
Fall [Full Sem]

Introduction to the music area and its programs, including email usage, department policies and procedures, career options, and curriculum. Music Majors and Minors only

MUSC 1911 - Introduction to Music Technology

Credits: (1)
Typically taught:
Spring [Full Sem]

Introduction to uses of technology in music teaching and performance, including use of music composition and multimedia software. Music Majors and Minors only

MUSC 2006 - Concert Attendance II

Credits: (0)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

To be a successful musician, it is essential to develop excellent listening skills. Professional musicians are familiar with a wide variety of genres and styles. This course provides music students with opportunities to become familiar with the diversity of music that exists in our world. With this in mind, music majors and minors are expected to attend concerts and recitals on a regular basis. During the first two years of study, concert attendance is required and tracked by the department office staff. Students must concurrently enroll in applied music lessons. Credit/No Credit grading. May be repeated once.

MUSC 2110 - Music Theory III

Credits: (3)
Typically taught:
Fall [Full Sem]

Continuation of Theory II. Includes altered, borrowed, and other unique chord sonorities; advanced modulation; 20th century compositional techniques; analysis; and projects that will explore application of theoretical concepts. Prerequisite: MUSC 1120 and MUSC 1140 or equivalents. Must be taken concurrently with MUSC 2130, MUSC 2140. Music Majors and Minors only

MUSC 2120 - Music Theory IV

Credits: (3)
Typically taught:
Spring [Full Sem]

Continuation of Theory II. Includes altered, borrowed, and other unique chord sonorities; advanced modulation; 20th century compositional techniques; analysis; and projects that will explore application of theoretical concepts. Prerequisite: MUSC 1120 and MUSC 1140 or equivalents. Must be taken concurrently with MUSC 2130, MUSC 2140. Music Majors and Minors only

MUSC 2130 - Sight Singing & Aural Skills III

Credits: (1)
Typically taught:
Fall [Full Sem]

Continuation of Sight-Singing & Aural Skills II. Development of more advanced listening skills and of ability to recognize and correct performance errors. Prerequisite: MUSC 1120 and MUSC 1140 or equivalents. Must be taken concurrently with MUSC 2110, MUSC 2120. Music Majors and Minors only

MUSC 2140 - Sight Singing & Aural Skills IV

Credits: (1)
Typically taught:
Spring [Full Sem]

Continuation of Sight Singing & Aural Skills II. Development of more advanced listening skills and of ability to recognize and correct performance errors. Prerequisite: MUSC 1120 and MUSC 1140 or equivalents. Must be taken concurrently with MUSC 2110, MUSC 2120. Music Majors and Minors only

MUSC 2150 - Class Piano III

Credits: (1)
Typically taught:
Fall [Full Sem]

Continuation of MUSC 1160 with emphasis on advanced reading, further development of technical facility and expanded concepts of musicianship. Prerequisite: MUSC 1160 or placement by audition, and MUSC 1120 and MUSC 1140. Music Majors and Minors only

MUSC 2160 - Class Piano IV

Credits: (1)
Typically taught:
Spring [Full Sem]

Continuation of MUSC 1160 with emphasis on advanced reading, further development of technical facility and expanded concepts of musicianship. Prerequisite: MUSC 1160 or placement by audition, and MUSC 1120 and MUSC 1140. Music Majors and Minors only

MUSC 2202 - Survey of Music History & Literature I

Credits: (2)
A survey of the development of the historical and stylistic periods of European art music from ca 400-1750. Required for Music History credit for all Music Minors. Prerequisite: MUSC 1110 and MUSC 1130. Open to all university students who have completed MUSC 1010. Does not fulfill Creative Arts or Humanities credit. Music Majors and Minors only

MUSC 2212 - Survey of Music History & Literature II

Credits: (2)
Typically taught:
Spring [Full Sem]

A survey of the development of the historical and stylistic periods of European art music from ca 1750-20th century. Required for Music History credit for all Music Minors. Prerequisite: MUSC 1110 and MUSC 1130. Open to all university students who have completed MUSC 1010. Does not fulfill Creative Arts or Humanities credit. Music Majors and Minors only

MUSC 2321 - Principles of Piano Accompanying I

Credits: (1)
Typically taught:
Fall [Full Sem]

To learn the art of accompaniment, to become knowledgeable about repertoire and style, and to improve sight reading. Prerequisite: Piano proficiency. Music Majors and Minors only

MUSC 2331 - Principles of Piano Accompanying II

Credits: (1)
Typically taught:
Spring [Full Sem]

To learn the art of accompaniment, to become knowledgeable about repertoire and style, and to improve sight reading. Prerequisite: Piano proficiency. Music Majors and Minors only

MUSC 2540 - Instrumental Techniques for Choral Majors

Credits: (2)
Typically taught:
Fall [Full Sem] even years

A course for Choral Music Education majors that encompasses a practical and analytical approach to the understanding of basic playing and teaching techniques of the band and orchestral instruments. Music Majors and Minors only

MUSC 2610 - Applied Keyboard: Piano

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music Majors or Minors with a Keyboard Emphasis only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours~~. Music Majors and Minors only~~.

MUSC 2611 - Applied Keyboard: Organ

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours.~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 2620 - Applied Voice

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours. Music~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 2630 - Applied Woodwinds: Flute

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours.~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 2631 - Applied Woodwinds: Oboe

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours. Music~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 2632 - Applied Woodwinds: Clarinet

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours.~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 2633 - Applied Woodwinds: Saxophone

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours. Music~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 2634 - Applied Woodwinds: Bassoon

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours.~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 2640 - Applied Brass: Trumpet

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours. Music~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 2641 - Applied Brass: French Horn

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours.~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 2642 - Applied Brass: Trombone

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours. Music~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 2643 - Applied Brass: Euphonium/Tuba

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours. ~~Music Majors and Minors only.~~

MUSC 2650 - Applied Strings: Violin

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours. Music~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 2651 - Applied Strings: Viola

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours. ~~Music Majors and Minors only.~~

MUSC 2652 - Applied Strings: Violoncello

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours. Music~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 2653 - Applied Strings: String Bass

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours. ~~Music Majors and Minors only.~~

MUSC 2654 - Applied Strings: Guitar

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours. ~~Music Majors and Minors only.~~

MUSC 2655 - Applied Strings: Harp

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours. ~~Music Majors and Minors only.~~

MUSC 2660 - Applied Percussion

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours. ~~Music Majors and Minors only.~~

MUSC 2673 - Private Instruction

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~All performance areas. Two hours~~Music majors and minors only. For vocal or instrumental students. Two hours of instruction/week. Minimum of 18 hours/week practice required. One-half hour special assignment. By consent of instructor only. May be taken for credit up to three times in any area of specialization. ~~May be repeated for credit. Music Majors and Minors only~~Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors.

MUSC 2821 - Percussion Methods I

Credits: (1)
Typically taught:
Fall [Full Sem] even years

A practical and analytical approach to teaching and playing percussion instruments, including selection of appropriate repertoire and minor repair. Music Majors and Minors only

MUSC 2822 - Percussion Methods II

Credits: (1)
Typically taught:
Spring [Full Sem] odd years

A continuation of MUSC 2821. Prerequisite: MUSC 2821. Music Majors and Minors only

MUSC 2841 - Brass Methods I

Credits: (1)
Typically taught:
Fall [Full Sem] even years

A practical and analytical approach to teaching and playing brass instruments, including selection of appropriate repertoire and minor repair. Music Majors and Minors only

MUSC 2842 - Brass Methods II

Credits: (1)
Typically taught:
Spring [Full Sem] odd years

A continuation of MUSC 2841. Prerequisite: MUSC 2841. Music Majors and Minors only

MUSC 2851 - Woodwind Methods I

Credits: (1)
Typically taught:
Fall [Full Sem] odd years

A practical and analytical approach to teaching and playing woodwind instruments, including selection of appropriate repertoire and minor repair. Music Majors and Minors only

MUSC 2852 - Woodwind Methods II

Credits: (1)
Typically taught:
Spring [Full Sem] even years

A continuation of MUSC 2851. Prerequisite: MUSC 2851 Music Majors and Minors only

MUSC 2871 - String Methods I

Credits: (1)
Typically taught:
Fall [Full Sem] odd years

A practical and analytical approach to teaching and playing string instruments, including selection of appropriate repertoire and minor repair. Music Majors and Minors only

MUSC 2872 - String Methods II

Credits: (1)
Typically taught:
Spring [Full Sem] even years

A continuation of MUSC 2871. Prerequisite: MUSC 2871 Music Majors and Minors only

MUSC 2881 - Vocal Workshop

Credits: (1)
Development of the singing voice with special attention to freedom of tones, purity of vowels, interpretation, diction, and flexibility. Music Majors and Minors only

MUSC 2890 - Cooperative Work Experience

Credits: (1-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Open to all students in the music area who meet the minimum cooperative work experience requirements of the department. Provides academic credit for on-the-job experience. Grade and amount of credit will be determined by the department. May be repeated to a maximum of 6 credits. Music Majors and Minors only

MUSC 2910 - Opera Production

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Preparation of operatic scenes and music. Music and staging rehearsal venue for the preparation of fully staged opera productions. May be repeated up to 10 times.

MUSC 2920 - Short Courses, Workshops, Institutes, and Special Programs

Credits: (1-4)
Consult the class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript May be repeated 3 times with a maximum of 6 credit hours. Music Majors and Minors only

MUSC 3102 - Counterpoint

Credits: (2)
Typically taught:
Spring [Full Sem] odd years

Eighteenth century polyphonic techniques including the five contrapuntal species, formal processes, analysis, and compositional application of concepts studied. Prerequisite: MUSC 2120 and MUSC 2140 or equivalents. Music Majors and Minors only

MUSC 3112 - Orchestration

Credits: (2)
Typically taught:
Spring [Full Sem] even years

An exploration of principles of arranging music for instrumental sections and instrumental combinations. Prerequisite: MUSC 2120 and MUSC 2140 or equivalents. Music Majors and Minors only

MUSC 3122 - Choral Arranging

Credits: (2)
Typically taught:
Spring [Full Sem] odd years

An exploration of principles of arranging music for various voice groups. Prerequisite: MUSC 2120 and MUSC 2140 or equivalent. Music Majors and Minors only

MUSC 3205 - Music History I: Medieval and Renaissance Music

Credits: (2)
Typically taught:
Fall [Full Sem]

A survey of the developments in European art music, ca. 400-1600. The course emphasizes stylistic and critical analysis of representative compositions within historical and cultural contexts. Prerequisite: MUSC 1120 and MUSC 1140.

MUSC 3206 - Music History II: Baroque and Classical Music

Credits: (3)
Typically taught:
Spring [Full Sem]

A survey of the developments in European art music, ca. 1600-1820. The course emphasizes stylistic and critical analysis of representative compositions within historical and cultural contexts. Prerequisite: MUSC 3205.

MUSC 3207 - Music History III: Music of the 19th through the 21st Centuries

Credits: (3)
Typically taught:
Fall [Full Sem]

A survey of the developments in European art music, ca. 1800-2000. The course emphasizes stylistic and critical analysis of representative compositions within historical and cultural contexts. Prerequisite: MUSC 3206.

MUSC 3208 - World Music

Credits: (2)
Typically taught:
Spring [Full Sem]

An in-depth exploration of selected music outside the European/ American art and popular traditions. Attention will be given to musical elements and systems, as well as to the participation of music within culture and society. Open to both music and non-music majors. Prerequisite: MUSC 3207 for music majors; MUSC 1010 or MUSC 1040 for non-music majors

MUSC 3302 - Keyboard Literature I-II

Credits: (2)
Typically taught:
Fall [Full Sem] even years

Keyboard literature to acquaint the student with historical and stylistic periods of music. Music Majors and Minors only

MUSC 3312 - Keyboard Literature I-II

Credits: (2)
Typically taught:
Spring [Full Sem] odd years

Keyboard literature to acquaint the student with historical and stylistic periods of music. Music Majors and Minors only

MUSC 3402 - Vocal Literature I

Credits: (2)
Typically taught:
Fall [Full Sem] odd years

A study of a cross-section of vocal literature leading to knowledge of styles, composers, performance practice, and basic phonetics in commonly-used languages. Prerequisite: Piano proficiency and a minimum of two years of private voice instruction. Music Majors and Minors only

MUSC 3412 - Vocal Literature II

Credits: (2)
Typically taught:
Spring [Full Sem] even years

A continuation of MUSC 3402. Prerequisite: MUSC 3402. Music Majors and Minors only

MUSC 3502 - Violin Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3503 - Viola Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3504 - Cello Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]

Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3505 - String Bass Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3506 - Guitar Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3507 - Harp Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3510 - Trumpet Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3511 - French Horn Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3512 - Trombone Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3513 - Euphonium/Tuba Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3520 - Percussion Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3525 - ArtsBridge

Credits: (1-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

ArtsBridge is a course that provides undergraduate students with an internship and academic credit for designing and implementing a comprehensive, needs-based, integrated arts project with community organizations or area schools. The course will offer students a clear structure and process for navigating the complexities of community engagement. ArtsBridge students will work closely with a WSU faculty mentor, community/school stakeholder, peers, and the ArtsBridge program coordinator throughout the process culminating in the development of an arts integrated project. Prerequisite: Recommendation by education supervisor in fine arts content area faculty mentor. Content methodology course(s) completed or in progress. Following faculty recommendation, please contact the ArtsBridge coordinator for an interview.

MUSC 3530 - Voice Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3540 - Flute Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3541 - Oboe Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3542 - Clarinet Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3543 - Saxophone Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3544 - Bassoon Master Class

Credits: (1)
Typically taught:
Fall [Full Sem]

Spring [Full Sem]

May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3601 - Private Instruction

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Individual lessons, vocal or instrumental. For those students not pursuing a major or minor in music. May be repeated ~~29~~19 times with a maximum of ~~30~~20 credit hours. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors.

MUSC 3610 - Applied Keyboard: Piano

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours.~~ Music Majors ~~and~~or Minors with a Keyboard Emphasis only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 3611 - Applied Keyboard: Organ

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours. Music~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 3620 - Applied Voice

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours.~~ Music majors and minors only. Students are responsible

for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 3630 - Applied Woodwinds: Flute

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours~~. Music Majors and Minors only~~.

MUSC 3631 - Applied Woodwinds: Oboe

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours.~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 3632 - Applied Woodwinds: Clarinet

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours. Music~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 3633 - Applied Woodwinds: Saxophone

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours.~~ Music majors and minors only. Students are responsible

for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 3634 - Applied Woodwinds: Bassoon

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours. Music~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 3640 - Applied Brass: Trumpet

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours.~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 3641 - Applied Brass: French Horn

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours. Music~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 3642 - Applied Brass: Trombone

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours.~~ Music majors and minors only. Students are responsible

for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 3643 - Applied Brass: Euphonium/Tuba

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours. Music~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 3650 - Applied Strings: Violin

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours. ~~Music Majors and Minors only.~~

MUSC 3651 - Applied Strings: Viola

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours. Music~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 3652 - Applied Strings: Violoncello

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours.~~ Music majors and minors only. Students are responsible

for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 3653 - Applied Strings: String Bass

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours. Music~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 3654 - Applied Strings: Guitar

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours.~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 3655 - Applied Strings: Harp

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours. Music~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 3660 - Applied Percussion

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See

the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours. ~~Music Majors and Minors only.~~

MUSC 3673 - Private Instruction

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~All performance areas. Two hours~~Music majors and minors only. For vocal or instrumental students. Two hours of instruction/week. Minimum of 18 hours/week practice required. One-half hour special assignment. By consent of instructor only. May be taken for credit up to three times in any area of specialization. ~~Music Majors and Minors only~~Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors.

MUSC 3730 - Keyboard Ensemble

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Training in piano ensemble situations to develop fluency in reading. Keyboard majors and minors only. Fulfills the major ensemble requirement for music majors. May be repeated 7 times with a maximum of 8 credit hours. Music Majors and Minors only.

MUSC 3740 - Weber State Concert Choir

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Fulfills the major ensemble requirement for music majors and minors. Membership by audition or consent of instructor. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3741 - Chamber Choir

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A highly select group of approximately 24 singers performing the entire range of small choir literature. Fulfills the chamber ensemble requirement for music majors. By audition only. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3743 - Vocal Chamber Ensemble

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Training in small vocal groups such as trios, quartets, and sextets. Fulfills the chamber ensemble requirement for music majors. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3744 - Musical Theatre

Credits: (1-2)
Rehearsal and performance of musical theatre productions. By audition only. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3745 - Weber State Community Choir

Credits: (1)
Typically taught:
(Evening only.)

Membership by audition or consent of instructor. Does not fulfill any ensemble requirement for music majors or minors. May be repeated 7 times with a maximum of 8 credit hours. Note: This course is not currently active.

MUSC 3750 - Symphonic Band

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Membership by audition or consent of instructor. Emphasis is on the study and preparation of modern symphonic band literature. Fulfills the major ensemble requirement for music majors and minors. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3751 - Wind Ensemble

Credits: (1)
Typically taught:
Spring [Full Sem]

Membership by audition or consent of instructor. Emphasis is on study and performance of literature for selected wind and percussion ensembles of varying size. Participants may be required to participate in symphonic band. Fulfills the major ensemble requirement for music majors and minors. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3752 - Marching Band

Credits: (2)
Typically taught:
Fall [Full Sem]

By audition and/or consent of the director to students on flags, rifles, and band instruments. Fulfills the major ensemble requirement for music majors and minors. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3753 - Jazz Ensemble

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Membership by audition or consent of instructor. Fulfills the chamber ensemble requirement for music majors. May be repeated up to 10 times.

MUSC 3754 - Percussion Ensemble

Credits: (1)
Typically taught:
Spring [Full Sem]

Membership by audition or consent of instructor. Fulfills the chamber ensemble requirement for music majors. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3755 - Instrumental Chamber Ensemble

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Training in instrumental chamber ensembles such as trios, quartets, quintets, and sextets. Fulfills the chamber ensemble requirement for music majors. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3756 - Pep Band

Credits: (1)
Typically taught:
Spring [Full Sem]

Plays at athletic functions using contemporary jazz, rock, and popular music. By audition. Does not fulfill any ensemble requirement for music majors or minors. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3760 - Weber State Symphony Orchestra

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Membership by audition or consent of instructor. Full symphony orchestra instrumentation. Fulfills the major ensemble requirement for music majors and minors. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3761 - Chamber Orchestra

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Membership by audition or consent of instructor. Fulfills the chamber ensemble requirement for music majors. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3762 - Theatre Orchestra

Credits: (1-2)
Membership by audition or consent of instructor. Instrumentation determined by the music production being presented. Does not fulfill any ensemble requirement for music majors or minors. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3763 - Guitar Ensemble

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Membership by audition or consent of instructor. Fulfills the major ensemble requirement for music majors and minors. May be repeated 7 times with a maximum of 8 credit hours.

MUSC 3822 - Instrumental Conducting I-II

Credits: (2)
Typically taught:
Fall [Full Sem]

Basic conducting technique and advanced techniques for conducting instrumental ensembles. Prerequisite: MUSC 1120/MUSC 1140. Music Majors and Minors only

MUSC 3823 - Instrumental Conducting I-II

Credits: (2)
Typically taught:

Spring [Full Sem]

Basic conducting technique and advanced techniques for conducting instrumental ensembles. Prerequisite: MUSC 1120 and MUSC 1140. Music Majors and Minors only

MUSC 3824 - Music for Elementary Teachers

Credits: (4)
Typically taught:
Fall [Full Sem]

Methods and materials for teaching elementary school music (grades K-6) including skill development on selected elementary classroom instruments.

MUSC 3840 - Form and Analysis

Credits: (2)
Typically taught:
Fall [Full Sem]

A study of basic musical form with particular emphasis on the most important contrapuntal and homophonic styles from the Baroque Period forward. The course coordinates the study of the forms of individual genres with their history and role in the continuous development of music. Prerequisite: MUSC 2120 and 2140. Music Majors and Minors only

MUSC 3842 - Producing the School Musical

Credits: (2)
Typically taught:
Spring [Full Sem] odd years

A detailed study of musical theatre and the practical application of skills, techniques, and materials necessary for production in secondary schools. Music Majors and Minors only

MUSC 3851 - Stringed Instrument Pedagogy I

Credits: (2)
Typically taught:
Fall [Full Sem]

An in-depth study of pedagogical methods employed in teaching the four orchestral stringed instruments to beginning and intermediate level students. Prerequisite: MUSC 2871/MUSC 2872. May be repeated up to 9 credit hours. Music Majors and Minors only

MUSC 3852 - Stringed Instrument Pedagogy II

Credits: (2)
Continued in-depth study of pedagogical methods employed in teaching the four orchestral stringed instruments with a focus on upper intermediate and advanced level students. Prerequisite: MUSC 3851. Music Majors and Minors only

MUSC 3872 - Choral Conducting I-II

Credits: (2)
Typically taught:
Fall [Full Sem] even years

Basic conducting technique and advanced techniques for techniques for conducting choral ensembles. Prerequisite: MUSC 1120 and MUSC 1140. Music Majors and Minors only

MUSC 3882 - Choral Conducting I-II

Credits: (2)
Typically taught:
Spring [Full Sem] even years

Basic conducting technique and advanced techniques for techniques for conducting choral ensembles. Prerequisite: MUSC 1120 and MUSC 1140. Music Majors and Minors only

MUSC 3924 - Music Teaching and Learning in the Elementary School

Credits: (4)
As an introduction to the role of music in the lives of children, this course provides opportunities for music majors to develop their rapport with elementary students. The course will include selecting literature and designing effective instructional strategies aligned with the Utah K-6 music core curriculum as well as the national music standards. Students will be introduced to different philosophical and pedagogical approaches as well as develop and implement age-appropriate assessment strategies. Students will develop their understanding of music's role in an interdisciplinary curriculum. A field experience with elementary-age students is required. Prerequisite: Completed Piano Proficiency. Music Majors and Minors only

MUSC 3991 - Junior Recital

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Applied instruction in preparation for and public performance of a 30 minute recital. Prerequisite: Piano proficiency. Music Majors and Minors only

MUSC 4302 - Keyboard Pedagogy I-II

Credits: (2)
Typically taught:
Fall [Full Sem] odd years

Comprehensive study of performance pedagogy. Music Majors and Minors only

MUSC 4312 - Keyboard Pedagogy I-II

Credits: (2)
Typically taught:
Spring [Full Sem] even years

Comprehensive study of performance pedagogy. Music Majors and Minors only

MUSC 4402 - Vocal Pedagogy I-II

Credits: (2)
Typically taught:
Fall [Full Sem] even years

Comprehensive study of the principles, rules and procedures pertaining to the development, exercise, and practice of the art of singing and the science of teaching singing. Music Majors and Minors only

MUSC 4412 - Vocal Pedagogy I-II

Credits: (2)
Typically taught:
Spring [Full Sem] odd years

Comprehensive study of the principles, rules and procedures pertaining to the development, exercise, and practice of the art of singing and the science of teaching singing. Music Majors and Minors only

MUSC 4610 - Applied Keyboard: Piano

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music Majors or Minors with a Keyboard Emphasis only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours~~. Music Majors and Minors only~~.

MUSC 4611 - Applied Keyboard: Organ

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours.~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 4620 - Applied Voice

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours. Music~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 4630 - Applied Woodwinds: Flute

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours.~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 4631 - Applied Woodwinds: Oboe

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours. Music~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 4632 - Applied Woodwinds: Clarinet

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours.~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 4633 - Applied Woodwinds: Saxophone

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours. Music~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 4634 - Applied Woodwinds: Bassoon

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours.~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 4640 - Applied Brass: Trumpet

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours. Music~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 4641 - Applied Brass: French Horn

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours.~~ Music majors and minors only. Students are responsible

for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 4642 - Applied Brass: Trombone

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours. Music~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 4643 - Applied Brass: Euphonium/Tuba

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours. ~~Music Majors and Minors only.~~

MUSC 4650 - Applied Strings: Violin

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours. Music~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 4651 - Applied Strings: Viola

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See

the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours. ~~Music Majors and Minors only.~~

MUSC 4652 - Applied Strings: Violoncello

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~May be repeated 3 times with a maximum of 4 credit hours. Music~~ Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours.

MUSC 4653 - Applied Strings: String Bass

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours. ~~Music Majors and Minors only.~~

MUSC 4654 - Applied Strings: Guitar

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours. ~~Music Majors and Minors only.~~

MUSC 4655 - Applied Strings: Harp

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See

the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours. ~~Music Majors and Minors only.~~

MUSC 4660 - Applied Percussion

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Music majors and minors only. Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors. May be repeated 3 times with a maximum of 4 credit hours. ~~Music Majors and Minors only.~~

MUSC 4673 - Private Instruction

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~All performance areas.~~Music majors and minors only. For vocal or instrumental students. Two hours of instruction/week. Minimum of 18 ~~hrs/wk~~hours/week practice required. One-half hour special assignment. By consent of instructor only. May be taken for credit up to three times in any area of specialization. ~~May be repeated for credit. Music Majors and Minors only~~Students are responsible for contacting individual instructors to schedule lessons. See the Music website for a list of private instructors.

MUSC 4771 - Stringed Instrument Literature I

Credits: (2)
A study of music for technical development, plus solo, and chamber music literature of the stringed instruments of the orchestra. This class will focus on music for beginning and intermediate students. Prerequisite: MUSC 2871/MUSC 2872. Music Majors and Minors only

MUSC 4772 - Stringed Instrument Literature II

Credits: (2)
Advanced study of music for technical development, plus solo, and chamber music literature of the stringed instruments of the orchestra. This class will focus on music for upper intermediate and advanced students. Prerequisite: MUSC 4771.

MUSC 4801 - College of Arts & Humanities Leadership Lecture Series

Credits: (1)
Typically taught:
Spring [Full Sem]

This one-credit elective course will give arts and humanities' majors the opportunity to interact with successful guest lecturers whose undergraduate backgrounds are in the arts and humanities. Lecturers will clarify how the talents and skills associated with their degrees have contributed to their pursuit of successful careers and lives.

MUSC 4820 - Pro Tools 101

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course covers basic Pro Tools principles. It provides everything you need to complete a Pro Tools project—from initial set up to final mixdown. The course focuses on Pro Tools 9 software and covers a multitude of new functions and feature enhancements. Whether your project involves recording live instruments, MIDI sequencing of software synthesizers, or audio editing or region looping, this course will give you the basic skills to succeed. Audience: This course is designed for the audio enthusiast with little to no Pro Tools experience. Possession of the following skills is recommended prior to beginning this course: basic familiarity with operating a computer and basic understanding of recording techniques, processes, and equipment.

MUSC 4821 - Pro Tools 110

Credits: (1)
This course provides a more detailed look at the Pro Tools system on top of the knowledge learned in Pro Tools 101. It covers all the key concepts and skills needed to operate a Pro Tools system. The course provides the foundation for the later 200-series of courses on Pro Tools music and post production. Audience: This course is designed for end-users with basic Pro Tools skills, including musicians, audio engineers, and sound editors for film or television. Prerequisite: MUSC 4820 (Pro Tools 101). May be repeated once with a maximum of 2 credit hours.

MUSC 4822 - Junior High/ Middle School Music Methods

Credits: (2)
Typically taught:
Fall [Full Sem]

Methods of instruction, organization and presentation of appropriate content and musical literature in junior high/middle school music classes. Prerequisite: Piano proficiency Music Majors and Minors only

MUSC 4830 - Directed Readings

Credits: (1-3)
To be arranged. May be taken for a maximum of 7 hours of credit. Music Majors and Minors only

MUSC 4842 - High School Music Methods

Credits: (2)
Typically taught:
Spring [Full Sem]

Methods of instruction, organization and presentation of appropriate content and musical literature in high school music classes. Emphasis is placed on the administration of the school music program. Prerequisite: Piano proficiency and MUSC 4822. Music Majors and Minors only

MUSC 4860 - Internship in Music

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Practical synthesis and application of knowledge and skills gained in pedagogy and methods courses. Students plan and implement lessons, document progress, and evaluate their teaching assignments in group or private settings. May be repeated for a maximum of 12 credits. Music Majors and Minors only

MUSC 4890 - Cooperative Work Experience

Credits: (1-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A continuation of MUSC 2890. Open to all students. May be repeated to a maximum of 6 credits. Music Majors and Minors only

MUSC 4900 - Senior Project--BA in Music

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

This course will serve as a capstone project for the BA in Music. It will be taken during a student's final semester, and shall demonstrate the student's ability to synthesize the various components of her musical education. In conjunction with the general syllabus (attached), this individualized course will be governed by a contract (also attached). Depending upon the student's chosen track within the BA, examples of projects might include a major composition, a research paper, an analysis paper, a lecture-recital, etc. Prerequisite: Instructor approval.

MUSC 4910 - Opera Production

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Preparation of operatic scenes and music. Music and staging rehearsal venue for the preparation of fully staged opera productions. May be repeated up to 10 times for credit hours.

MUSC 4920 - Short Courses, Workshops, Institutes, and Special Programs

Credits: (1-4)
Typically taught:
Fall [Full Sem]

Consult the class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated 3 times with a maximum of 4 credit hours. Music Majors and Minors only

MUSC 4991 - Senior Recital

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Private instruction in preparation for and public performance of a one hour recital. Music Majors and Minors only

MUSC 4992 - Senior Project

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Music education majors have the option of completing a senior project in lieu of the senior recital and should register for MUSC 4992 during the semester in which they plan to complete the project. Requires submission of a project proposal and approval by a faculty committee. Prerequisite: MUSC 4830. Music Majors and Minors only

NET 1300 - Networks and Emerging Technologies

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course is designed to introduce the fundamentals of voice and data networking technologies. The course includes topics such as history of telecommunications, history of data networking, study of industry, transport media, common networking protocols, and emerging technologies.

NET 2010 - Business English Applications

Credits: (3)
Typically taught:
Fall [Full Sem Online]

Includes Business English essentials: grammar, punctuation, and proofreading. Keyboarding 40 wpm recommended. Prerequisite: WEB 1700 or WEB 1701/WEB 1501.

NET 2200 - Microcomputer Operating Systems

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Study of hardware and software components through managing programs, directories, files, and disks. Includes integrating applications, customizing windows, and managing printing.

NET 2300 - Introduction to LAN Management

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Local area networking concepts including needs analysis, applications, topologies and configurations, and troubleshooting using hands-on labs. Prerequisite/Co-requisite: NET 2200 or instructor approval.

NET 2415 - Cisco TCP/IP Routing Protocols and Router Configuration

Credits: (3)
Typically taught:
Fall [Full Sem]

This course is the first in a two-course series designed to prepare students to pass the examinations for Cisco Certified Network Associate (CCNA). This course covers the OSI model, network components and topologies, IP addressing, beginning router configuration and routing protocols. Prerequisite: NET 2300 or CS 2705.

NET 2435 - Cisco Advanced LAN and WAN Switching and Routing Theory and Design

Credits: (3)
Typically taught:
Spring [Full Sem]

This course is the second in a two-course series designed to prepare students to pass the examinations for Cisco Certified Network Associate (CCNA). This course covers advanced router configurations, LAN switching theory and VLANs, advanced LAN and LAN switched design, Novell IPX, WAN theory design and technology, PPP, frame relay, ISDN, network troubleshooting, national SCANs skills, and threaded case studies. Prerequisite: NET 2415.

NET 2610 - NetWare Administration

Credits: (3)
This is the introductory course to Novell Administration involving setting up, managing, and using basic network

services, including file systems, network printing, security, and Z.E.N. Works. After completing this course and successfully passing the Novell test, the candidate becomes a Certified Novell Administrator (CNA). Prerequisite: WEB 1700 or WEB 1701/WEB 1501 and WEB 1702/WEB 1502 and WEB 1703/WEB 1503.

NET 3200 - Linux Systems Administration

Credits: (3)
Typically taught:
Fall [Full Sem]

This course gives students a solid foundation in the fundamentals of the Linux operating system. Students gain system-level experience through problem-solving exercises at the command line and in the graphical user interface (GUI). By the end of the course, students will have learned the major, essential, command-line commands necessary to be accomplished users of Linux. Prerequisite: NET 2200 or instructor approval.

NET 3210 - Advanced Linux Systems Administration

Credits: (3)
Typically taught:
Spring [Full Sem]

This course presents advanced administrative skills common to mid- to senior-level administrators in an enterprise environment. Students learn how to apply security to network users and resources, manage and compile the Linux kernel, and troubleshoot network processes and services. Prerequisite: NET 3200.

NET 3250 - Business Communication

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem]

Application of oral and written communication, including diversity and international aspects of communication. Prerequisite: ENGL 2010.

NET 3300 - Advanced LAN Security Management

Credits: (3)
Typically taught:
Spring [Full Sem]

This course provides an in-depth look into the field of network security. Specific topics to be examined include networking protocols and threats, authentication models, cryptography, layer 2 security, application security, social engineering, access control lists, firewalls, risk management, and OS hardening. Prerequisite: NET 2435 or instructor permission.

NET 3310 - Network Server Administration

Credits: (3)
Typically taught:
Fall [Full Sem]

Students will learn how to install, configure, manage, and troubleshoot hardware and applications in a Server environment. With a specific focus on Server fundamentals, this course will teach students how to install servers, configure active directories, create and manage users, install server roles and features, perform diagnostics, and troubleshoot malfunctioning servers. Prerequisite: NET 2300.

NET 3415 - Cisco CCNPB-Advanced Router Configuration

Credits: (3)
Building Scalable Cisco Networks (BSCN). Addresses tasks network managers and administrators need to perform when managing access and controlling overhead traffic in growing routed networks once basic connectivity has been established. Discusses router capabilities used to control traffic over LANs and WANs, as well as connecting corporate networks to an Internet Service Provider (ISP). Prerequisite: NET 2435 or CCNA Certification or CS 3705.

NET 3425 - Cisco CCNP-Building Cisco Switched Networks

Credits: (3)
Building Cisco Multilayer Switched Networks (BCMSN). Teaches network administrators how to build campus networks using multilayer switching technologies over high speed Ethernet. Teaches how routing and switching concepts and implementations technologies work together. Prerequisite: NET 2435 or CCNA Certification.

NET 3435 - Cisco CCNP--Remote Access Networks

Credits: (3)
Teaches how to build a remote access network to interconnect central sites to branch offices and home office/telecommuters. Further teaches students how to control access to the central site as well as maximizes bandwidth utilization over remote links. Prerequisite: NET 2435 or CCNA Certification.

NET 3445 - Cisco CCNP--Internetwork Troubleshooting

Credits: (3)
Hands-on lab exercises. Covers developments in Cisco IOS and Catalyst software. Teaches how to baseline and troubleshoot an environment using Cisco routers and switches for multiprotocol client hosts and servers connected with: Ethernet, Fast Ethernet, and Token Ring LANS; and Serial, Frame Relay and ISDN BRI WANs. Prerequisite: NET 2435 or CCNA Certification.

NET 3550 - Supervising Information Technology

Credits: (3)
Typically taught:
Fall [Full Sem]

Application of supervisory functions in network management and multimedia settings including planning, structure, design, implementation, evaluation, problem-solving, and human resources. Prerequisite: NET 2300 or WEB 2300.

NET 3600 - Principles of Business/Marketing Education

Credits: (3)
Typically taught:
Spring [Full Sem]

This course includes professionalism, curriculum, standards, counseling, tech prep, competency-based testing, research, and current issues and trends in Business/Marketing Education. Along with advanced electronic presentations, this course will include a review of other technologies used in teaching. Prerequisite: WEB 1700; or WEB 1701/WEB 1501 and WEB 1702/WEB 1502 and WEB 1703/WEB 1503.

NET 3610 - Methods of Teaching Marketing Education Subjects

Credits: (3)
Typically taught:
Fall [Full Sem]

Analysis and research into methods of teaching business and marketing subjects with emphasis on teaching demonstrations and practices, objectives, outcome measurements, testing, and grading. Prerequisite: WEB 1700 or WEB 1701/WEB 1501 and WEB 1702/WEB 1502 and WEB 1703/WEB 1503.

NET 3710 - Switching and Transmission Network Systems Management

Credits: (3)
Typically taught:
Fall [Full Sem]

This course covers management of switching and transport systems and their technologies from industry carrier systems to private business networks. Also included are cellular/mobile/fixed wireless technologies including network elements, routing, packet delivery, handoff technology, and the evolution of generations of wireless technologies and systems. Prerequisite: NET 2300. Co-Requisite: NET 3715.

NET 3715 - Transmission Network Applications

Credits: (2)
Typically taught:
Fall [Full Sem]

Hands-on labs working with TDM lines and trunks, transport, IP routing, and SIP. Applications will be run on live LAN/WAN networks. Also, the course includes discussion of new technologies. Prerequisite: NET 2300. Co-Requisite: NET 3710.

NET 3720 - Advanced Transport Media

Credits: (3)
Typically taught:
Fall [Full Sem]

An examination of the growing wireless technologies, fiber optics, their roles within the telecommunications data and media industries and to introduce associated fiber optic technical skills. Prerequisite: NET 3710 and NET 1300.

NET 3730 - Cyber Policy and Ethics

Credits: (3)
Typically taught:
Fall [Full Sem]

Explores how the structural, competitive, economic, environmental, and ethical forces affect the continuing transformation of the networking industry both domestically and internationally. Discussion of the impact of contemporary issues on the provider and the consumer of telecommunication services including the legal and ethical requirements and ramifications of electronic privacy are included. Prerequisite: NET 3710 and NET 1300.

NET 4700 - Data and Voice Network Design

Credits: (4)
Typically taught:
Spring [Full Sem]

As a capstone course, students will design data and voice networks using industry metrics and rationale. Architecture, technologies, and standards associated with the design and management of modern data and voice networks will be covered. Prerequisite: NET 3710, CS 2130.

NET 4740 - Security Vulnerabilities and Intrusion Mitigation

Credits: (4)
Typically taught:
Spring [Full Sem]

A treatment of security issues related to computers and computer networking. This course is designed for advanced users, system administrators and network administrators. The course covers TCP/IP security issues, security policies, packet filtering, Internet firewall architecture and theory, detecting and monitoring unauthorized activity, password authentication, intrusion detection and prevention and other security issues involving Linux, UNIX and Microsoft Windows operating systems. A team project is included. Prerequisite: MATH 1040, CS 2130, NET 3250, and CS 3705.

NET 4760 - Network/Telecommunications Internship

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Must be completed senior year in a network/telecommunications environment with company placement and outcomes approved by the department. Prerequisite: NET 4700. Simultaneous enrollment in NET 4790 is required.

NET 4790 - Network/Telecommunications Senior Project

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Capstone project applying the principles of network/telecommunications to the development of a network/telecommunications system within a company. Prerequisite: NET 4700. Simultaneous enrollment in NET 4760 is required.

NET 4990 - Senior Project

Credits: (3)
Research, analysis, presentation, and discussion of topics relative to graduating majors and minors. Prerequisite: WEB 2860 or equivalent.

NET 6600 - Principles of Business/Marketing Education

Credits: (3)
Typically taught:
Spring [Full Sem]

This graduate-level course includes professionalism, curriculum, standards, counseling, tech prep, competency-based testing, research, and current issues and trends in Business/Marketing Education. Along with advanced electronic presentations, this course will include a review of other technologies used in teaching. NET 6600 may be substituted for NET 3600 in the undergraduate Business Education Composite Teaching major, Business Education Teaching minor, or Business/Marketing Teaching minor for those working on a second bachelor's degree. Prerequisite: WEB 1700; or WEB 1701/WEB 1501, WEB 1702/WEB 1502, and WEB 1703/WEB 1503 and a bachelor's degree.

NET 6610 - Methods of Teaching Business Education

Credits: (3)
Typically taught:
Fall [Full Sem]

This graduate-level course includes an evaluation and application of the methods of teaching business and marketing subjects with emphasis on teaching demonstrations and practices, objectives, outcome measurements, testing, and grading. The students will write a unit-long Learning Activity Package (LAP) and will demonstrate teaching in a business/marketing course. NET 6610 may be substituted for NET 3610 in the undergraduate Business Education Composite Teaching major, Business Education Teaching minor, or Business/Marketing Teaching minor for those working on a second bachelor's degree. Prerequisite: WEB 1700; or WEB 1701/WEB 1501, WEB 1702/WEB 1502, and WEB 1703/WEB 1503; and a bachelor's degree.

NEUR 2050 - Introduction to Neuroscience

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring or Summer [Full Sem]

Introduction to the interdisciplinary field of neuroscience, which examines the function and dysfunction of the human and animal nervous system. The course spans the major areas of neuroscience including cellular/molecular factors, neuron physiology, brain structure and function, and medical/clinical applications. The topics addressed are critical to multiple fields of study (e.g. health sciences, psychology, and zoology) and provides the skills necessary for students to succeed in upper-division courses related to the brain and behavior. Prerequisite: none; recommend some background in basic biology, chemistry, or psychology.

NEUR 3750 - Cognitive and Behavioral Neuroscience

Credits: (3)
Typically taught:
Spring [Full Sem] even years

This course challenges students to apply knowledge of nervous system structure and function to higher order cognitive functions and motor abilities including attention, memory, emotions, language and symbolic functions, reasoning, decision making, problem solving, voluntary movement, and consciousness. Prerequisite: NEUR 2050 or PSY 2730 or instructor approval.

NEUR 3850 - Clinical Neuroscience

Credits: (3)
Typically taught:
Spring [Full Sem] odd years

This is an advanced undergraduate course primarily for Neuroscience minors, but open to all students. Students will apply a knowledge of neuroanatomy, neurophysiology, cognition, and behavior to discuss and solve in-depth clinical case studies in the classroom setting. The course will consist of instructor-led and student-led activities to explore a range of nervous system disorders. Prerequisite: NEUR 2050 or PSY 2730 or consent of instructor.

NEUR 4800 - Projects and Research

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Supervised participation in projects and/or primary research with a faculty mentor in various areas of neuroscience. Limited to advanced students upon consent of neuroscience faculty mentor and the Neuroscience Program director. A paper written in APA style and an oral report are required at the end of the semester. Prerequisite: NEUR 2050 (Introduction to Neuroscience), PSY 3600 (Statistics) or equivalent, and faculty mentor permission. Students may enroll in this course twice for a maximum of 6 credit hours.

NEUR 4810 - Experimental

Credits: (1-6)
Typically taught:
Spring [Full Sem] odd years

May be repeated 5 times for a maximum of 6 credit hours.

NEUR 4830 - Directed Readings

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Independent readings or secondary research on advanced neuroscience special topics under the direction of a faculty mentor. For each hour of credit in a readings project the student is required to read an appropriate number of primary research journal articles and book chapters. A paper written in APA style and oral report are required at the end of the term. Prerequisite: NEUR 2050 (Introduction to Neuroscience), PSY 3600 (Statistics) or equivalent, and faculty mentor permission. Students may enroll in this course twice for a maximum of 6 credit hours.

NEUR 4900 - Topics in Neuroscience

Credits: (2-3)
Typically taught:
Spring [Full Sem] or as needed

This course offers an in-depth exploration of selected topics and issues in the discipline. The prerequisite may be waived or replaced by an equivalent at the discretion of the instructor in consultation with the Neuroscience Program Director. Prerequisite: NEUR 2050 or PSY 2730 or consent of instructor. The course may be taken up to three times for a maximum of six credit hours.

NRSG 2100 - Pharmacology for Nurses 1

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem]

Basic pharmacological treatments used by the nurse to promote health across the lifespan. Included in the course will be administering medications safely through various routes and specific agents that affect health and wellbeing. Credit hours (3): 3 lecture hours per week. Prerequisite: Admission to the Nursing Program. Co-Requisite: NRSG 2200 and NRSG 2250.

NRSG 2200 - Nursing Foundations

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]

Summer [Full Sem]

Students are socialized into the profession of nursing, taught scope of practice, rules and ethics. Building nursing care on a health/wellness continuum is introduced. Students begin the nursing process through assessment of health and wellness in individuals, families and populations throughout the lifespan, and in diverse cultures and environments. Credit hours (3): 3 lecture hours per week. Prerequisite: Admission to the Nursing Program. Co-Requisite: NRSG 2100 and NRSG 2250.

NRSG 2250 - Nursing Foundations Clinical

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem]

Guided laboratory and clinical experiences with emphasis on clinical application of nursing process, patient care skills, and professional behaviors. Focus on assessment, promoting wellness, and basic skills. Credit hours (3): 9 clinical hours per week. Prerequisite: Admission to the Nursing Program. Co-Requisite: NRSG 2100 and NRSG 2200.

NRSG 2283 - Directed Readings and Projects

Credits: (1-3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

(Maximum of 3 semester hours per year). Prerequisite: Instructor approval.

NRSG 2300 - Patient Centered Nursing Care 1

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]

Focused theory with emphasis on nursing care across the lifespan for patients experiencing changes in health status. Focus will be on identifying chronic diseases and developing a nursing strategy to promote wellness and quality of life for the patient. Clinical will focus on application of theory related to nursing care of patients in multiple environments and across the life-span. Credit hours (3): 3 lecture hours per week. Prerequisite: NRSG 2100, NRSG 2200, and NRSG 2250. Co-Requisite: NRSG 2350 ~~and NRSG 2400~~.

NRSG 2350 - Patient Centered Nursing Care Clinical 1

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]

Clinical course focused on application of concepts related to nursing care of patients in multiple environments and across the lifespan in the nursing practice lab, simulations, and clinical settings. Credit hours (3): 9 clinical hours per week. Prerequisite: NRSG 2100, NRSG 2200, and NRSG 2250. Co-Requisite: NRSG 2300~~ and NRSG 2400~~.

NRSG 2500 - Patient Centered Nursing Care 3

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

Focused theory with emphasis on nursing care across the lifespan for patients experiencing changes in health care status. Focus will be on caring for patients in the acute care setting with a goal of restoring optimal health and wellness. Prerequisite: NRSG 2300, NRSG 2350,~~ and NRSG 2400~~ or Admission to the PN to RN nursing program. Co-Requisite: NRSG 2550 and NRSG 3100.

NRSG 2550 - Patient Centered Nursing Care Clinical 3

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

Clinical course focused on application of concepts related to nursing care of patients in acute care settings and across the lifespan in the nursing practice lab, simulations, and clinical settings. Credit hours (3): 9 clinical hours per week. Prerequisite: NRSG 2300, NRSG 2350,~~ NRSG 2400~~ or Admission to the PN to RN Program Co-Requisite: NRSG 2500 and NRSG 3100.

NRSG 3100 - Pharmacology for Nurses 2

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

Advanced pharmacological treatments used by the nurse to promote health across the lifespan. Included in the course will be administering medications safely though intravenous and other routes along with specific agents that affect health and well-being. Credit hours (3): 3 lecture hours per week. Prerequisite: NRSG 2300,NRSG 2350, ~~and NRSG 2400~~ or admission to the PN to RN Program. Co-Requisite: NRSG 2500 and NRSG 2550.

NRSG 3200 - Complex Patient Centered Nursing Care 1

Credits: (3)
Typically taught:
Fall [Full Sem, Online]

Spring [Full Sem, Online]
Summer [Full Sem, Online]

Theory focuses on nursing care of patients with complex changes in health status requiring extensive multifaceted resources. Credit hours (3): 3 lecture hours per week. Prerequisite: NRSG 2500, NRSG 2550, and NRSG 3100. Co-Requisite: NRSG 3300 and NRSG 3350.

NRSG 3300 - Entry Into Nursing Professional Practice

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

Theory focuses on synthesis of nursing knowledge and skills necessary for entrance into registered nursing practice and includes preparation for licensing exams and synthesis of previous concepts. Credit hours (3): 3 lecture hours per week. Prerequisite: NRSG 2500, NRSG 2550, and NRSG 3100. Co-Requisite: NRSG 3200 and NRSG 3350.

NRSG 3350 - Entry Into Nursing Professional Practice Preceptorship

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

Clinical preceptorship focuses on synthesis of nursing knowledge, skills, and conduct necessary for entrance into registered nursing practice. Credit hours (3): 9 clinical hours per week. Prerequisite: NRSG 2500, NRSG 2550, and NRSG 3100. Co-Requisite: NRSG 3200 and NRSG 3300.

NRSG 4000 - Culture and Health Care

Credits: (2)
This course is an exploration of culture, health care issues and experiences at the local, regional, national, or international levels. The learner will study and compare the health care of a selected country/community from the cultural, political and educational perspective. Credit hours (2), 2 lecture hours per week. Prerequisite: Admission to Weber State University; recommended for nursing students, Licensed Nurses, and other healthcare providers.

NRSG 4001 - Clinical Experience Related to Culture and Health Care of Nurses

Credits: (1-3)
This course is a Study Abroad Experience for Health Care Workers to explore the relationship between culture, health care and nursing issues at local, regional, national, and/or international levels. Information gained during NRSG 4000 will assist the student to put into practice the concepts learned. Credit hours (1-3). Lab hours depend on the country visited. Prerequisite/Co-requisite: Co-requisite or prerequisite: NRSG 4000 related to area being visited.

NRSG 4010 - Interdisciplinary Health Care Teams

Credits: (3)
This course provides an interdisciplinary experience with the team concept as a priority. The students learn the role of the health care team members, each with their different skills and objectives. The course teaches students to practice an interdisciplinary approach as they research, interact and learn in the interdisciplinary environment of a health care setting. Cross-listed with DENT 4010 & HTHS 4010. May be repeated once up to 6 credit hours.

NRSG 4045 - ELNEC: End-of-Life Nursing Education Consortium

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course is designed from the nationally recognized guidelines of the End-of-Life Nursing Education Consortium (ELNEC) project. These guidelines are revised regularly to reflect current advances in the field. The purpose of the ELNEC project is to support the knowledge and skills of nurses in providing palliative care to patients who are experiencing serious illness or end of life. ELNEC content focuses on nursing care at the end of life; pain management; symptom management; ethical/legal issues; cultural considerations in end-of-life care; communication; loss, grief, bereavement; and preparation for and care at time of death. Prerequisite: Admission to a nursing program or current registered nurse.

NRSG 4050 - Nursing Assessment Across the Life Span

Credits: (3)
This course provides the theory requisite for the systematic examination and analysis of subjective and objective health assessment data obtained during the health assessment process. The health status of a client will be determined through the process of differential analysis of both the anecdotal evidence provided by the client and empirical evidence gathered during the physical examination. With this evidence, students will learn to apply the scientific process of formulating and testing hypothetical diagnoses. The overall purpose will be focused upon developing strategies and skills to assess the health care needs of people across the life span. Students are challenged to identify normal assessment findings and critically analyze variations from normal.

NRSG 4060 - Oncology Nursing

Credits: (3)
Investigate and analyzes broad epidemiological and biological origins of cancer. Then individual common cancers are studied including etiology, therapies and specific nursing interventions. (Hybrid) Prerequisite: NRSG 4050.

NRSG 4070 - Threats and Crises: Nursing Response

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Terrorism, war and natural disasters present new challenges to nurses and requires they be trained to care for

resultant victims. Learning emphasizes crisis management, specific patient/health issues and unique nursing interventions. (Hybrid)

NRSG 4080 - Nursing: High Risk Adult

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]

Advanced theories and concepts of nursing practice are explored in relation to adults experiencing life threatening alterations in health. (Hybrid)

NRSG 4090 - Nursing: High Risk OB/Pediatric Patient

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]

At-risk families need multiple interventions from knowledgeable care givers to assist them through the intricacies of obtaining quality health care. Students identify, then integrate, complex nursing strategies in situations involving parents, infants, and children in high risk childbearing populations. (Hybrid).

NRSG 4100 - Complex Patient Centered Nursing Care 2

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]

~~In this course,~~Nursing 4100 is designed to assist students ~~will learn~~in learning theory and concepts ~~in the~~related to nursing care of ~~chronically ill~~ patients~~, as well as~~ with chronic conditions, including illness implications and education for patients and families.~~ The evidence-based family caregiving and symptom management is a major focus and basis~~ Topics will include areas such as genetic conditions, caregiver stress and grieving, as well as advocacy for ~~nursing interventions with patients and families.~~vulnerable populations. The course will incorporate application of advanced skills and knowledge to address ~~variations~~coordination of complex care~~, the increased complexity, and the increased use of~~ issues and healthcare resources inherent in caring for patients ~~who are vulnerable. Focus will be on patients with chronic conditions and disabilities affecting functional status and family relationships~~and families experiencing chronic conditions.

NRSG 4200 - Scholarship for Evidence-Based Practice

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]

~~This course~~Nursing 4200 focuses on a basic understanding of how multiple sources of evidence are developed and

integrated into an evidence-based nursing environment. These sources include the formal research process, quality improvement data, clinical judgment, inter-professional perspectives, and patient preference. This course will ~~examine~~include the application of advanced knowledge and skills required for translating reliable evidence into evidence-based practice and clinical judgments. The course will also support the establishment of a research-base for the ~~student's~~student's personal nursing practice, as well as influence the continual improvement of healthcare quality and safety.

NRSG 4300 - Healthcare Policy and Decision Making

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]

~~This course~~Nursing 4300 will explore healthcare policies, including financial and regulatory policies, which directly and indirectly influence nursing practice. These policies shape responses to organizational, local, national, and global issues of equity, access, affordability, and social justice. Students will ~~learn~~apply advanced skills and knowledge to identify, analyze and problem-solve variables affecting nursing decisions and healthcare policy encountered in nursing practice. Topics will be presented that provide an overview of legal and ethical principles and theories, emphasizing the role of ethics and healthcare policy in nursing.

NRSG 4400 - Population Health in Nursing

Credits: (4)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]

~~This course~~Nursing 4400 explores nursing in diverse populations in a local and global ~~context~~contest emphasizing disease prevention, health promotion and cultural competency for the improvement of health status throughout the lifespan. Focus will include ~~disparities~~idsparities in health and health care services, and the impact of behavior and lifestyle choices. ~~This~~ Course projects will ~~include assisting individuals, families, groups, communities,~~incorporate application of advanced skills and ~~populations~~knowledge related to ~~prepare for and minimize negative~~ health ~~consequences.~~needs and health promotion at the individual and community level. Students will examine frameworks of community and public health, assess and analyze prevalent population-based health issues, and explore population-based interventions.

NRSG 4500 - Nursing Management and Leadership

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]

~~The main focus of this course~~Nursing 4500 is designed to ~~help the~~facilitate student ~~learn the role~~learning and ~~functions of the nurse leader,~~application of advanced skills and knowledge related to nursing leadership and nursing management. In acccordance with this, students will explore and examine personal and professional characteristics of ~~the~~ nurse leaders and nurse ~~leader,~~managers which will prepare them to lead through ~~principle~~evidence-based ~~leadership, and collaborate with~~ principles. Students will also gain experience in communication and collaboration with community partners and interdisciplinary teams ~~ultimately advancing the~~ , which will prepare them to assist in

the advancement of the profession of nursing through empowerment, change, and anticipation of ~~nursing's~~nursing's future.

NRSG 4600 - Communication, Collaboration, and Information Management in Healthcare

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]

~~Advanced~~ Nursing 4600 will incorporate application of advanced skills and knowledge ~~and skills in~~related to information management, patient care technology, and effective interpersonal communication modalities. These skills are critical in preparing nurses to deliver quality patient care in a variety of healthcare settings. ~~In this course,~~ Students will examine information management tools used to monitor: outcomes of care processes, patient care technologies essential to ensuring high quality, safe patient care, and communication and collaboration skills necessary to providing optimal patient-centered care. ~~Key concepts related to information and computer literacy will be emphasized in this course.~~

NRSG 4700 - Forensic Nursing

Credits: (3)
This course explores nursing in the field of forensics in both criminal and civil contexts. The different roles and responsibilities of forensic nurses will be explored and best-practices for evidence collection and preservation will be reviewed. Holistic care of victims and families will be emphasized. Students will review victimology, evaluate prevalent population-based health issues, and explore forensic nursing interventions.

NRSG 4830 - Directed Theoretical Readings

Credits: (1-3)
Involves a contract with faculty to include reading and writing of materials relevant to baccalaureate level nursing. Subject emphasis arranged with faculty. May be repeated once up to 6 credit hours.

NRSG 4840 - Departmental Honors in Nursing Seminar

Credits: (3)
Completion of this course is required for students participating in the honors program in nursing. Students explore scholarly activity in nursing through the guided completion of one of three different learning options: creating a research proposal, writing a scholarly paper, or performing a service project. Learning through active and individualized scholarly inquiry is the focus of this class.

NRSG 4850 - Study Abroad

Credits: (1-6)
Variable Title
The purpose of this course is to provide opportunities for students in health professions to experience a study abroad program that is designed to explore healthcare, culture, and clinical experience. May be repeated 5 times up to 6 credit hours.

~~NTM 1040 - Speedbuilding Keyboarding~~

~~Credits: (1)~~
~~Intensive computerized approach for improving speed and accuracy. Keyboarding 25 wpm recommended.~~

~~NTM 1300 - Networks and Emerging Technologies~~

~~Credits: (3)~~
~~Typically taught:~~
~~Fall [Full Sem]~~
~~Spring [Full Sem]~~

~~This course is designed to introduce the fundamentals of voice and data networking technologies. The course includes topics such as history of telecommunications, history of data networking, study of industry, transport media, common networking protocols, and emerging technologies.~~

~~NTM 1501 TA - Document Creation Competency Exam~~

~~Credits: (.5)~~
~~Typically taught:~~
~~Fall [Full Sem, Online]~~
~~Spring [Full Sem, Online]~~
~~Summer [Full Sem, Online]~~

~~The computer competency exam for this course is a hands-on examination verifying a student's skills at document creation. Practice materials are available on the web for studying the competencies covered on the test. The one-hour exam must be completed during the semester registered. Two repeats of the exam may be taken during the semester with an additional fee charged. The grade for the course is credit/no credit. Call (801-626-7384) or email CIL@weber.edu for more information about the CIL requirement.~~

~~NTM 1502 TB - Content, Internet Identity, and Device Management Competency Exam~~

~~Credits: (.5)~~
~~Typically taught:~~
~~Fall [Full Sem, Online]~~
~~Spring [Full Sem, Online]~~
~~Summer [Full Sem, Online]~~

~~The computer competency exam for this course is a hands-on examination verifying a student's skills in content, internet identity, and device management. Practice materials are available on the web for studying the competencies covered on the test. The one-hour exam must be completed during the semester registered. Two repeats of the exam may be taken during the semester with an additional fee charged. The grade for this course is credit/no credit. Call (801-626-7384) or email CIL@weber.edu for more information about the CIL requirement.~~

~~NTM 1503 TC - Data Manipulation, Visualization, and Presentation Competency Exam~~

~~Credits: (.5)~~
~~Typically taught:~~
~~Fall [Full Sem, Online]~~

~~**Spring [Full Sem, Online]**~~
~~**Summer [Full Sem, Online]**~~

~~The computer competency exam for this course is a hands-on examination verifying a student's skills at data manipulation, visualization, and presentation. Practice materials are available on the web for studying the competencies covered on the test. The one-hour exam must be completed during the semester registered. Two repeats of the exam may be taken during the semester with an additional fee charged. The grade for the course is credit/no credit. Call (801-626-7384) or email CIL@weber.edu for more information about the CIL requirement.~~

~~**NTM 1504 TD - Information Literacy Competency Exam**~~

~~**Credits: (.5)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem, Online]**~~
~~**Spring [Full Sem, Online]**~~
~~**Summer [Full Sem, Online]**~~

~~This exam verifies a student's information literacy competency. Web tutorials are available for students to study for this exam at their own pace. Sample questions and a practice test are available online. Students may also request assistance with studying for this exam at the library reference desk. The exam must be completed during the semester registered. Repeats of the exam may be taken during the semester with an additional fee charged. The grade for this course is credit/no credit. Call (801-626-7384) or email CIL@weber.edu for more information about the CIL requirement.~~

~~**NTM 1700 TE - Introduction to Computer Applications**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem, Online]**~~
~~**Spring [Full Sem, Online]**~~
~~**Summer [Full Sem, Online]**~~

~~Students will use current software to produce correctly formatted research papers with an accepted academic reference format, to produce effective employment documents such as a resume and a cover letter, and to use multiple collaboration mediums to effectively share, communicate, and collaborate with their peers. Students will use currrent software/technology to manage content on local devices and in the cloud, to manage their web identity and presence according to e-safety, security, and privacy best practices and standards, and to manipulate multiple computing platforms to troubleshoot problems. Students will protect local devices from security threats including viruses, malware, and adware using current best practices and technologies. Students will also manipulate and analyze data using various software applications and basic programming, organize data using graphical methods such as charts and infographics, and create an effective, well-designed presentation. Keyboarding 25 wpm recommended.~~

~~**NTM 1701 TA - Document Creation**~~

~~**Credits: (1)**~~
~~**Typically taught:**~~
~~**Fall [1st Blk, Online]**~~
~~**Spring [1st Blk, Online]**~~
~~**Summer [1st Blk, Online]**~~

~~Students will use current software to produce correctly formatted research papers with an accepted academic~~

~~reference format suchas MLA or APA. Students will use current software/technology to produce effective employment documents such as a resume and a cover letter. Students will also be able to use multiple collaboration mediums to effectively share, communicate, and collaborate with their peers. Keyboarding 25 wpm recommended.~~

~~NTM 1702 TB - Content, Internet Identity, and Device Management~~

~~Credits: (1)~~
~~Typically taught:~~
~~Fall [Full Sem, Online]~~
~~Spring [Full Sem, Online]~~
~~Summer [Full Sem, Online]~~

~~Students will use current software/technology to manage content on local devices and in the cloud. Students will manage their web identity and presence according to e-safety, security, and privacy best practices and standards. Students will manipulate multiple computing platforms and troubleshoot problems when they arise. Students will protect local devices from security threats including viruses, malware, and adware using current best practices and technologies. Keyboarding 25 wpm recommended.~~

~~NTM 1703 TC - Data Manipulation, Visualization, and Presentation~~

~~Credits: (1)~~
~~Typically taught:~~
~~Fall [Full Sem, Online]~~
~~Spring [Full Sem, Online]~~
~~Summer [Full Sem, Online]~~

~~Students will manipulate and analyze data using various software applications and basic programming. Students will organize data using various graphical methods such as charts and infographics to appropriately convey information. Students will create an effective, well-designed presentation using current technologies. Keyboarding 25 wpm recommended.~~

~~NTM 2010 - Business English Applications~~

~~Credits: (3)~~
~~Typically taught:~~
~~Fall [Online]~~

~~Includes Business English essentials: grammar, punctuation, and proofreading. Keyboarding 40 wpm recommended. Prerequisite: NTM 1700 or NTM 1701/NTM 1501.~~

~~NTM 2080 - Database Applications~~

~~Credits: (1)~~
~~Typically taught:~~
~~Fall [Online]~~

~~Use of database software to design and create a database, including objects such as tables, queries, reports, and forms. Use of advanced management features such as macros, switchboards, referential integrity, and compound criteria. Prerequisite: NTM 1700 or NTM 1702/NTM 1502.~~

~~NTM 2200 - Microcomputer Operating Systems~~

~~Credits: (3)~~
~~Typically taught:~~
~~Fall [Full Sem]~~
~~Spring [Full Sem]~~

~~Study of hardware and software components through managing programs, directories, files, and disks. Includes integrating applications, customizing windows, and managing printing. Prerequisite: NTM 1700 or NTM 1702/NTM 1502 or instructor approval.~~

~~NTM 2300 - Introduction to LAN Management~~

~~Credits: (3)~~
~~Typically taught:~~
~~Fall [Full Sem]~~
~~Spring [Full Sem]~~

~~Local area networking concepts including needs analysis, applications, topologies and configurations, and troubleshooting using hands-on labs. NTM 2200 or instructor approval.~~

~~NTM 2334 - Web Animation~~

~~Credits: (3)~~
~~Typically taught:~~
~~Fall [Full Sem]~~

~~This course introduces various web technologies that aid the creation of web animations for distribution on many platforms. Students discuss technical issues affecting animation such as speed and compression. Students will explore several current tools to create animations for the web. Prerequisite: NTM 1700 or NTM 1701/NTM 1501 and NTM 1702/NTM 1502 and NTM 1703/NTM 1503.~~

~~NTM 2335 - Introduction to User Experience Design for Web & Mobile~~

~~Credits: (3)~~
~~Typically taught:~~
~~Fall [Full Sem]~~

~~This course is designed to introduce students to the elements of user experience design for the web and mobile. The following topics will be covered: history of user experience, user centric design, agile development, user interface best practices for web and mobile applications, and analytics. Using current technologies and tools, students will create a basic web or mobile application.~~

~~NTM 2415 - Cisco TCP/IP Routing Protocols and Router Configuration~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~

~~This course is the first in a two-course series designed to prepare students to pass the examinations for Cisco Certified Network Associate (CCNA). This course covers the OSI model, network components and topologies, IP addressing, beginning router configuration and routing protocols. Prerequisite: NTM 2300 or CS 2705.~~

~~**NTM 2435 - Cisco Advanced LAN and WAN Switching and Routing Theory and Design**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Spring [Full Sem]**~~

~~This course is the second in a two-course series designed to prepare students to pass the examinations for Cisco Certified Network Associate (CCNA). This course covers advanced router configurations, LAN switching theory and VLANs, advanced LAN and LAN switched design, Novell IPX, WAN theory design and technology, PPP, frame relay, ISDN, network troubleshooting, national SCANs skills, and threaded case studies. Prerequisite: NTM 2415.~~

~~**NTM 2531 - Exploring Multimedia Applications**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~

~~Capabilities and limitations of multimedia technology, evaluation of multimedia products, and creation of a multimedia portfolio. Prerequisite: NTM 1700 or NTM 1701/NTM 1501.~~

~~**NTM 2532 - Web Design and Usability**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~
~~**Summer [Full Sem]**~~

~~Understand the technicalities of the World Wide Web and the Internet. Plan, design, and implement a successful web site using current web technologies. Topics covered include audience analysis, information architecture, wireframing, prototyping, responsive design, usability and accessibility, testing, and analytics. Prerequisite: NTM 1700 or NTM 1701/NTM 1501.~~

~~**NTM 2533 - Image Editing Solutions**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~

~~In this course you will be introduced to the fundamentals of a bitmap image editing program such as Adobe~~

~~Photoshop. You will work primarily with digital photos and scanned images. The following image editing workflow will be learned: image capture, cropping, color correction, tonal adjustments, noise reduction, retouch, creative effects, and exporting. You will merge images into a collage using masking, blend modes, and adjustment layer techniques. Prerequisite: NTM 1700 or NTM 1701/NTM 1501 and NTM 1702/NTM 1502.~~

~~NTM 2534 - Video Editing Techniques~~

~~Credits: (3)~~
~~Typically taught:~~
~~Fall [Full Sem]~~

~~Using video editing software such as Adobe Premiere, students will combine many separate video recordings to create short digital movies. The following steps of the video production process will be completed: creating storyboards; shooting the video and recording the audio; capturing resources to the computer; importing resources into a video project; adding titles, graphics, transitions, and effects; and exporting the video to formats for the computer, television, DVDs, and the Web. Prerequisite: NTM 1700 or NTM 1701/NTM 1501 and NTM 1702/NTM 1502 and NTM 1703/NTM 1503.~~

~~NTM 2610 - NetWare Administration~~

~~Credits: (3)~~
~~This is the introductory course to Novell Administration involving setting up, managing, and using basic network services, including file systems, network printing, security, and Z.E.N. Works. After completing this course and successfully passing the Novell test, the candidate becomes a Certified Novell Administrator (CNA). Prerequisite: NTM 1700 or NTM 1701/NTM 1501 and NTM 1702/NTM 1502 and NTM 1703/NTM 1503.~~

~~NTM 2860 - Business Systems Technologies Practicum~~

~~Credits: (1-6)~~
~~Open to all students who meet the minimum requirements of the department for business-related on-the-job experiences. Approval of instructor and employer is required. Amount of credit will be determined by the department.~~

~~NTM 2920 - Short Courses, Workshops, Institutes, and Special Programs~~

~~Credits: (1-4)~~
~~Consult the class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript.~~

~~NTM 3000 - Advanced Word Processing~~

~~Credits: (1)~~
~~Typically taught:~~
~~Spring [Online]~~

~~Use of word processing software including sorts, tables, columns, reports, merges, graphics, and macros. Prerequisite: NTM 1700 or NTM 1701/NTM 1501.~~

~~NTM 3070 - Advanced Spreadsheet Applications~~

~~Credits: (1)~~
~~Typically taught:~~
~~Fall [Full Sem, Online]~~
~~Spring [Full Sem, Online]~~

~~Use of spreadsheet software including macros, sorts, advanced formulas, graphs, and creative presentations. Prerequisite: NTM 1700 or NTM 1703/NTM 1503.~~

~~NTM 3090 - Advanced Electronic Presentations~~

~~Credits: (2)~~
~~Typically taught:~~
~~Fall [Full Sem]~~
~~Spring [Online]~~

~~Use of electronic slide presentation software to create slides consisting of short paragraphs, bulleted lists, graphic images, movie clips, audio clips, data charts, diagrams, and imported data from other software. Emphasis will also be placed on professional quality presentation design and animation of slide elements. Prerequisite: NTM 1700 or NTM 1701/NTM 1501 and NTM 1702/NTM 1502 and NTM 1703/NTM 1503.~~

~~NTM 3100 - Desktop Publishing~~

~~Credits: (3)~~
~~Typically taught:~~
~~Fall [Full Sem]~~
~~Spring [Full Sem]~~

~~Use of desktop publishing software including analyzing, designing, creating, and editing brochures, flyers, and other publications. Prerequisite: NTM 1700 or NTM 1701/NTM 1501 and NTM 1702/NTM 1502 and NTM 1703/NTM 1503.~~

~~NTM 3200 - Linux Systems Administration~~

~~Credits: (3)~~
~~Typically taught:~~
~~Fall [Full Sem]~~

~~This course gives students a solid foundation in the fundamentals of the Linux operating system. Students gain system-level experience through problem-solving exercises at the command line and in the graphical user interface (GUI). By the end of the course, students will have learned the major, essential, command-line commands necessary to be accomplished users of Linux. Prerequisite: NTM 2200 or instructor approval.~~

~~NTM 3210 - Advanced Linux Systems Administration~~

~~Credits: (3)~~
~~Typically taught:~~
~~Spring [Full Sem]~~

~~This course presents advanced administrative skills common to mid- to senior-level administrators in an enterprise environment. Students learn how to apply security to network users and resources, manage and compile the Linux kernel, and troubleshoot network processes and services. Prerequisite: NTM 3200.~~

~~NTM 3250 - Business Communication~~

~~Credits: (3)~~
~~Typically taught:~~
~~Fall [Full Sem, Online]~~
~~Spring [Full Sem, Online]~~
~~Summer [Full Sem]~~

~~Application of oral and written communication, including diversity and international aspects of communication. Prerequisite: ENGL 2010.~~

~~NTM 3300 - Advanced LAN Security Management~~

~~Credits: (3)~~
~~Typically taught:~~
~~Spring [Full Sem]~~

~~Advanced concepts of Local Area Network management including performance, maintenance, security, and TCP/IP protocols using hands-on labs. Course will utilize common security tools for all current operating systems. Extensive use of Linux network security tools will be used. Prerequisite: NTM 2435 or instructor permission.~~

~~NTM 3310 - Network Server Administration~~

~~Credits: (3)~~
~~Typically taught:~~
~~Fall [Full Sem]~~

~~Students will learn how to install, configure, manage, and troubleshoot hardware and applications in a Server environment. With a specific focus on Server fundamentals, this course will teach students how to install servers, configure active directories, create and manage users, install server roles and features, perform diagnostics, and troubleshoot malfunctioning servers. Prerequisite: NTM 2300.~~

~~NTM 3400 - Training the Trainer~~

~~Credits: (3)~~
~~Typically taught:~~
~~Spring [Full Sem]~~

~~Real-world strategies and techniques to provide better employee training, including development of materials and methods to enhance the learning process. Prerequisite: NTM 1700 or NTM 1701, NTM 1702, and NTM 1703, or NTM 1501, NTM 1502, and NTM 1503.~~

~~NTM 3415 - Cisco CCNPB-Advanced Router Configuration~~

~~**Credits: (3)**~~
~~Building Scalable Cisco Networks (BSCN). Addresses tasks network managers and administrators need to perform when managing access and controlling overhead traffic in growing routed networks once basic connectivity has been established. Discusses router capabilities used to control traffic over LANs and WANs, as well as connecting corporate networks to an Internet Service Provider (ISP). Prerequisite: NTM 2435 or CCNA Certification or CS 3705.~~

~~**NTM 3425 - Cisco CCNP-Building Cisco Switched Networks**~~

~~**Credits: (3)**~~
~~Building Cisco Multilayer Switched Networks (BCMSN). Teaches network administrators how to build campus networks using multilayer switching technologies over high speed Ethernet. Teaches how routing and switching concepts and implementations technologies work together. Prerequisite: NTM 2435 or CCNA Certification.~~

~~**NTM 3435 - Cisco CCNP - Remote Access Networks**~~

~~**Credits: (3)**~~
~~Teaches how to build a remote access network to interconnect central sites to branch offices and home office/telecommuters. Further teaches students how to control access to the central site as well as maximizes bandwidth utilization over remote links. Prerequisite: NTM 2435 or CCNA Certification.~~

~~**NTM 3445 - Cisco CCNP - Internetwork Troubleshooting**~~

~~**Credits: (3)**~~
~~Hands-on lab exercises. Covers developments in Cisco IOS and Catalyst software. Teaches how to baseline and troubleshoot an environment using Cisco routers and switches for multiprotocol client hosts and servers connected with: Ethernet, Fast Ethernet, and Token Ring LANS; and Serial, Frame Relay and ISDN BRI WANs. Prerequisite: NTM 2435 or CCNA Certification.~~

~~**NTM 3532 - Web Development**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~

~~With a basic foundation in both client side web design and databases, students will move to server side web development. Using server side technologies such as PHP and MySQL student will build and plan dynamic web sites. Students will also gain a better understanding of HTML, CSS, web usability, and visual design. Prerequisite: NTM 2532 or equivalent.~~

~~**NTM 3534 - Advanced Web Animation**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Spring [Full Sem]**~~

~~Students will explore native web technologies that are useful for animation including JavaScript, SVG, the HTML canvas element and CSS. Using these native web technologies, students will design and produce advanced multimedia projects applicable for business and industry. These projects will be produced by combining web animation, graphics,~~

~~video, and text into interactive web and mobile multimedia presentations. Prerequisite: NTM 1700 (or NTM 1701/NTM 1501 and NTM 1702/NTM 1502 and NTM 1703/NTM 1503) and NTM 2334.~~

~~NTM 3535 - Creating Computer Illustrations~~

~~Credits: (3)~~
~~Typically taught:~~
~~Fall [Full Sem]~~

~~In this course you will learn the fundamentals of a vector drawing program such as Adobe Illustrator. You will become skilled using the Pen Tool to create vector drawings and will learn various techniques for applying color, attributes, styles, and effects to your artwork. You will also create, edit, and format type to add to your artwork. At the end of the course you will create a project that integrates vector and bitmap images. Prerequisite: NTM 2533.~~

~~NTM 3550 - Supervising Information Technology~~

~~Credits: (3)~~
~~Typically taught:~~
~~Fall [Full Sem]~~

~~Analyzing Information Technology (IT) systems and procedures including planning and implementation, departmental structure and operations, and the responsibilities and productivity of IT personnel. Prerequisite: NTM 2300 or NTM 2534.~~

~~NTM 3600 - Principles of Business/ Marketing Education~~

~~Credits: (3)~~
~~Typically taught:~~
~~Spring [Full Sem]~~

~~This course includes professionalism, curriculum, standards, counseling, tech prep, competency-based testing, research, and current issues and trends in Business/Marketing Education. Along with advanced electronic presentations, this course will include a review of other technologies used in teaching. Prerequisite: NTM 1700; or NTM 1701/NTM 1501 and NTM 1702/NTM 1502 and NTM 1703/NTM 1503.~~

~~NTM 3610 - Methods of Teaching Marketing Education Subjects~~

~~Credits: (3)~~
~~Typically taught:~~
~~Fall [Full Sem]~~

~~Analysis and research into methods of teaching business and marketing subjects with emphasis on teaching demonstrations and practices, objectives, outcome measurements, testing, and grading. Prerequisite: NTM 1700 or NTM 1701/NTM 1501 and NTM 1702/NTM 1502 and NTM 1703/NTM 1503.~~

~~NTM 3634 - Computer Animation and Motion~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Spring [Full Sem]**~~

~~In this course you will use Adobe After Effects to create motion graphics and visual effects for film and video. You will learn how to create sophisticated motion graphics using animated text and objects, compositing videos and images, and adding visual effects to video. You will learn how to set keyframes on a timeline and work with transform properties, motion paths, rotoscoping masks and effects, developing a solid foundation in this increasingly popular and versatile software. Prerequisite: NTM 2534 or approval of instructor.~~

~~**NTM 3645 - Advanced User Interface Design**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Spring [Full Sem]**~~

~~Students will learn the elements of user interface design as it applies to front-end web development and software engineering. Students will identify best practices in user interface design. The following topics will be covered: wire-framing, color palettes, typography, information architecture, contrast, uniformity, and responsive design techniques. Using current technologies and tools, students will wireframe, design, and program effective interfaces. Prerequisite: NTM 2335 or CS 2335, NTM 2532 or CS 1400, or permission from instructor.~~

~~**NTM 3710 - Switching and Transmission Network Systems Management**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~

~~This course covers management of switching and transport systems and their technologies from industry carrier systems to private business networks. Also included are cellular/mobile/fixed wireless technologies including network elements, routing, packet delivery, handoff technology, and the evolution of generations of wireless technologies and systems. Prerequisite: NTM 2300. Co-Requisite: NTM 3715.~~

~~**NTM 3715 - Transmission Network Applications**~~

~~**Credits: (2)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~

~~Hands-on labs working with TDM lines and trunks, transport, IP routing, and SIP. Applications will be run on live LAN/WAN networks. Also, the course includes discussion of new technologies. Prerequisite: NTM 2300. Co-Requisite: NTM 3710.~~

~~**NTM 3720 - Advanced Transport Media**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~

~~An examination of the growing wireless technologies, fiber optics, their roles within the telecommunications data and media industries and to introduce associated fiber optic technical skills. Prerequisite: NTM 3710 and NTM 1300.~~

~~NTM 3730 - Cyber Policy and Ethics~~

~~Credits: (3)~~
~~Typically taught:~~
~~Fall [Full Sem]~~

~~Explores how the structural, competitive, economic, environmental, and ethical forces affect the continuing transformation of the telecommunications industry both domestically and internationally. Discussion of the impact of contemporary issues on the provider and the consumer of telecommunications services including the legal and ethical requirements and ramifications of electronic privacy. Prerequisite: NTM 3710 and NTM 1300.~~

~~NTM 4700 - Data and Voice Network Design~~

~~Credits: (4)~~
~~Typically taught:~~
~~Spring [Full Sem]~~

~~As a capstone course, students will design data and voice networks using industry metrics and rationale. Architecture, technologies, and standards associated with the design and management of modern data and voice networks will be covered. Prerequisite: NTM 3710, CS 2130.~~

~~NTM 4760 - Network/Telecommunications Internship~~

~~Credits: (3)~~
~~Typically taught:~~
~~Fall [Full Sem]~~
~~Spring [Full Sem]~~
~~Summer [Full Sem]~~

~~Must be completed senior year in a network/telecommunications environment with company placement and objectives approved by the department. Prerequisite: NTM 4700 and NTM 4710 . Simultaneous enrollment in NTM 4790 is required.~~

~~NTM 4790 - Network/Telecommunications Senior Project~~

~~Credits: (2)~~
~~Typically taught:~~
~~Fall [Full Sem]~~
~~Spring [Full Sem]~~
~~Summer [Full Sem]~~

~~Capstone project applying the principles of network/telecommunications to the development of a network/telecommunications system within a company. Prerequisite: NTM 4700 and NTM 4710 Simultaneous enrollment in NTM 4760 is required.~~

~~NTM 4800 - Independent Research~~

~~Credits: (1-4)~~
~~Typically taught:~~
~~Fall [Full Sem]~~
~~Spring [Full Sem]~~
~~Summer [Full Sem]~~

~~Directed research and study on an individual basis. Prerequisite: Permission of instructor. May be repeated up to 6 credit hours.~~

~~NTM 4860 - Business/Multimedia Technologies Internship~~

~~Credits: (3)~~
~~Typically taught:~~
~~Fall [Full Sem]~~
~~Spring [Full Sem]~~

~~Student works in a business/multimedia technologies environment. The student fulfills at least four objectives and a major capstone project that has been approved by a business/organization supervisor and a faculty advisor. Must have Senior standing or approval of instructor.~~

~~NTM 4890 - Multimedia Projects and Web Portfolio~~

~~Credits: (3)~~
~~Typically taught:~~
~~Spring [Full Sem]~~

~~This project-based course allows the students to use multimedia technology to develop advanced multimedia projects. Students will also create a web portfolio that features their work. Prerequisite: NTM 2532, NTM 2533, NTM 2534, and NTM 3634.~~

~~NTM 4920 - Short Courses, Workshops, Institutes, and Special Programs~~

~~Credits: (1-4)~~
~~Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript.~~

~~NTM 4990 - Senior Project~~

~~Credits: (3)~~
~~Research, analysis, presentation, and discussion of topics relative to graduating majors and minors. Prerequisite: NTM 2860 or equivalent.~~

~~NTM 6600 - Principles of Business/ Marketing Education~~

~~Credits: (3)~~
~~Typically taught:~~

~~**Spring [Full Sem]**~~

~~This graduate-level course includes professionalism, curriculum, standards, counseling, tech prep, competency-based testing, research, and current issues and trends in Business/Marketing Education. Along with advanced electronic presentations, this course will include a review of other technologies used in teaching. NTM 6600 may be substituted for NTM 3600 in the undergraduate Business Education Composite Teaching major, Business Education Teaching minor, or Business/Marketing Teaching minor for those working on a second bachelor's degree. Prerequisite: NTM 1700; or NTM 1701/NTM 1501, NTM 1702/NTM 1502, and NTM 1703/NTM 1503 and a bachelor's degree.~~

~~**NTM 6610 - Methods of Teaching Business Education**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~

~~This graduate-level course includes an evaluation and application of the methods of teaching business and marketing subjects with emphasis on teaching demonstrations and practices, objectives, outcome measurements, testing, and grading. The students will write a unit-long Learning Activity Package (LAP) and will demonstrate teaching in a business/marketing course. NTM 6610 may be substituted for NTM 3610 in the undergraduate Business Education Composite Teaching major, Business Education Teaching minor, or Business/Marketing Teaching minor for those working on a second bachelor's degree. Prerequisite: NTM 1700; or NTM 1701/NTM 1501, NTM 1702/NTM 1502, and NTM 1703/NTM 1503; and a bachelor's degree.~~

NUCM 4103 - Radiopharmaceuticals and Dosages

Credits: (3)
Typically taught:
Fall [Full Sem]

Radiopharmacology, characterization of radiopharmaceuticals used in performing examinations and calculation of dosages.

NUCM 4203 - Scanning and Imaging Procedures I

Credits: (3)
Typically taught:
Spring [Full Sem]

Organ concentration, excretion and absorption, measurements and imaging.

NUCM 4213 - Scanning and Imaging Procedures II

Credits: (3)
Typically taught:
Summer [Full Sem]

Organ concentration, excretion and absorption, measurements and imaging.

NUCM 4223 - Nuclear Cardiology

Credits: (3)
Typically taught:
Summer [Full Sem]

Pathology, indications for examination and procedures in nuclear cardiology.

NUCM 4303 - Radionuclide Physics & Instrumentation

Credits: (3)
Typically taught:
Spring [Full Sem]

Production and properties of radionuclides, decay schemes, radiation measurements and special characteristics of radiopharmaceuticals.

NUCM 4333 - Quality Assurance

Credits: (3)
Typically taught:
Summer [Full Sem]

Nuclear Medicine departmental policies and procedures.

NUCM 4861 - Clinical Education

Credits: (3)
Typically taught:
Fall [Full Sem]

A minimum of 24 hours per week in an active Nuclear Medicine department.

NUCM 4862 - Clinical Education

Credits: (3)
Typically taught:
Spring [Full Sem]

A minimum of 24 hours per week in an active Nuclear Medicine department.

NUCM 4863 - Clinical Education

Credits: (3)
Typically taught:
Summer [Full Sem]

A minimum of 24 hours per week in an active Nuclear Medicine department.

NUCM 4912 - Comprehensive Review

Credits: (2)
Typically taught:
Summer [Full Sem]

Review of learned material.

NUCM 4991 - Seminar

Credits: (1)
New technology, procedures and equipment.

NUTR 1020 LS - Science and Application of Human Nutrition

Credits: (3)
Typically taught:
Fall [Full Sem, 1st Blk, Online]
Spring [Full Sem, 1st Blk, Online]
Summer [Full Sem, 1st Blk, 2nd Blk, Online]

Human nutrition is the platform to study the nature and integration of science across disciplines and in society through applied problem solving and data analysis. Nutritional balance and good health are explored in context of the levels of organization, metabolism and homeostasis, genetics and evolution, and ecological interactions. *This course is taught Web enhanced.*

NUTR 1120 - Nutrition for the Athlete

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The course will address nutrition, eating behavior, and lifestyle issues of the athlete in the typical collegiate athletic environment. Topics in nutrition for the performance athlete, meal planning for the collegiate athlete, menu evaluation, personal diet analysis, and common fad diets aimed at the performance athlete are included.

NUTR 1240 - ~~Exploration in Culinary Art and Food Science~~Nutrition and Sustainable Cooking

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Sustainable ways to acquire, prepare and consume food to support a healthier individual, population, and environment are explored. Food science principles will be emphasized in the laboratory experience.

NUTR 2220 - Prenatal and Infant Nutrition

Credits: (2)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

This course focuses on nutrition and diet as they apply to birth outcome, the maintenance of maternal health, and the growth of the infant. Breastfeeding and community programs will be discussed in support of maternal and infant health. Prerequisite: NUTR 1020 or HLTH 1020.

NUTR 2320 - Food Values, Diet Design and Health

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Online]

The relationships between dietary components and the development of chronic diseases provides the foundation for designing diets that support life-long "good health". Topics in nutrigenomics, food allergy and food technology are introduced. Prerequisite: NUTR 1020 or HLTH 1020. This course is taught Web enhanced.

NUTR 2420 - Childhood and Adolescent Nutrition

Credits: (2)
Typically taught:
Fall [Online]
Spring [Online]
Summer [Online]

The effects of nutrition and diet on child growth, health and behavior are explored from toddler through adolescence. The processes of growth and puberty provide the foundations for understanding nutritional support. Common nutritionally-related problems such as obesity, anemia, and eating disorders are also addressed. Prerequisite: NUTR 1020 or HLTH 1020.

NUTR 3020 - Sports Nutrition

Credits: (3)
Typically taught:
Fall [Online]
Spring [Online]
Summer [Online]

The nutritional support necessary to achieve optimum athletic performance will be discussed in the context of diet and metabolism. In addition, the use of ergogenic aids will be addressed with reference to athletic performance. Prerequisite: NUTR 1020 or HLTH 1020 and NUTR 2320.

NUTR 3220 - Foundations in Diet Therapy

Credits: (2)
Typically taught:
Fall [Online]
Spring [Online]
Summer [Online]

Nutritionally related medical conditions in which diet is crucial for control of the disease will be the foundation for developing skills in case management. The use of several nutritional alternatives and supplements will be incorporated into the curriculum as they pertain to the dietary management of the condition. Prerequisite: NUTR 1020 or HLTH 1020 and NUTR 2320 (ZOOL 2200 or HTHS 1110/HTHS 1111 are recommended).

NUTR 3320 - Health and Nutrition in the Older Adult

Credits: (3)
Typically taught:
Fall [Online]
Spring [Online]
Summer [Online]

The developmental process of late adulthood with focus on the physiological age-related changes provides the foundation for understanding physical, mental, and social health and well-being in the older adult. Nutrition and exercise assessments and prescriptions, clinical services, community and social support services, complementary and alternative medicine, and other topics are explored in the context of promoting healthy aging. Prerequisite: NUTR 1020 or HLTH 1020.

NUTR 3420 - Multicultural Health & Nutrition

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem, Online]

The application and understanding of social, religious, economic and aesthetic qualities of foods provides the knowledge for the explorations of the food patterns of various cultures. The understanding or world food problems as they pertain to the health will also be discussed. Prerequisite: NUTR 1020 or HLTH 1020 and NUTR 2320. This course is taught Web enhanced.

NUTR 4320 - Current Issues in Nutrition

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Technology-aided literature review of the nutritional and medical sciences provides the information for presentation to peers in both written and oral forms. Prerequisite: NUTR 1020 or HLTH 1020 and NUTR 2320 or consent of instructor.

NUTR 4420 - Nutrition and Fitness

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Principles of sports nutrition and fitness are applied to achieve a healthy body weight. Consideration of exercise and dietary practices along with fitness evaluation, dietary analysis and body composition testing are utilized to create a plan to improve physiological health. Prerequisite: NUTR 1020 or HLTH 1020 and NUTR 2320. This course is taught Web enhanced.

NUTR 4520 - Directed Undergraduate Nutrition Research

Credits: (1-4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course will provide undergraduate students an opportunity to engage in research processes and participate in ongoing nutrition research projects. Prerequisite: NUTR 4320 or HPHP Majors with NUTR 1020 or HLTH 1020 and Permission of Instructor. May be repeated 3 times up to 4 credit hours.

NUTR 4860 - Field Experience

Credits: (1-2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Work experience, which applies prior academic learning in a supervised setting. Prerequisite: NUTR 1240 and consent of faculty supervisor prior to registration. May be repeated up to 2 credit hours.

NUTR 6320 - Current Issues in Nutrition

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Technology-aided literature review of the nutritional and medical sciences provides the information for presentation to peers in both written and oral forms. Prerequisite: NUTR 1020 or HLTH 1020 and NUTR 2320 or consent of instructor.

NUTR 6420 - Nutrition and Fitness

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Principles of sports nutrition and fitness are applied to achieve a healthy body weight. Consideration of exercise and dietary practices along with fitness evaluation, dietary analysis and body composition testing are utilized to create a plan to improve physiological health. Prerequisite: Consent of instructor. This course is taught Web enhanced.

NUTR 6520 - Directed Graduate Nutrition Research

Credits: (1-4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course will provide graduate students an opportunity to engage in research processes and participate in ongoing nutrition research projects. Prerequisite: NUTR 4320 or HPHP Majors with NUTR 1020 or HLTH 1020 and Permission of Instructor. Graduate students taking this class as 6520 must have completed a statistical methods course. May be repeated 3 times up to 4 credit hours.

OCRE 2500 - Introduction to Outdoor Pursuits

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Introduction to Outdoor Pursuits is focused on engaging and introducing students to discover, explore, and practice a variety of outdoor adventure and recreation activities. This includes, but is not limited to, group development, outdoor living, backpacking, flat- and whitewater paddling, mountain biking, rock climbing, caving, and winter-based pursuits. Emphasis is placed on activity-specific technical skill development, equipment management, risk management, environmental ethics, and basic instructional and facilitation strategies. Field Sessions are required.

OCRE 2610 - Introduction to Outdoor Living Skills I

Credits: (2)
This course will provide students with an overview of backcountry skills. Students will learn about backcountry travel and camping skills, equipment use, and hazard identification. One lecture and 3 hour field trip are required each week.

OCRE 2890 - Cooperative Work Experience

Credits: (1-9)
Provides academic credit for on-the-job experience. Grade and amount of credit will be determined by the department. Open to all students in Recreation who meet the minimum Cooperative Work Experience requirements of the department. May be repeated 8 times up to 9 credit hours.

OCRE 3050 - Recreation and Leisure in Society

Credits: (3)
Content, nature, extent and significance of recreation and leisure; their role in our lives, relevant service delivery agencies/organizations/businesses, leadership functions and styles, and a introduction to team-building/adventure programming activities.

OCRE 3100 - Recreation Leadership and Group Facilitation

Credits: (3)
Customer/client-based leisure services, role delineation, settings, theories of leadership and group dynamics. Skills: apply various experiential techniques for different populations that recreational professionals may encounter.

OCRE 3230 - Wilderness Nutrition & Backcountry Cooking

Credits: (4)
Typically taught:
Spring [1st Blk]

For outdoor professionals and those who spend extensive time in the outdoors, wilderness nutrition and backcountry cooking are critical components to providing safe, healthy, and enjoyable outdoor recreation experiences. Concepts of nutritional balance, energy needs, menu planning, and cooking are explored and applied within the context of a backcountry setting. Multiple field experiences are required. Prerequisite: HLTH 1030 or NUTR 1020.

OCRE 3300 - Inclusive and Adaptive Recreation

Credits: (3)
Students will explore and apply concepts of leisure and recreation experiences and the related social impacts across a wide variety of populations including: ethnicity, race, ability, gender, age, religion and nationality.

OCRE 3320 - Adventure Programming

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

In this course, students will gain a theoretical and applied understanding of adventure programming within the field of Community and Outdoor Recreation. Students will have the opportunity to explore program planning and preparation, and activity implementation through individual and collaborative learning experiences. Upon completion of this course, students will have a Program Plan that reflects the theoretical and logistical elements that comprise programs in Community and Outdoor Recreation. This course also requires an adventure program implementation field experience. Prerequisite: OCRE 3100 (formerly REC 3810).

OCRE 3500 - Community Recreation and Park Planning

Credits: (3)
Typically taught:

Fall [Full Sem]
Spring [Full Sem]

This course will focus on principles and methods of recreation and park design and planning. The student should expect to learn how to: assess community recreation facilities, parks, open spaces, recreation trends, industry standards, create planning goals and objectives, and make planning recommendations. Classification of recreation areas according to primary function, location and clientele will also be explored. Prerequisite: OCRE 3320.

OCRE 3600 - Administration and Management of Outdoor and Community Recreations Services

Credits: (3)
This course provides an examination of administration and management skills tied to outdoor recreation agencies/businesses/organizations. Emphasis will be placed on site visits, services delivery, environmental impacts, legal issues, human resources and administration and management skills. Outdoor activities (backpacking/hiking/camping/ropes course leadership, and use of technology in leisure research and programming) will be explored in the context of program management and administration. Field trips are required. Prerequisite/Co-requisite: OCRE 3320.

OCRE 3700 - Recreation and Sports Facilities and Events Management

Credits: (3)
Typically taught:
Spring [Full Sem]

Studies the principles, guidelines, and fundamental practices involved in indoor and outdoor facilities planning, construction, use and management, as well as publicity and management of events for recreation and sports. Integrates tenets of the law and risk management as they relate to recreational and athletic facilities and events. Prerequisite: ESS 2200 or OCRE 3050.

OCRE 3900 - Commercial Outdoor Recreation

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course will cover outdoor and adventure recreation business development. Particular emphasis will be on analyzing the types of commercial and private recreation enterprises, trends and directions, regulations, financial requirements and procedures for planning and organizing commercial recreation services. Prerequisite: OCRE 3320.

OCRE 4020 - Nature Interpretation

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Nature Interpretation is focused on providing the student with an in-depth investigation of the fundamental principles and concepts of nature interpretation. This includes, but is not limited to historical development of the

field, principles of exhibit design, interpretative program designs and techniques, common field techniques, and current trends used by outdoor leaders. In addition, an overview of employment opportunities in the field will be explored. This course emphasizes experimental learning theories and their application to natural history interpretation and environmental education program design. The course content is interdisciplinary in nature, and is grounded in the tenets of experiential education and learning (per the work of John Dewey). Prerequisite: OCRE 3050 and OCRE 3100 (formerly 3810).

OCRE 4300 - Trends and Ethical Issues in Recreation Services

Credits: (3)
Typically taught:
Spring [Full Sem]

Current Trends and Ethical Issues in Recreation examines major ethical theories and their relation to the development of personal and professional ethics in practitioners working in the field of community and outdoor recreation. The differences between ethics and morality will be analyzed, and selected codes of ethics will be presented for review and discussion. The application of ethical decision making and problem solving in recreation settings will be explored. Prerequisite: OCRE 3600.

OCRE 4550 - Outdoor Education Philosophies & Principles

Credits: (3)
Provides basic concepts of outdoor education, and direct, firsthand experience with learning resources beyond the classroom. Prerequisite: OCRE 2500.

OCRE 4800 - Individual Projects

Credits: (1-3)
A comprehensive study of a significant problem in the field of recreation. Hours to be arranged. For seniors only. May be repeated 2 times up to 3 credit hours.

OCRE 4890 - Cooperative Work Experience

Credits: (1-6)
A continuation of OCRE 2890. May be repeated 5 times up to 6 credit hours.

OCRE 4930 - Outdoor Education Workshop

Credits: (2)
A broad inter-disciplinary approach to the methodology of outdoor education teaching techniques; experiential learning-course taught almost totally outdoors.

OCRE 6930 - Outdoor Education Workshop

Credits: (2)
A broad interdisciplinary approach to the methodology of outdoor education teaching techniques; experiential learning-course taught almost totally outdoors.

PAR 1000 - Emergency Medical Technician

Credits: (~~2~~4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [~~Full Sem~~1st Blk]

This course teaches the student to recognize and instruct the response to emergency calls to provide efficient and immediate care to the critically ill and injured, and deliver transport needs for the patient to the appropriate medical facility. The student will be able to determine the nature and extent of illness or injury and establish priority for required emergency care. Theory will include the emergency medical care to the adult, infant and child, medical, and trauma patients. ~~There are 46 lessons in the core curriculum.~~This course meets all of the requirements of the National EMS Education Standards. Successful evaluation of professionalism, interpersonal relationships, skills, and knowledge must be completed for recommendation of certification. (Must be taken with PAR 1001.)

PAR 1001 - Emergency Medical Technician Lab

Credits: (~~4~~2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem, 2nd Blk]
Summer [~~Full Sem~~1st Blk]

At the completion of this course the student will be able to demonstrate competency managing emergencies, utilizing all Basic Support equipment and skills in accordance with all behavioral objectives in the current ~~USDOT/EMT Basic curriculum.~~National EMS Education Standards. In addition to the lab, this course requires that the student have patient interactions in a clinical setting. Based on assessment finding, renders emergency medical care to the adult, infant and child, medical, and trauma patients. Successful evaluation of professionalism, interpersonal relationships, skills, and knowledge must be completed for recommendation of certification. (Must be taken with PAR 1000).

PAR 1005 - EMT-Basic Field Experience - I

Credits: (3)
Typically taught:
Summer [Full Sem]

Minimum of 120 hours of supervised EMT-Basic patient care experience provided through assigned day shifts on the ambulance and/or pre-hospital setting. A preceptor evaluates basic life support knowledge, skills and affective abilities. Prerequisite: PAR 1000/PAR 1001 and HTHS 1101, HTHS 1110/HTHS 1111 and 70% minimum on EMT-B assessment exam. Department permission required.

PAR 1006 - EMT-Basic Field Experience - II

Credits: (3)
Typically taught:
Not currently being offered

Minimum of 120 additional hours of continued supervised EMT-Basic patient care experience provided through assigned shifts on the ambulance and/or pre-hospital setting. A preceptor evaluates basic life support knowledge, skills and affective abilities. Prerequisite: PAR 1005, ENGL 1010, and MATH 0990 or MATH 1010.

PAR 1010 - Emergency Medical Technician - Intermediate Introduction

Credits: (2)
Typically taught:
Not currently being offered

Introduction of Intermediate EMT concepts of basic and advanced life support utilizing cognitive knowledge objects using the State Department of Health and current National Standard EMT-I Curriculum. Application of pre-hospital care will be demonstrated through written assignments and exams. Course may be challenged for credit. Course is required, or equivalent work experience, before admission into the paramedic program. Prerequisite: Must have Basic EMT certification. PAR 1010 combined with PAR 1011 will provide a certificate of 60 hours of continuing medical education hours toward recertification requirements for the Utah State Department of Health.

PAR 1011 - Emergency Medical Technician - Intermediate Introduction Lab

Credits: (2)
Typically taught:
~~Fall [Full Sem]~~Not currently being offered

This course requires clinical hours with an emergency facility and ambulance as scheduled. Application of basic EMT skills involving pre-hospital care with staged and real emergencies and demonstration of psychomotor skills through laboratory, ambulance riding time, and clinical assignments. Clinical activities are adapted to previous documented work experiences. This course may be challenged for credit. This course is required, or equivalent work experience, before admission into the paramedic program. Prerequisite: Must have Basic EMT certification. PAR 1010 combined with PAR 1011 will provide a certificate of 60 hours of continuing medical education hours toward recertification requirements for the Utah State Department of Health.

PAR 1020 - Emergency Medical Technician - Intermediate

Credits: (2)
Typically taught:
Not currently being offered

Curriculum includes but is not limited to the US Department of Transportation National Standard Curriculum for the EMT-Intermediate. This course consists of the cognitive knowledge and theory components of the USDOT Curriculum and builds upon the EMT Basic knowledge. State certification eligibility of EMT Intermediate upon successful completion of both PAR 1020 and PAR 1021. Students will demonstrate mastery of cognitive knowledge skills through written assignments and examinations. Course format consists of didactic lecture. Paramedic Program application, faculty review, and committee selection are required to be admitted to this course. Prerequisite: PAR 1011 or equivalent.

PAR 1021 - Emergency Medical Technician - Intermediate Lab

Credits: (2)
Typically taught:
~~Spring [Full Sem]~~Not currently being offered

Curriculum includes but is not limited to the U.S. Department of Transportation National Standard Curriculum for the EMT-Intermediate. Builds upon the EMT Basic psychomotor skills. State certification eligibility of EMT I upon successful completion of both PAR 1020 and PAR 1021. This course consists of clinical instruction and supervised field experiences in an advanced life support rescue unit which functions under a medical command authority. Students will demonstrate their mastery of the educational psychomotor skills through practical exams and staged and real emergencies. Must have department approval by application process involving an admissions committee final selection. Prerequisite: PAR 1020 or equivalent.

PAR 1030 - Pediatric Advanced Life Support (PALS)

Credits: (1)
Typically taught:
Not currently being offered

Subject and case based approach to American Heart Association protocols and skills required for successful resuscitation of child and infant. The cognitive and psychomotor skills needed to resuscitate and stabilize infants and children in respiratory failure, shock, or cardiopulmonary arrest. Prerequisite: Basic Life Support course completion card.

PAR 1031 - Advanced Cardiac Life Support (ACLS)

Credits: (1)
Typically taught:
~~Spring [Full Sem]~~Not currently being offered

Subject and case based approach to American Heart Association protocols and skills required for successful resuscitation of the adult. This course is designed to help all participants succeed in acquiring the cognitive knowledge psychomotor skills needed by medical professionals in adult resuscitation attempts.

PAR 2000 - Introduction to Paramedic Practice

Credits: (4)
Typically taught:
Fall [~~Full Sem~~1st Blk]

Introduces the paramedic student to basic pathophysiology, pharmacology, research methods, airway management, plus patient interaction and assessment skills. Includes professional and wellness considerations for the individual practitioner and patient. Basic knowledge of medical incident command, rescue awareness, hazardous materials incidents, and crime scene awareness is included. Meets all national EMS Education Standards. Prospective students must be EMT~~-B~~ certified, accomplish Dumke College of Health Professions advising, complete the department application process, and then be accepted to the program prior to registration. ~~Prerequisite: PAR 1006 may be used as an experience prerequisite for PAR 2000.~~

PAR 2020 - Traumatic Emergencies

Credits: (3)
Typically taught:
Spring [~~Full Sem]~~
~~Summer [Full Sem~~1st Blk]

Prepares the student to recognize, assess and provide paramedic interventions related to bodily traumatic injuries. Current PHTLS/BTLS/ABLS principles are utilized. Prerequisite: PAR 2000 and PAR 3010.

PAR 2030 - Special ~~Considerations~~Populations in Paramedic Practice

Credits: (3)
Typically taught:
Spring [~~Full Sem]~~
~~Summer [Full Sem~~1st Blk]

Prepares the student to recognize, assess and provide paramedic interventions related to the special challenges posed by neonate, pediatric, obstetric, geriatrics, and psychiatric patients. Acute interventions for the ~~chronic~~ chronically ill and home care patient ~~is~~ are discussed. Current AHA~~/~~, PEPP, and national EMS Education Standards are utilized. Prerequisite: PAR 2000 and PAR 3010.

PAR 2040 - Paramedic ~~Clinical~~Skills and Simulation Lab~~ I~~

Credits: (4)
Typically taught:
Fall [~~Full Sem]~~
~~Summer [Full Sem]~~

~~Clinical~~**2nd Blk]**

Skills application ~~of~~using the theory of paramedic practice. This course will complete the National Registry Paramedic Psychomotor Competency Portfolio. Students must pass all skills before advancing into clinical and field internship rotations. Prerequisite: PAR 2000. ($~~98~~225 lab fee)

PAR 2100 - ~~Advanced~~Capstone Course in Paramedic Practice

Credits: (4)
Typically taught:
~~Fall [Full Sem]~~
Spring [~~Full Sem~~2nd Blk]

Pathophysiology and advanced concepts applied to recognition of Advanced ~~Live~~Life Support patient problems and treatment modalities. Student research and presentation projects are designed to meet professional goals and experiences. All paramedic terminal competencies will be re-verified prior to a recommendation to certify. Student must pass the physician oral examination to be recommended for certification testing. Prerequisite: PAR 2000, PAR 3010, PAR 2020, PAR 2030, PAR 2040.~~ ($98 lab fee)~~

PAR 2110 - Paramedic Clinical ~~II~~Experience

Credits: (3)
Typically taught:
Fall [~~Full Sem]~~
~~Spring [Full Sem~~2nd Blk]

Clinical rotations in various medical settings provide the student with the opportunity to perform skills and apply knowledge of paramedic practice. Includes, but is not limited to, areas in the operating room, emergency department, labor~~ and~~/delivery, ~~and pediatrics~~psychiatric, pediatric, burn and cardiac cath units. Prerequisite: PAR 2000, PAR 3010, PAR 2020, PAR 2030, PAR 2040.

PAR 2120 - Paramedic Field Internship

Credits: (9)
Typically taught:
~~Fall [Full Sem]~~
Spring [~~Full Sem~~2nd Blk]

Rotations with various paramedic Fire/EMS agencies ~~provide~~providing rescue vehicle response to advance the skills and performance of paramedic practice. Successful evaluation of professionalism, interpersonal relationships~~, skills,~~ and ~~knowledge~~problem solving under stress, must be completed for recommendation ~~of~~to test for certification~~. National Registry EMT-P testing is required.~~/licensure. Student will nominally complete 480 hours of ride time and successfully complete 50 ALS Team Leads. Prerequisite: PAR 2000, PAR ~~3010, PAR~~ 2020, PAR 2030, PAR 2040, PAR 2110, PAR 3010.

PAR 3010 - Cardiac and Medical Emergencies

Credits: (6)
Typically taught:
Fall [2nd Blk]

Integrates assessment findings with principles of epidemiology and pathophysiology to formulate a field impression and implement a comprehensive treatment and/or disposition plan for a patient with a cardiac or medical complaint. This course prepares the paramedic student to recognize, assess, develop and implement paramedic interventions related to cardiac and other medical emergencies. Topical areas include the cardiac, circulatory, digestive, endocrine, HEENT, hematologic, respiratory, and urinary systems. Concepts of infectious diseases, toxicology, anaphylaxis, environmental exposure, and shock will also be presented. Current AHA Guidelines and the 2010 National EMS Standards will be fully utilized. Prerequisite: PAR 2000. May be repeated once for credit.

PAR 3110 - Critical Care Transport Course

Credits: (6)
Typically taught:
Summer [1st Blk]

This course will prepare experienced paramedics and registered nurses to become part of a highly functioning critical care transport team, often transporting high risk patients. Topics covered include; 1) History and role of critical care transport; 2) General principles of critical care transport, 3) Patient care principles 4) Trauma emergencies; 5) Medical emergencies; 6) Environmental emergencies 7) Special populations, and 8) Medical, legal and patient care issues in critical care transport. While the course is primarily oriented to ground transportation, the content presented will allow a student take the National Flight Nurse/Paramedic exam. Prerequisite: Paramedic or registered nurse (2-3 years experience nominal) or department approval.

PAR 3120 - Tactical Emergency Medicine

Credits: (3)
Typically taught:
Not currently being offered

This rigorous course provides the principles of tactical medicine. Topics include instruction in the tenets of tactical emergency medicine, particularly in providing acute care in tactical combat situations and the medical operations support of tactical teams. This course is designed to provide the EMS provider with a variety of skills necessary to support a tactical law enforcement team. Prerequisite: EMT-Basic certification

PAR 3130 - Mobile Integrated Healthcare

Credits: (2)
Typically taught:
Spring [1st Blk, Online]

Mobile Integrated Healthcare (MIH) is the provision of healthcare using patient-centered, mobile resources in the out-of-hospital environment. This course is intended to provide the Emergency Healthcare Services student the tools needed to perform an organizational readiness assessment leading to the development of a community MIH program. The history of MIH, potential stakeholders, types of MIH programs along with data collection, QA/QI, and reimbursement will be explored. As the course capstone, each student will submit a MIH implementation plan that could be utilized in their current EMS response area. (This course does not have a clinical component nor leads to any potential state licensure.) Prerequisite: Allied Health or Nursing background suggested or departmental approval.

PAR 4110 - Emergency Medical Services Management Topics

Credits: (3)
Typically taught:
Spring [Full Sem]

The principles of management and process that contribute to the effectiveness of day-to-day operations within an EMS organization. Topics include human resource management, communications systems, deployment strategies, and risk management. Additional topics include an emphasis on demand analysis, staffing, medical direction, reimbursement, capital investment, and cost control.

PAR 4120 - Emergency Medical Service Teaching Topics

Credits: (3)
Typically taught:
Fall [Full Sem]

Using the USDOT/NHTSA National Guidelines for Educating EMS Instructors, this course will prepare emergency medical service instructors for classroom and skill lab teaching. Topics discussed include; 1) instructor roles and responsibilities; 2) the student; 3) foundations of education; 4) delivering the message; 5) evaluation and 6) course administration. Students will demonstrate EMS teaching in both a class room and skill lab environment. Prerequisite: EMT-Basic certification.

PAR 4130 - Capstone Seminar in Emergency Medicine Research

Credits: (3)
Typically taught:
Spring [Full Sem, Online]

This course is designed to offer students the basic principles and methods of empirical inquiry in emergency healthcare. The course will provide an understanding of emergency medicine research through serious exploration of its language, ethics, and methods. The course examines the processes of quantitative, qualitative, and mixed methods approaches to experimental and observed analysis. Students will develop the skills to begin to critically review literature relevant to emergency medicine research and determine why evidence-based practices are important for the development and progression of the emergency healthcare discipline. Prerequisite: Must be enrolled in Bachelor of Science in Emergency Healthcare Services or by departmental approval.

PAR 4850 - Study Abroad

Credits: (1-6)
Variable Title
Typically taught:
Not currently being offered

The purpose of this course is to provide opportunities for students in health professions to experience a study abroad program that is designed to explore healthcare, culture, and clinical experience.

PE 1010 - Aerobics, Level I

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

A physical activity course that engages students in aerobic exercises to improve cardiovascular and respiratory functioning.

PE 1011 - Aerobics, Level II

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

A physical activity course that engages students in aerobic exercises to improve cardiovascular and respiratory functioning.

PE 1012 - Aerobics, Level III

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

A physical activity course that engages students in aerobic exercises to improve cardiovascular and respiratory functioning.

PE 1035 - Zumba, Level I

Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A physical activity course that introduces students to Zumba; an activity that fuses cardiovascular fitness, upbeat world rhythms, and easy-to-follow choreography for a total-body workout.

PE 1036 - Zumba, Level II

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A physical activity course that introduces students to Zumba; an activity that fuses cardiovascular fitness, upbeat world rhythms, and easy-to-follow choreography for a total-body workout.

PE 1037 - Zumba, Level III

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Spring Sem]

A physical activity course that introduces students to Zumba; an activity that fuses cardiovascular fitness, upbeat world rhythms, and easy-to-follow choreography for a total-body workout.

PE 1040 - Walking for Fitness, Level I

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

A physical activity course that engages students in walking to improve physical fitness.

PE 1041 - Walking for Fitness, Level II

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

A physical activity course that engages students in walking to improve physical fitness.

PE 1042 - Walking for Fitness, Level III

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

A physical activity course that engages students in walking to improve physical fitness.

PE 1043 - Jogging, Level I

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A physical activity course that engages students in jogging to improve physical fitness and health. Topics in the biomechanics of running efficiently and safely, heart rate, energy expenditure, body composition, and diet may be taught.

PE 1044 - Jogging, Level II

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A physical activity course that engages students in jogging to improve physical fitness and health. Topics in the biomechanics of running efficiently and safely, heart rate, energy expenditure, body composition, and diet may be taught.

PE 1045 - Jogging, Level III

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A physical activity course that engages students in jogging to improve physical fitness and health. Topics in the biomechanics of running efficiently and safely, heart rate, energy expenditure, body composition, and diet may be taught.

PE 1055 - Pilates

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

A physical activity course that introduces students to Pilates training; a mind-body exercise program designed to tone the body, stabilize the core, improve balance, and increase flexibility.

PE 1057 - Hatha Yoga, Level I

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

PE 1058 - Hatha Yoga, Level II

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A physical activity course that allows students to learn and experience the physical benefits and body awareness associated with practicing yoga. This Level II course allows students to build on skills developed in Level I.

PE 1068 - Kettlebell Conditioning

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A vigorous introductory physical conditioning course primarily utilizing kettlebells. Exercises designed to enhance strength, power, endurance, and agility will be emphasized.

PE 1070 - Cross Training For Fitness, Level I

Credits: (1)
Typically taught:
Fall [Full Sem]

Spring [Full Sem]
Summer [Full Sem]

A physical activity course that engages students in cross training activities to improve overall levels of physical fitness.

PE 1071 - Cross Training For Fitness, Level II

Credits: (1)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

A physical activity course that engages students in cross training activities to improve overall levels of physical fitness.

PE 1072 - Cross Training For Fitness, Level III

Credits: (1)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

A physical activity course that engages students in cross training activities to improve overall levels of physical fitness.

PE 1077 - Weightlifting, Level I

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A vigorous physical conditioning course intended to assist students in skill development specific to Olympic weightlifting. The clean-and-jerk, and snatch, lifts will be emphasized exclusively. Prerequisite: PE 1080, or instructor approval.

PE 1078 - Weightlifting, Level II

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A vigorous physical conditioning course intended to assist students in skill development specific to Olympic weightlifting. The clean-and-jerk, and snatch, lifts will be emphasized exclusively. Prerequisite: PE 1080, or instructor approval.

PE 1080 - Strength Training, Level I

Credits: (1)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

A physical activity course that engages students in neuromuscular conditioning. Course subject matter will include neuromuscular conditioning, developing strength training programs, and learning and practicing proper lifting techniques.

PE 1081 - Strength Training, Level II

Credits: (1)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

A physical activity course that engages students in neuromuscular conditioning. Course subject matter will include neuromuscular conditioning, developing strength training programs, and learning and practicing proper lifting techniques.

PE 1082 - Strength Training, Level III

Credits: (1)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

A physical activity course that engages students in neuromuscular conditioning. Course subject matter will include neuromuscular conditioning, developing strength training programs, and learning and practicing proper lifting techniques.

PE 1098 - Fitness for Life

Credits: (1)
A physical activity course that teaches students the importance of engaging in lifetime fitness. Strategies for maintaining and enhancing cardiovascular fitness, muscular strength, flexibility, and body composition will be taught.

PE 1100 - Tennis, Level I

Credits: (1)
Typically taught:
Fall [1st Blk]

A physical activity course that allows students to learn and develop the skills needed to play tennis.

PE 1101 - Tennis, Level II

Credits: (1)
Typically taught:
Fall [1st Blk]

A physical activity course that allows students to learn and develop the skills needed to play tennis.

PE 1102 - Tennis, Level III

Credits: (1)
A physical activity course that allows students to learn and develop the skills needed to play tennis.

PE 1105 - Badminton, Level I

Credits: (1)
A physical activity course that allows students to learn and develop the skills needed to play badminton.

PE 1106 - Badminton, Level II

Credits: (1)
A physical activity course that allows students to learn and develop the skills needed to play badminton.

PE 1110 - Racquetball, Level I

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A physical activity course that allows students to learn and develop the skills needed to play racquetball.

PE 1111 - Racquetball, Level II

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A physical activity course that allows students to learn and develop the skills needed to play racquetball.

PE 1112 - Racquetball, Level III

Credits: (1)
Typically taught:
Fall [Full Sem]

Spring [Full Sem]

A physical activity course that allows students to learn and develop the skills needed to play racquetball.

PE 1130 - Golf, Level I

Credits: (1)
Typically taught:
Fall [1st Blk]
Summer [Full Sem, 1st Blk]

A beginning level physical activity course that allows students to learn and develop the skills needed to play golf.

PE 1131 - Golf, Level II

Credits: (1)
Typically taught:
Fall [1st Blk]
Summer [Full Sem, 1st Blk]

An intermediate level physical activity course that allows students to learn and develop the skills needed to play golf.

PE 1132 - Golf, Level III

Credits: (1)
Typically taught:
Fall [1st Blk]
Summer [Full Sem, 1st Blk]

An advanced level physical activity course that allows students to learn and develop the skills needed to play golf.

PE 1135 - Archery, Level I

Credits: (1)
Typically taught:
Summer [Full Sem]

A physical activity course that allows students to learn and develop the skills needed to practice archery.

PE 1136 - Archery, Level II

Credits: (1)
Typically taught:
Summer [Full Sem]

A physical activity course that allows students to learn and develop the skills needed to practice archery.

PE 1137 - Archery, Level III

Credits: (1)
Typically taught:
Summer [Full Sem]

A physical activity course that allows students to learn and develop the skills needed to practice archery.

PE 1140 - Marksmanship

Credits: (1)
A physical activity course that allows students to learn and develop the skills needed to practice shooting and other skills related to marksmanship.

PE 1145 - Bowling, Level I

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [2nd Blk]

A physical activity course that allows students to learn and develop the skills needed to practice bowling.

PE 1146 - Bowling, Level II

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [2nd Blk]

A physical activity course that allows students to learn and develop the skills needed to practice bowling.

PE 1147 - Bowling, Level III

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A physical activity course that allows students to learn and develop the skills needed to practice bowling.

PE 1150 - Billiards, Level I

Credits: (1)
Typically taught:
Fall [Full Sem]

Spring [Full Sem]

A physical activity course that allows students to learn and develop the skills needed to practice billiards.

PE 1151 - Billiards, Level II

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A physical activity course that allows students to learn and develop the skills needed to practice billiards.

PE 1152 - Billiards, Level III

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A physical activity course that allows students to learn and develop the skills needed to practice billiards.

PE 1155 - Fencing, Level I

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A physical activity course that allows students to learn and develop the skills needed to practice fencing.

PE 1156 - Fencing, Level II

Credits: (1)
A physical activity course that allows students to learn and develop the skills needed to practice fencing.

PE 1157 - Fencing, Level III

Credits: (1)
A physical activity course that allows students to learn and develop the skills needed to practice fencing.

PE 1200 - Basketball, Level I

Credits: (1)
Typically taught:
Fall [Full Sem]

Spring [Full Sem]

A physical activity course that allows students to learn and develop the skills needed to play basketball.

PE 1201 - Basketball, Level II

Credits: (1)
Typically taught:
Spring [Full Sem]
Summer [Full Sem]

A physical activity course that allows students to learn and develop the skills needed to play basketball.

PE 1202 - Basketball, Level III

Credits: (1)
Typically taught:
Spring [Full Sem]

A physical activity course that allows students to learn and develop the skills needed to play basketball.

PE 1210 - Volleyball, Level I

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A physical activity course that allows students to learn and develop the skills needed to play volleyball.

PE 1211 - Volleyball, Level II

Credits: (1)
Typically taught:
Spring [Full Sem]

A physical activity course that allows students to learn and develop the skills needed to play volleyball.

PE 1212 - Volleyball, Level III

Credits: (1)
Typically taught:
Spring [Full Sem]

A physical activity course that allows students to learn and develop the skills needed to play volleyball.

PE 1225 - Softball

Credits: (1)
A physical activity course that allows students to learn and develop the skills needed to play softball.

PE 1230 - Soccer, Level I

Credits: (1)
A physical activity course that allows students to learn and develop the skills needed to play soccer.

PE 1231 - Soccer, Level II

Credits: (1)
A physical activity course that allows students to learn and develop the skills needed to play soccer.

PE 1232 - Soccer, Level III

Credits: (1)
A physical activity course that allows students to learn and develop the skills needed to play soccer.

PE 1235 - Flag Football

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This physical activity course is intended to engage students in the sport of flag football. Students will learn techniques, drills, and games to assist with development of skills and competitive game play.

PE 1265 - Water Sports

Credits: (1)
A physical activity course that allows students to learn and develop skills needed to play water sports. Water sports include, but are not limited to: swimming, water aerobics, water polo, and snorkeling.

PE 1300 - Swimming, Level I

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

A physical activity course that allows students to engage in the sport of swimming.

PE 1301 - Swimming, Level II

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

A physical activity course that allows students to engage in the sport of swimming.

PE 1302 - Swimming, Level III

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A physical activity course that allows students to engage in the sport of swimming.

PE 1310 - Water Aerobics, Level I

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This physical activity course will introduce students to water conditioning. Through aerobic conditioning, abdominal toning, and stretching, students will learn how to maintain a high level of fitness through application of aerobic training principles in an aquatic environment.

PE 1311 - Water Aerobics, Level II

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This physical activity course will introduce students to water conditioning. Through aerobic conditioning, abdominal toning, and stretching, students will learn how to maintain a high level of fitness through application of aerobic training principles in an aquatic environment.

PE 1312 - Water Aerobics, Level III

Credits: (1)
This physical activity course will introduce students to water conditioning. Through aerobic conditioning, abdominal toning, and stretching, students will learn how to maintain a high level of fitness through application of aerobic training principles in an aquatic environment.

~~**PE 1316 - Stand-Up Paddleboard**~~

~~**Credits: (1)**~~
~~**Typically taught:**~~
~~**Fall [1st Blk]**~~
~~**Summer [1st Blk]**~~

~~This physical activity course is intended to introduce students to the fundamental skills and knowledge necessary to enjoy Stand-Up Paddleboarding (SUP). The course will cover: 1) technical knowledge (i.e., history, terminology, equipment, regulations, safety); 2) technical skills (i.e., carrying, launching, landing, balance, stances, strokes, maneuvers, equipment maintenance); and) 3 rescue/safety (i.e. self-rescues).~~

PE 1340 - Lifeguarding

Credits: (2)
Skills and knowledge needed by lifeguards to prevent and respond to aquatic emergencies. The course content and activities prepare lifeguard candidates to recognize emergencies, respond quickly and effectively to emergencies, and prevent drownings and other incidents. The course also teaches other skills and individual needs to become a professional lifeguard. Upon successful completion of this course participants will be certified in American Red Cross CPR for Professional Rescuer and Lifeguard Training. Prerequisite: Skills screening will be required. Please note: The Lifeguard Training certificate includes certification in first aid.

~~**PE 1350 - Scuba Diving I**~~

~~**Credits: (1)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem, 1st Blk, 2nd Blk]**~~
~~**Spring [Full Sem, 1st Blk, 2nd Blk]**~~
~~**Summer [Full Sem, 1st Blk, 2nd Blk]**~~
~~**Offered through Continuing Education only.**~~

~~**PE 1351 - Scuba Diving, Level II**~~

~~**Credits: (1)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~

~~A physical activity that engages students in the underwater activity of scuba diving. This Level II course allows students to build on skills developed in Level I. Prerequisite: PE 1350.~~

PE 1400 - Self Defense, Level I

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A physical activity course that allows students to learn and develop the skills needed to perform the art of self-defense, in a safe and controlled environment.

PE 1401 - Self Defense, Level II

Credits: (1)
A physical activity course that allows students to learn and develop the skills needed to perform the art of self-defense, in a safe and controlled environment.

PE 1402 - Self Defense, Level III

Credits: (1)
A physical activity course that allows students to learn and develop the skills needed to perform the art of self-defense, in a safe and controlled environment.

PE 1410 - TaiChi, Level I

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

A physical activity course that allows students to learn and develop the skills needed to perform TaiChi, which engages the body and mind and to reduce stress.

PE 1411 - TaiChi, Level II

Credits: (1)
A physical activity course that allows students to learn and develop the skills needed to perform TaiChi, which engages the body and mind and to reduce stress.

PE 1412 - TaiChi, Level III

Credits: (1)
A physical activity course that allows students to learn and develop the skills needed to perform TaiChi, which engages the body and mind and to reduce stress.

PE 1435 - Kempo, Level I

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

A physical activity course that allows students to learn and develop the skills needed to perform the various fighting styles of Kempo Karate.

PE 1436 - Kempo, Level II

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

A physical activity course that allows students to learn and develop the skills needed to perform the various fighting styles of Kempo Karate.

PE 1437 - Kempo, Level III

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

A physical activity course that allows students to learn and develop the skills needed to perform the various fighting styles of Kempo Karate.

PE 1445 - Tae Kwon-do, Level I

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A physical activity course that allows students to learn and develop the skills needed to perform the martial art of Tae Kwon-do through combat and self-defense while incorporating sport and exercise.

PE 1446 - Tae Kwon-do, Level II

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A physical activity course that allows students to learn and develop the skills needed to perform the martial art of Tae Kwon-do through combat and self-defense while incorporating sport and exercise.

PE 1447 - Tae Kwon-do, Level III

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A physical activity course that allows students to learn and develop the skills needed to perform the martial art of Tae Kwon-do through combat and self-defense while incorporating sport and exercise.

~~**PE 1505 - Kayaking, Level I**~~

~~**Credits: (1)**~~
~~**Typically taught:**~~
~~**Spring [2nd Blk]**~~

~~A physical activity course that introduces students to the outdoor activity of kayaking. The fundamental skills of kayaking will be addressed for both beginning and recreational paddlers.~~

~~**PE 1510 - Fishing, Level I**~~

~~**Credits: (1)**~~
~~A physical activity course that allows students to learn and develop the skills needed to practice fishing.~~

~~**PE 1511 - Fishing, Level II**~~

~~**Credits: (1)**~~
~~A physical activity course that allows students to learn and develop the skills needed to practice fishing.~~

~~**PE 1512 - Fishing, Level III**~~

~~**Credits: (1)**~~
~~A physical activity course that allows students to learn and develop the skills needed to practice fishing.~~

PE 1515 - Sailboating

Credits: (1)
A physical activity course that introduces students to the outdoor activity of sailboating. The fundamental skills of sailboating will be addressed for both beginning and recreational sailors.

~~**PE 1520 - Hiking, Level I**~~

~~**Credits: (1)**~~
~~**Typically taught:**~~
~~**Fall [1st Blk]**~~
~~**Spring [2nd Blk]**~~
~~**Summer [1st Blk]**~~

~~A physical activity course that allows students to learn and develop the skills needed to safely enjoy hiking through the use of trail resources, environmental conscientiousness, planning, and conduct.~~

~~**PE 1521 - Hiking, Level II**~~

~~**Credits: (1)**~~
~~A physical activity course that allows students to learn and develop the skills needed to safely enjoy hiking through the use of trail resources, environmental conscientiousness, planning, and conduct.~~

~~**PE 1522 - Hiking, Level III**~~

~~**Credits: (1)**~~
~~A physical activity course that allows students to learn and develop the skills needed to safely enjoy hiking through the use of trail resources, environmental conscientiousness, planning, and conduct.~~

~~**PE 1527 - Rock Climbing, Level I**~~

~~**Credits: (1)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem, 1st Blk]**~~
~~**Spring [Full Sem, 2nd Blk]**~~
~~**Summer [1st Blk]**~~

> ~~A beginner level physical activity course that allows students to learn and develop the skills and knowledge needed to safely enjoy rock climbing.~~

~~**PE 1528 - Rock Climbing, Level II**~~

~~**Credits: (1)**~~
~~**Typically taught:**~~
~~**Fall [1st Blk]**~~
~~**Spring [2nd Blk]**~~
~~**Summer [1st Blk]**~~

~~An intermediate level physical activity course that allows students to learn and develop the skills and knowledge needed to safely enjoy rock climbing.~~

~~**PE 1529 - Rock Climbing, Level III**~~

~~**Credits: (1)**~~
~~An advanced level physical activity course that allows students to learn and develop the skills and knowledge needed to safely enjoy rock climbing.~~

PE 1557 - Bicycling, Level I

Credits: (1)

A physical activity course that allows students to learn and develop the skills and knowledge needed to safely enjoy bicycling.

PE 1558 - Bicycling, Level II

Credits: (1)

A physical activity course that allows students to learn and develop the skills and knowledge needed to safely enjoy bicycling.

PE 1559 - Bicycling, Level III

Credits: (1)

A physical activity course that allows students to learn and develop the skills and knowledge needed to safely enjoy bicycling.

~~**PE 1610 - Skiing, Level I**~~

~~**Credits: (1)**~~
~~**Typically taught:**~~
~~**Spring [1st Blk]**~~

~~A physical activity course that allows students to learn and develop the skills and technique needed to safely enjoy skiing and advance through specified skill levels.(CR/NC).~~

~~**PE 1611 - Skiing, Level II**~~

~~**Credits: (1)**~~
~~**Typically taught:**~~
~~**Spring [1st Blk]**~~

~~A physical activity course that allows students to learn and develop the skills and technique needed to safely enjoy skiing and advance through specified skill levels. (CR/NC).~~

~~**PE 1612 - Skiing, Level III**~~

~~**Credits: (1)**~~
~~**Typically taught:**~~
~~**Spring [1st Blk]**~~

~~A physical activity course that allows students to learn and develop the skills and technique needed to safely enjoy skiing and advance through specified skill levels. (CR/NC).~~

~~**PE 1620 - Snowboarding, Level I**~~

~~**Credits: (1)**~~
~~**Typically taught:**~~
~~**Spring [1st Blk]**~~

~~A physical activity course that allows students to learn and develop the skills and technique needed to safely enjoy snowboarding and advance through specified skill levels. (CR/NC).~~

~~**PE 1621 - Snowboarding, Level II**~~

~~**Credits: (1)**~~
~~**Typically taught:**~~
~~**Spring [1st Blk]**~~

~~A physical activity course that allows students to learn and develop the skills and technique needed to safely enjoy snowboarding and advance through specified skill levels. (CR/NC).~~

~~**PE 1622 - Snowboarding, Level III**~~

~~**Credits: (1)**~~
~~**Typically taught:**~~
~~**Spring [1st Blk]**~~

~~A physical activity course that allows students to learn and develop the skills and technique needed to safely enjoy snowboarding and advance through specified skill levels. (CR/NC).~~

~~**PE 1630 - Cross Country Skiing, Level I**~~

~~**Credits: (1)**~~
~~**Typically taught:**~~
~~**Spring [1st Blk]**~~

~~A physical activity course that allows students to learn and develop the skills and technique needed to safely enjoy cross-country skiing. (CR/NC).~~

~~**PE 1631 - Cross Country Skiing, Level II**~~

~~**Credits: (1)**~~
~~**Typically taught:**~~
~~**Spring [1st Blk]**~~

~~A physical activity course that allows students to learn and develop the skills and technique needed to safely enjoy cross-country skiing. (CR/NC).~~

~~**PE 1632 - Cross Country Skiing, Level III**~~

~~**Credits: (1)**~~
~~**Typically taught:**~~
~~**Spring [1st Blk]**~~

~~A physical activity course that allows students to learn and develop the skills and technique needed to safely enjoy cross-country skiing. (CR/NC).~~

PE 1670 - Ice Skating, Level I

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A physical activity course that introduces students to ice skating. The fundamental skills of ice skating will be addressed for both beginning and recreational skaters.

PEP 1079 - Weightlifting, Level III

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A vigorous physical conditioning course intended to assist students in skill development specific to Olympic weightlifting. The clean-and-jerk, and snatch, lifts will be emphasized exclusively. Prerequisite: PE 1080, or instructor approval.

PEP 2000 - Foundations of Physical Education

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Examination of history, philosophy, career opportunities, issues, and trends in physical education. Emphasis on professional preparation requirements and competencies.

PEP 2100 - Introduction to Coaching Sport

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Examines various coaching philosophies and styles along with the duties and responsibilities of the coach, with an emphasis on leadership skills, organizational and administrative duties, the legal responsibilities that affects sport and the evaluation of the athletic program.

~~**PEP 2200 - Foundations of Human Performance Management Professions**~~

~~**Credits: (2)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~

~~Designed to orient and acquaint students with the goals, objectives, scope, professional preparation, career opportunities, and trends in human performance management professions.~~

~~**PEP 2300 - Health/Fitness Evaluation and Exercise Prescription**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~

~~Skills and competencies for prospective health fitness instructors, personal fitness trainers, and nutrition educators to deliver preventive exercise programs. Prerequisite: HLTH 1030 and NUTR 1020.~~

PEP 2480 - Fitness for Life Concepts

Credits: (1)
Prescribe individualized programs for weight control, cardiovascular endurance, strength and flexibility.

PEP 2500 - Sport Pedagogy

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course is designed to provide information on skill development, practice and game planning, season schedules, creating drills and practice sessions, motivating players and coaching tips.

PEP 2600 - Growth and Motor Development

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Description of the structural and functional principles of human growth and development. Introduction of motor learning principles with emphasis on their application to pedagogy. Prerequisite: PEP 2000 or concurrent enrollment in PEP 2000.

PEP 2700 SS - Sociohistorical Aspects of Sport

Credits: (3)
Typically taught:

Fall [Online]
Spring [~~Full Sem~~Online]
Summer [Online]

This course examines the ~~popular fascination with,~~sociological and ~~the academic investigation~~historical aspects of~~,~~ sport in American society~~, to include~~ with the purpose of gaining an understanding of how race, class, gender, ethnicity, politics, and religion can bind Americans in a community of shared values and aspirations. Students will explore the unifying power of sport, as well as how sport serves to reproduce many inequalities present in the larger society. Gaining an understanding of how these issues, and others, interplay with sport is critical for those aspiring to become successful sport coaches, as well as for those who simply wish to gain an understanding of the complex relationship between sport and society (e.g., parents, fans, and sport participants).

PEP 2800 - Individual Projects

Credits: (1-4)
A comprehensive study of a significant problem in the field of physical education. Hours to be arranged. May be repeated 3 times up to 4 credit hours.

~~**PEP 2890 - Cooperative Work Experience**~~

~~**Credits: (1-6)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~
~~**Summer [Full Sem]**~~

~~Open to all students in Human Performance Management and Physical Education who meet the minimum Cooperative Work Experience requirements of the department. Provides academic credit for on-the-job experience. Grade and amount of credit will be determined by the department. May be repeated 5 times up to 6 credit hours.~~

PEP 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Typically taught:
As Needed

Consult the semester class schedule for current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated 2 times up to 4 credit hours.

PEP 3100 - Principles of Motor Learning and Motor Development

Credits: (3)
The purpose of this course is to introduce and explore motor learning and motor development principles. Particular focus will be on how the application of motor learning and motor development impact the physical education and coaching learning environments. Prerequisite: PEP 2000.

PEP 3240 - Skill Development and Methods of Field Sports

Credits: (2)
Typically taught:
Fall [Full Sem]

The purpose of this course is to provide prospective physical education teachers experiences that will lead to skill acquisition, the ability to analyze, diagnose and correct errors in skill performance, the development of skills, drills, and game progressions, and the pedagogical skills needed to teach a variety of field sports (e.g., flag football, soccer, and softball). Prerequisite/Co-requisite: Prerequisite or concurrent enrollment in PEP 2000.

PEP 3242 - Skill Development and Methods of Court Sports

Credits: (2)
Typically taught:
Spring [Full Sem]

The purpose of this course is to provide prospective physical education teachers experiences that will lead to skill acquisition the ability to analyze, diagnose and correct errors in skill performance, the development of skills, drills, and game progressions, and the pedagogical skills needed to teach a variety of court sports (e.g., basketball and volleyball). Prerequisite/Co-requisite: Prerequisite or concurrent enrollment in PEP 2000.

PEP 3260 - Methods of Teaching Lifelong Activities

Credits: (2)
Typically taught:
Fall [Full Sem]

Designed to give students a broad variety of noncompetitive/nonconventional activities and sports that are beneficial as lifetime sports. Prerequisite/Co-requisite: Prerequisite or concurrent enrollment in PEP 2000.

PEP 3262 - Methods of Teaching Individual Sports

Credits: (2)
Typically taught:
Spring [Full Sem]

The purpose of this course is to provide prospective physical education teachers experiences that will lead to skill acquisition, the ability to analyze, diagnose and correct errors in skill performance, the development of skills, drills, and game progressions, and the pedagogical skills needed to teach a variety of individual sports (e.g., golf, swimming, and track and field). Prerequisite/Co-requisite: Prerequisite or concurrent enrollment in PEP 2000.

PEP 3264 - Skill Development and Methods of Teaching Racket Sports

Credits: (2)
Typically taught:
Fall [Full Sem]

The purpose of this course is to provide prospective physical education teachers experiences that will lead to skill acquisition, the ability to analyze, diagnose and correct errors in skill performance, the development of skills, drills,

and game progressions, and the pedagogical skills needed to teach a variety of racket sports (e.g., badminton, racketball, and tennis/pickleball). Prerequisite/Co-requisite: Prerequisite or concurrent enrollment in PEP 2000.

PEP 3270 - Methods of Teaching Aerobic Conditioning

Credits: (2)
Typically taught:
Spring [Full Sem]

Examine, evaluate and practice aerobic conditioning theories and current practices for the purpose of preparing entry level professionals to select, incorporate, and facilitate appropriate aerobic activities, as well as, design and evaluate the effectiveness of aerobic conditioning programs. Two lecture/labs per week. Prerequisite: PEP 2000, PEP 2600 or concurrent enrollment in PEP 2000 or PEP 2600. Prerequisite/Co-requisite: Prerequisite or concurrent enrollment in PEP 2000.

PEP 3280 - Methods of Teaching Strength and Conditioning

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Examine, evaluate and practice strength and conditioning theories and current practices for the purpose of preparing entry level professionals to select, incorporate, and facilitate appropriate conditioning activities, as well as, design and evaluate the effectiveness of strength and conditioning programs. Two lecture/labs per week. Prerequisite: PE 1080.

PEP 3290 - Methods of Teaching Fitness for Life

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course is designed to introduce the fundamental principles of cardiovascular fitness, flexibility, and strength development, as well as to assist each individual to design and implement their own personal fitness program based on individual needs, assessments, and personal preferences. Students will explore resources for and methods of teaching the principles of fitness in the secondary school setting. This is a required course for the physical education major and the physical education/coaching minor. Prerequisite/Co-requisite: Prerequisite or concurrent enrollment in PEP 2000.

PEP 3310 - Techniques for Teaching Aquatics

Credits: (2)
Practice of swimming and related aquatic skills, teaching techniques for all levels of swimming, and the acquisition of materials to use for teaching swimming. Course leads to American Red Cross certification as a Water Safety Instructor. Prerequisite: Skills screening will be required.

PEP 3320 - Techniques for Teaching Lifeguarding

Credits: (2)
Typically taught:
As Needed

Professional techniques and methods in teaching water safety, educational programs, lifeguard training and reviews, and lifeguard progressions are taught. This course leads to Red Cross certification as a lifeguard instructor.

PEP 3400 - Sport Psychology for Coaches

Credits: (3)
This course involves understanding the study and analysis of human behavior patterns as they relate to sport performance. Students (coaches) are provided with necessary information regarding mental processes, and applicable uses for this information. Prerequisite: PSY 1010.

~~**PEP 3450 - Structural Kinesiology**~~

~~**Credits: (3)**~~
~~This course is a detailed study of muscles, nerves, bones, and joints as they are involved in the science of movement. It is designed for students to experience theoretical concepts and apply functional anatomy knowledge to the execution and improvement of human performance. Prerequisite: HTHS 1110, Co-requisite: HTHS 1111, or Prerequisite: ZOOL 2100.~~

~~**PEP 3500 - Biomechanics**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~

~~A study of the musculomechanical bases of human movement and experience in applying that knowledge to the execution and evaluation of human performance. Prerequisite: PEP 3450; and Quantitative Literacy, MATH 1050 or MATH 1060.~~

~~**PEP 3510 - Exercise Physiology**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~

~~A study of various physiological and environmental factors which affect performance of exercise and sport during acute exercise and physiological adaptations to chronic exercise. Prerequisite: HTHS 1110 or ZOOL 1020 or ZOOL 2200.~~

PEP 3520 - Curriculum and Assessment

Credits: (2)
Typically taught:

Fall [Full Sem]
Spring [Full Sem]

Course emphasis is on developing curriculum necessary to meet the needs of diverse learners. Emphasis is also on development of assessment strategies that correctly match objectives and instruction. The students are given a basic understanding of the statistical use of data for grade determination. Students will have hands on experience in designing and implementing various assessments and grading methods relating to physical education objectives. Students will also be provided the opportunity to learn how to design and implement lessons using up-to-date forms of technology that are currently being used in public schools. Prerequisite: PEP 3100 and 6 credits of PEP 3630, PEP 4700, PEP 4710, program admission. Co-Requisite: PEP 3520L.

PEP 3520L - Curriculum and Assessment Lab

Credits: (1)
This course will avail students a practicum opportunity to apply in an area K-12 school the theory learned and the curriculum prepared in the Curriculum and Assessment PEP 3520 course. Students will develop lessons and assessments to determine students learning and implement them in a teaching experience in the school setting. Co-Requisite: PEP 3520.

~~**PEP 3540 - Physiological Aspects of Human Performance**~~

~~**Credits: (2)**~~
~~Examine, evaluate, and apply the latest physiological concepts and ideas in conditioning practices for improving human performance. Prerequisite: PEP 2000 or PEP 2200 and 3 hours of General Education Life Science (LS).~~

PEP 3600 - Measurement ~~for Evaluation and Research~~and Statistics in Exercise Science

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [1st Blk]

The selection, administration, and interpretation of measurement techniques and statistical procedures for the purpose of evaluation and research as related to ~~human performance,~~ exercise science and health promotion~~ and education.~~. Prerequisite: Meet WSU Quantitative Literacy requirement and complete ~~NTM~~WEB 1700.

PEP 3610 - Assessment/Technology in Physical Education

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course is designed to help students develop assessment strategies that correctly match objectives and instruction. The students are given a basic understanding of the statistical use of data for grade determination. Students will have hands on experience in designing and implementing various assessment (affective, cognitive, and psychomotor) and grading methods relating to physical education objectives. Students will also be provided the opportunity to learn how

to design and implement lessons using up-to-date forms of technology that are currently being used in public schools. Prerequisite: A minimum of 3 Skill Development and Methods of Teaching Courses.

PEP 3620 - Methods of Teaching Physical Education and Health for Elementary Teachers

Credits: (3)
The course is designed to provide students with instructional methods, activities and skills for teaching Physical Education K-6 and Health Education. The course will include a 15-hour hands-on-practicum teaching experience in an area public school. The content of this course will be presented through various instructional strategies and teaching models. Prerequisite/Co-requisite: Prerquisite/Co-requisite: EDUC 3100.

PEP 3630 - Methods of Teaching Elementary School Physical Education

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Provides prospective elementary physical education teachers with the knowledge, skills, and experience necessary to delivering quality physical education lessons for elementary school-aged students. Principles, concepts, strategies, classroom management, skill development, and assessment will be explored. Prerequisite: PEP 2000 or PEP 3100.

PEP 3660 - Adapted Physical Education

Credits: (3)
Typically taught:
Fall [Full Sem]

The purpose of this course is to introduce and explore various congenital and acquired disabilities as well as gain an understanding of the legal mandates for individuals with disabilities and their educational rights. Particular emphasis and focus of this course will be on the application of various teaching methodologies to ensure inclusion for all in the physical education learning environment. In addition to meeting in the classroom, students will be required to participate in practicums both in the local school systems and at Weber State University. Prerequisite: PEP 3100; 3 classes of PEP 3240 - 3290.

~~**PEP 3700 - Recreation and Sports Facilities and Events Management**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Spring [Full Sem]**~~

~~Studies the principles, guidelines, and fundamental practices involved in indoor and outdoor facilities planning, construction, use and management, as well as publicity and management of events for recreation and sports. Integrates tenets of the law and risk management as they relate to recreational and athletic facilities and events. Prerequisite: PEP 2200.~~

~~**PEP 4370 - Exercise Management for Special Populations**~~

~~**Credits: (2)**~~
~~**Typically taught:**~~
~~**Spring [Full Sem]**~~

~~Exercise management for populations with special conditions. Overview of each condition's unique physiology, effects of the condition on the exercise response, effects of exercise training on the condition, and recommendations for exercise testing and programming are presented in a selected topics format. Prerequisite: PEP 2300 and PEP 3510.~~

~~**PEP 4620 - Leadership Concepts for Human Performance Management**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~

~~Students will study the current philosophical leadership concepts and the principles, practices, and issues of administration. Prerequisite: PEP 2200.~~

PEP 4700 - Methods of Teaching Junior High School Physical Education

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Provides prospective Junior High School physical education teachers with the knowledge, skills, and experience necessary to delivering quality physical education lessons for Junior High School-aged students. Principles, concepts, strategies, classroom management, skill development, and assessment will be explored. Prerequisite: PEP 2000, PEP 3100.

PEP 4710 - Methods of Teaching High School Physical Education

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Provides prospective high school physical education teachers with the knowledge, skills, and experience necessary to delivering quality physical education lessons for high school-aged students. Principles, concepts, strategies, classroom management, skill development, and assessment will be explored. Prerequisite: PEP 2000, PEP 3100.

PEP 4800 - Individual Projects

Credits: (1-4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A comprehensive study of a significant problem in the field of physical education. Hours to be arranged. For seniors only. May be repeated 3 times up to 4 credit hours.

PEP 4830 - Directed Readings

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Individualized readings and investigation of professional literature and its application to current and future specialized topics supervised by a faculty member. Extensive reading and formal writing required. Hours to be arranged. For seniors only. May be repeated 2 times up to 3 credit hours.

PEP 4860C - Field Experience Coaching

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Work experience which applies prior academic learning in a supervised setting. Prerequisite: PEP 2600, Junior/Senior status and department approval.

~~**PEP 4890 - Cooperative Work Experience**~~

~~**Credits: (1-6)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~
~~**Summer [Full Sem]**~~

~~A continuation of PEP 2890. May be repeated 5 times up to 6 credit hours.~~

PEP 4920 - Short Courses, Workshops, Institutes and Special Events

Credits: (1-4)
Typically taught:
As Needed

May be repeated 3 times up to 4 credit hours.

PEP 4990 - Field Experience/Senior Seminar

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course is designed to provide students with the opportunity to gain practical experiences in the field of physical education by teaching a class or classes in local public school grades 6-12. The course is also designed for students to meet and discuss a variety of issues relevant to preparing students to be physical educators. Prerequisite: PEP 3520, 12 credits of PEP 3240 - 3290. No substitutions can be made for this course.

PEP 6010 - Leadership in Physical Education

Credits: (3)
Typically taught:
As Needed

Designed to provide graduate students with an understanding of both theoretical and practical aspects of leadership in their respective fields of study. The ultimate goal of the course is to encourage daily application of leadership concepts in the personal and professional lives of the students.

PEP 6100 - Current Trends in Health and Physical Education

Credits: (3)
Typically taught:
As Needed

A study of health and physical education perspectives with an emphasis on the changes, trends, and future prospects that will affect the profession and the needs of those they serve.

~~**PEP 6300 - Advanced Biomechanics**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**As Needed**~~

~~Designed to expose the graduate student to appropriate research in sports biomechanics and to be involved in the analysis of movement based on selected mechanical principles such as balance, buoyancy, leverage, force, angles of rebound, projection and motion.~~

PEP 6370 - Exercise Management for Special Populations

Credits: (2)
Typically taught:
As Needed

Exercise management for populations with special conditions. Overview of each condition's unique physiology, effects of the condition on the exercise response, effects of exercise training on the condition, and recommendations for exercise testing and programming are presented in a selected topics format. Prerequisite: ~~PEP~~ESS 2300 and ~~PEP~~ESS 3510.

~~**PEP 6400 - Advanced Exercise Physiology**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**As Needed**~~

~~Understanding the physiological changes associated with exercise and training and the reasons for change are the paramount directives of this course. Concurrent with the lecture component is the practicum laboratory experience of equipment operation and individual assessment of physiological parameters.~~

PEP 6420 - Curriculum in Physical Education

Credits: (3)
Typically taught:
As Needed

Designed to provide an understanding of the role and importance of physical education in today's society, steps involved in curriculum planning, trends and issues in curriculum and to orient the student to various ideas in curriculum design.

PEP 6520 - Improving Physical Education

Credits: (3)
Typically taught:
As Needed

Designed for elementary classroom teachers to provide an opportunity for the teacher to further develop teaching skills, personal performance skills, knowledge and competencies. A major goal of this course will be to help the classroom teacher gain additional confidence in teaching physical education activities.

~~**PEP 6540 - Physiological Aspects of Human Performance**~~

~~**Credits: (2)**~~
~~**Typically taught:**~~
~~**As Needed**~~

~~Examine, evaluate, and apply the latest physiological concepts and ideas in conditioning practices for improving human performance. Prerequisite: PEP 2000 or PEP 2200 and 3 hours of General Education Life Science (LS).~~

PEP 6830 - Motor Learning

Credits: (3)
Typically taught:
As Needed

An in-depth study of the psychomotor domain of development. Special emphasis is given to skilled performance, learning theory, motor abilities, individual differences, developmental considerations, instructional and training procedures. Secondary school and athletic populations are considered regarding these topics.

PHIL 1000 HU - Introduction to Philosophy

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Online]

An introduction to the methods and problems of philosophy, with special emphasis on topics pertaining to the nature of reality, the theory of knowledge, and value theory.

PHIL 1120 HU - Contemporary Moral Problems

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem]

An introduction to ethical theories and their application to contemporary moral issues, such as human cloning, abortion, and physician-assisted suicide.

PHIL 1250 HU - Critical Thinking

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Online]

An introduction to informal logic, focusing on issues of logical form, standards of good and bad reasoning, and argumentative writing.

PHIL 2200 - Deductive Logic

Credits: (3)
Typically taught:
Fall ~~**[Full Sem, Online]**~~
~~**Spring [Full Sem, Online]**~~
~~**Summer**~~ **[Full Sem]**

An introduction to the concepts and methods of modern symbolic logic. Emphasis is placed on problems of translating English expressions into logical symbols, on the development of skills in using the formal proof procedures of sentential and predicate logic, and development of the predicate calculus.

PHIL 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-3)
Consult the semester class schedule for the current offering under this number. The specific title and number of credits authorized will appear on the ~~student's~~student's transcript. May be repeated ~~twice with~~three times for a maximum of ~~3 credit hours~~6 credits.

PHIL 3010 - History of Philosophy: Classical & Medieval

Credits: (3)
Typically taught:
Spring [Full Sem] even years

A survey of the major philosophers and issues from the Presocratics to the beginning of the early modern period, covering such major figures as Plato, Aristotle, Plotinus, Augustine, and Aquinas.

PHIL 3020 - History of Philosophy: Modern

Credits: (3)
Typically taught:
Spring [Full Sem] odd years

A topical survey of the major philosophers and issues from the seventeenth century to the beginning of the nineteenth century (Descartes to Kant).

PHIL 3150 - Existentialism

Credits: (3)
An examination of central themes in Existentialism, including anxiety, dread, freedom, awareness of death, and the consciousness and meaning of existence. These themes will be traced through the writings of such writers as Kierkegaard, Nietzsche, Heidegger, Camus, Sartre, and Simone de Beauvior.

PHIL 3200 - Philosophy of Democracy

Credits: (3)
Typically taught:
Spring [Full Sem] odd years

An examination of the ideals of and justifications for democratic institutions.

PHIL 3250 - Philosophy of Law

Credits: (3)
Typically taught:
~~Fall~~Spring [Full Sem] even years

An examination of central topics in the philosophy of law, including the relationship between law and morality, the justification of punishment, and legal reasoning.

PHIL 3350 - Medical Ethics

Credits: (3)
A survey of fundamental moral issues arising from the practice of medicine and from advances in medical science.

PHIL 3500 - Philosophy of Western Religion

Credits: (3)
Typically taught:
Fall [Full Sem] even years

A survey of topics in the philosophy of religion, especially as they pertain to Judaism, Christianity, and Islam.

PHIL 3550 - Philosophy of Eastern Religion

Credits: (3)
Typically taught:
Spring [Full Sem] even years

An examination of classic philosophical issues in Eastern religious thought, with a special emphasis on Hinduism, Buddhism, Taoism, and Confucianism.

PHIL 3650 - Aesthetics

Credits: (3)
Typically taught:
Fall [Full Sem] even years

An examination of philosophical issues concerning the nature and importance of aesthetic experience and appreciation in the arts and the environment, including questions about the definition of art, artistic representation and expression, and aesthetic value.

PHIL 4400 - Great Issues in Philosophy

Credits: (3)
A selected study of one of the traditional questions of philosophy, such as the nature of knowledge and truth, the mind/body problem, free will/determinism, and the nature of moral/aesthetic value. May be repeated once up to six credits covering a different topic.

PHIL 4450 - Great Thinkers of Philosophy

Credits: (3)
Selected study of the major works of a single central figure in philosophy. Philosophers whose works may be taught include, but are not limited to: Plato, Aristotle, Augustine, Aquinas, Descartes, Leibniz, Spinoza, Locke, Berkeley, Hume, Kant, Nietzsche, Mill, and Wittgenstein. May be repeated once up to six credits covering a different philosopher.

PHIL 4510 - Metaphysics

Credits: (3)
Typically taught:
Fall [Full Sem] odd years

A study of enduring topics concerning the nature of reality, such as the mind/body problem, free will/determinism, the problem of universals, and the existence of God. Historical and contemporary philosophers are discussed.

PHIL 4520 - Epistemology

Credits: (3)
Typically taught:
Fall [Full Sem] even years

A study of enduring topics in the theory of knowledge, such as the nature of justification; the relationship between knowledge, justification, and belief; the nature of truth; and sources of knowledge. Historical and contemporary philosophers are discussed.

PHIL 4530 - Philosophy of Mind

Credits: (3)
Typically taught:
Spring [Full Sem] odd years

A study of enduring topics in the philosophy of mind, such as the nature of mind; the mind-body problem; consciousness; the individuation of mental content; artificial intelligence. Historical and contemporary philosophers are discussed.

PHIL 4540 - Philosophy of Language

Credits: (3)
Typically taught:
Fall [Full Sem] odd years

A survey of central topics in the philosophy of language, including semantic content, speech acts, and the connection between meaning and truth. Historical and contemporary philosophers are discussed.

PHIL 4600 - Ethical Theory

Credits: (3)
Typically taught:
Fall [Full Sem] odd years

An in-depth study of western ethical theories, including utilitarianism, Kantian ethics, virtue ethics, and social contract theory.

PHIL 4810 - Experimental

Credits: (1-6)
May be repeated 5 times up to 6 credit hours.

PHIL 4830 - Directed Readings

Credits: (1-2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Individually designed tutorial for philosophy minors and majors, intended to satisfy program requirements not available through scheduled class offerings. May be repeated ~~3~~8 times ~~with~~for a maximum of ~~6~~9 credits.

PHIL 4900 - Senior Capstone Seminar

Credits: (3)
Typically taught:
Spring [Full Sem]

A comprehensive review of the various areas of philosophy and an in-depth study of a single philosopher with the goal of producing a substantial thesis paper.

PHIL 4920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-3)
Consult the semester class schedule for the current offering under this number. The specific title and number of credits authorized will appear on the student's transcript. May be repeated ~~twice with~~three times for a maximum of ~~3~~6 credit hours.

PHYS 1010 PS - Elementary Physics

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

A brief survey of physics at the introductory level. Topics covered include laws of motion, gravity, energy, light, heat, sound, electricity, magnetism, atomic and nuclear physics, radioactivity, and relativity. Three hours of lecture per week.

PHYS 1040 PS - Elementary Astronomy

Credits: (3)
Typically taught:
~~Su, F, SpFall~~Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]

A brief survey of the physical universe using the fundamental laws of physics. Topics include the history of astronomy, the solar system, the sun, the evolution of stars, pulsars, black holes, the Milky Way galaxy, galaxies, quasars, and the Big Bang. Three hours of lecture per week. Cross-listed with ASTR 1040.

PHYS 1360 PS - Principles of Physical Science

Credits: (3)
Typically taught:
Fall [Full Sem]

A lecture/laboratory course designed to provide an introduction to the scientific method and its application to the study of selected topics in physics and chemistry. Two hours of lecture and one 3-hour lab per week. Recommended for Elementary Education majors.

PHYS 2010 PS - College Physics I

Credits: (5)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

First semester of a two-semester sequence in general physics, primarily for students in pre-medicine, pre-dentistry, technology and other disciplines requiring physics without calculus. This semester covers topics in mechanics, including kinematics, Newton's laws, and the conservation laws of energy, linear momentum, and angular momentum. Also covered are topics in gravity, fluid mechanics, waves, and thermodynamics. Class meets five hours per week in lecture/discussion format. One 3-hour lab per week (PHYS 2015). Prerequisite: MATH 1060.

PHYS 2015 - College Physics I Lab

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

One 3-hour lab per week. Co-Requisite: PHYS 2010. Enrollment limited to transfer students.

PHYS 2020 - College Physics II

Credits: (5)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Second semester of a two-semester sequence in general physics. This semester covers topics in electricity and magnetism, electromagnetic waves, light and optics, relativity, atomic, and nuclear physics. Class meets five hours per week in lecture/discussion format. One 3-hour lab per week (PHYS 2029). Prerequisite: PHYS 2010.

PHYS 2025 - College Physics II Lab

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

One 3-hour lab per week. Co-Requisite: PHYS 2020. Enrollment limited to transfer students.

PHYS 2040 PS - Principles of Observational Astronomy

Credits: (3)
Typically taught:
Fall [Full Sem]

An introductory course in observational astronomy. Topics will include planetary, stellar, and galactic astronomy, with a focus on modern observational techniques, including digital imagery, spectroscopy, and observing with science-grade astronomical instrumentation. *Cross-listed with ASTR 2040*. Prerequisite: MATH 1060 (minimum grade of C).

PHYS 2090 PS - Environmental Physics - Energy and Power

Credits: (3)
Typically taught:
Spring [Full Sem]

An interdisciplinary course dealing with the chemical and physical concepts of energy and power. Emphasis will be placed on the emerging energy crisis, effects upon the environment and the quality of life.

PHYS 2210 PS - Physics for Scientists and Engineers I

Credits: (5)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

First semester of a two-semester sequence in calculus-based physics, primarily for students in science, math, computer science, and pre engineering. This semester covers topics in mechanics, including kinematics, Newton's laws, and the conservation laws of energy, linear momentum, and angular momentum. Also covered are topics in gravity, fluid mechanics, waves, and thermodynamics. Class meets five hours per week in lecture/discussion format. One 3-hour lab per week (PHYS 2219). Co-Requisite: MATH 1210.

PHYS 2215 - Physics for Scientists and Engineers I Lab

Credits: (1)
Typically taught:
Fall [Full Sem]

Spring [Full Sem]

One 3-hour lab per week. Co-Requisite: PHYS 2210. Enrollment limited to transfer students.

PHYS 2220 - Physics for Scientists and Engineers II

Credits: (5)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Second semester of a two semester sequence in calculus-based physics. This semester covers topics in electricity and magnetism, electromagnetic waves, light and optics, relativity, and quantum, atomic, and nuclear physics. Class meets five hours per week in lecture/discussion format. One 3-hour lab per week (PHYS 2229). Prerequisite: PHYS 2210. Co-Requisite: MATH 1220.

PHYS 2225 - Physics for Scientists and Engineers II Lab

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

One 3-hour lab per week. Co-Requisite: PHYS 2220. Enrollment limited to transfer students.

PHYS 2300 - Scientific Computing for Physical Systems

Credits: (3)
Typically taught:
Fall [Full Sem]

An introduction to computer programming and fundamental numerical algorithms as used for problem solving and visualization in the natural sciences. Applications may include nonlinear dynamics, chaos, many-particle systems, and Monte Carlo techniques. Prerequisite: PHYS 2210, MATH 1210, and either MATH 1200 or CS 1030 or permission of the instructor.

PHYS 2600 - Laboratory Safety

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An interdisciplinary, team-taught course that will be an overview of the major chemical, biological and physical safety issues related to science laboratories and field work. Class will meet once per week and will be taught in a lecture/demonstration format.

PHYS 2710 - Introductory Modern Physics

Credits: (3)
Typically taught:
Fall [Full Sem]

Relativity, quantum effects, the hydrogen atom, many-electron atoms, molecular and solid-state bonding, quantum effect devices, nuclear structure, nuclear reactions and devices, elementary particles. Prerequisite: PHYS 2220, MATH 1200 (may be taken concurrently), and MATH 1220.

PHYS 2800 - Introductory Individual Research Problems

Credits: (1-3)
Time and credit to be arranged. Intended for students working on a directed research project which includes physics/astronomy at the lower division level for one or more semesters. Prerequisite: Consent of instructor. Cross-listed with ASTR 2800. May be repeated up to 10 times.

PHYS 2830 - Introductory Readings in Physics/Astronomy

Credits: (1-3)
Time and credit to be arranged. Intended for students working on a directed reading project which includes physics/astronomy at the lower division level for one or more semesters. Prerequisite: Consent of instructor. Cross-listed with ASTR 2830. May be repeated up to 10 times.

PHYS 2890 - Cooperative Work Experience

Credits: (1-6)
Open to all students in the Physics Department who meet the minimum Cooperative Work Experience requirements of the department. Provides academic credit for on-the-job experience. Grade and amount of credit will be determined by the department.

PHYS 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Consult the class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript.

PHYS 3160 - Stellar and Planetary Astrophysics

Credits: (3)
Typically taught:
Spring [Full Sem] odd years

Selected topics in astrophysics, with a focus on stellar and planetary systems. Topics may include celestial mechanics, interaction of light and matter, stellar and planetary spectroscopy, stellar atmospheres and interiors, binary star systems, planets and planet formation, and extrasolar planets. Prerequisite: PHYS 2220. Cross-listed with ASTR 3160.

PHYS 3170 - Galaxies and Cosmology

Credits: (3)
Typically taught:
Spring [Full Sem] even years

Selected topics in astrophysics, with a focus on galactic astronomy and cosmology. Topics may include gravitational dynamics, interaction of light and matter, galaxy classification, galaxy formation and evolution, the structure of the universe, cosmology, and the origin and fate of the universe. Prerequisite: PHYS 2220. *Cross-listed with ASTR 3170.*

PHYS 3180 - Thermal Physics

Credits: (3)
Typically taught:
Spring [Full Sem]

An introduction to thermodynamics and statistical mechanics. Topics include heat and work; ideal gases; equipartition of energy; entropy; the Boltzmann, Fermi-Dirac, and Bose-Einstein distributions; applications to heat engines, refrigeration, chemical equilibrium, phase transitions, blackbody radiation, and properties of solids. Prerequisite: PHYS 2220, MATH 1200 and MATH 1220.

PHYS 3190 - Applied Optics

Credits: (3)
Typically taught:
Fall [Full Sem] odd years

Geometrical and physical optics, lasers, lenses, optical instruments, interference, thin films, interferometry, holography, diffraction, gratings, crystal diffraction, polarization. Two lectures and one 3-hour lab a week. Prerequisite: PHYS 2220 and MATH 1220.

PHYS 3300 - Advanced Computational Physics

Credits: (3)
Typically taught:
Spring [Full Sem] even years

This course extends the computational skills developed in PHYS 2300 to address a wider range of problems in modern physics. Students will explore the limits of computational methods and develop techniques suited to high-performance computing. Applications may be chosen from nonlinear dynamics, astrophysics, condensed matter physics, and quantum mechanics. Prerequisite: PHYS 2220 and PHYS 2300.

PHYS 3410 - Electronics for Scientists

Credits: (4)
Typically taught:
Fall [Full Sem]

An introductory course in electronics for students in physics and other sciences. The course includes D.C. and a.c. circuit analysis using complex impedances and covers basic principles of semiconductor operation, transistors, analog

and digital integrated circuits, analog-to-digital conversion techniques used in computer interfacing, and noise. Three lectures and one 3-hour lab a week. Prerequisite: PHYS 2220.

PHYS 3420 - Data Acquisition and Analysis

Credits: (3)
Typically taught:
Spring [Full Sem] odd years

Intermediate-level course in computer interfacing (data acquisition and analysis) for students in physics and all other sciences. Topics may include: data acquisition with industry-standard software packages, computerized test and measurement, analog-to-digital and digital-to-analog conversion, data acquisition electronics, electronic sensors (thermal sensors, light sensors, etc.), least squares curve fitting, fast Fourier transforms (FFT), Nyquist's theorem, noisy and weak signals. Two lectures and one 3-hour lab a week. Prerequisite: PHYS 2020 or PHYS 2220.

PHYS 3500 - Analytical Mechanics

Credits: (3)
Typically taught:
Fall [Full Sem]

Particle motion, oscillating systems; planetary motion, stability of orbits; collisions; Euler's equations, gyroscopic motion; Lagrange's equations, Hamilton's equations, theory of vibrations. Prerequisite: PHYS 2220, MATH 1200 and MATH 2280.

PHYS 3510 - Electromagnetic Theory

Credits: (3)
Typically taught:
Fall [Full Sem]

Vector analysis; electrostatics; calculating electric potentials; solving Laplace's equation; multipole expansions; electrostatic fields in matter; magnetostatics; charges in motion; electrodynamics; Faraday's law; Maxwell's equations. Prerequisite: PHYS 2220, MATH 1200, MATH 2210 and MATH 2280.

PHYS 3540 - Mechanical and Electromagnetic Waves

Credits: (3)
Typically taught:
Spring [Full Sem]

Periodic motions, free and forced vibrations; resonance; normal modes; dispersion; boundary conditions; electromagnetic waves and light; the Fresnel equations; electromagnetic radiation from accelerating charges. Prerequisite: PHYS 3500, PHYS 3510.

PHYS 3570 - Foundations of Science Education

Credits: (3)
Typically taught:
Spring [Full Sem]

A thorough investigation of research in science learning and curricular standards at the state and national levels. Foundations of the philosophy of science and scientific inquiry as applicable to science teaching at the secondary level. This course serves as a foundation to a preservice science teacher's education coursework.

PHYS 3710 - Nuclear and Particle Physics

Credits: (3)
Typically taught:
Spring [Full Sem] odd years

Nuclear structure and nuclear reactions including radioactive decay, fission, and fusion, with selected applications. The standard model of elementary particles and interactions. Collider experiments and their interpretation in terms of Feynman diagrams. Topics of current research at the high-energy frontier. Prerequisite: PHYS 2710.

PHYS 4200 - The Physics of Materials

Credits: (3)
Typically taught:
Spring [Full Sem] even years

An introduction to the modern theory of condensed matter. Emphasis is placed on the structural, electrical, and thermal properties of solids, with particular attention to materials of current research interest. Prerequisite: (May also be taken concurrently): PHYS 2710, PHYS 3180, CHEM 1220.

PHYS 4400 - Advanced Physics Laboratory

Credits: (2)
Typically taught:
Spring [Full Sem]

Advanced experiments in mechanics, electromagnetism, modern physics, and nuclear physics. This course also covers general laboratory practice, data analysis, and error propagation. Four hours of lab per week. Four hours of lab per week. Prerequisite: PHYS 2220; either PHYS 3190 or PHYS 3410.

PHYS 4410 - Materials Characterization Laboratory

Credits: (2)
Typically taught:
Fall [Full Sem] even years

A series of experiments for advanced students employing modern methods of measurement of properties of materials. The course will teach microscopic and spectroscopic techniques and general laboratory practice, data analysis, and error propagation. Four hours of lab per week. Prerequisite: PHYS 2220 and PHYS 3410.

PHYS 4570 - Secondary School Science Teaching Methods

Credits: (3)
Typically taught:
Fall [Full Sem]

Acquaintance and practice with various teaching and assessment methods. Development of science curricula including lesson and unit plans. It is recommended that this course be completed immediately before student teaching. Prerequisite: Admission to the Teacher Education Program.

PHYS 4610 - Quantum Mechanics

Credits: (3)
Typically taught:
Spring [Full Sem]

Wave-particle duality, Schrodinger equation, wave function, quantization rules, one-dimensional motion, one-electron atoms, spin and orbital angular momentum. Prerequisite: PHYS 2710, MATH 2270. Co-Requisite: PHYS 3500; MATH 3710.

PHYS 4620 - Advanced Quantum Mechanics

Credits: (3)
Typically taught:
Fall [Full Sem]

Approximation methods and other selected topics in pure and applied quantum mechanics. Prerequisite: PHYS 4610.

PHYS 4800 - Individual Research Problems

Credits: (1-3)
Time and credit to be arranged. Open to qualified students for one or more semesters. Prerequisite: Consent of instructor. Cross-listed with ASTR 4800. May be repeated up to 10 times.

PHYS 4830 - Readings in Physics/Astronomy

Credits: (1-3)
Topics which can be studied include (but are not limited to): mechanics, thermodynamics, kinetic theory, statistical mechanics, electronics, electromagnetism, optics, solid-state physics, modern physics, nuclear physics, relativity, cosmology, and astrophysics. These courses may be taken at any time on a personalized basis. Time and credit to be arranged. Prerequisite: Consent of instructor. Cross-listed with ASTR 4830. May be repeated up to 10 times.

PHYS 4890 - Cooperative Work Experience

Credits: (1-6)
A continuation of PHYS 2890. Open to all students.

PHYS 4920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Consult the class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript.

PHYS 4970 - Senior Thesis

Credits: (2)
An individual research program pursued under faculty supervision. It is expected that one or more semesters of research (PHYS 4800) will precede registration for this course. Course evaluation will include an oral and a written report. Prerequisite: senior class standing and consent of departmental committee.

PHYS 4990 - Seminar in Physics

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Joint sessions of faculty and students devoted to current topics in physics. Students taking this course for credit will make a presentation based on individual library research of a topic agreed on with the faculty advisor. One credit required for physics majors. Prerequisite: previous upper division physics course. May be taken twice for credit.

PHYS 5030 - Physics for Teachers

Credits: (2-3)
Science content course for teachers in the MEd Science Emphasis Program. To register, select another departmental course and develop a contract detailing additional work required for graduate credit. ~~Course may be repeated.~~ Contract must be approved by instructor, department chair, and Director of the Master of Education Program. May be repeated once up to 6 credit hours.

POLS 1010 - Introduction to Political Science

Credits: (3)
Typically taught:
Spring [Full Sem]
Summer [Online]

The purpose of this course is to define the discipline of political science. By discipline we mean the way in which political science has developed over the past 150 years. We will assess the basic sub-disciplines of political science: American, Comparative, International Relations, Political Theory, Public Administration and Public Law.

POLS 1100 AI - American National Government

Credits: (3)
Typically taught:
Fall [Full Sem, Online]

Spring [Full Sem, Online]
Summer [Full Sem, 1st Blk, Online]

A study of American constitutional democracy at the national level, including political institutions, interests, ideals, and the processes through which policies are formulated and implemented.

POLS 1520 SS - Leadership and Political Life

Credits: (3)
Typically taught:
Fall [Full Sem]

The purpose of the Leadership and Political Life class is to introduce students to the theory and practice of leadership in the public realm, which is applicable to the private sector.

~~**POLS 2060 - Freedoms**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~

~~An examination, at an introductory level, of the American judiciary and basic constitutional guarantees. Many of the specific cases used as examples will be drawn from the constitutionally fertile area of "school law." This course will have theoretical and practical dimensions.~~

POLS 2100 SS - Introduction to International Politics

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

Examines international politics by juxtaposing the traditional Realist model (power, state sovereignty, Balance of Power) emphasizing state competition and the newer Liberal model (potential nuclear catastrophe, environmental dangers, global economic interdependence) emphasizing global cooperation.

POLS 2200 SS - Introduction to Comparative Politics

Credits: (3)
Typically taught:
Fall ~~**[Full Sem]**~~
~~**Spring**~~ **[Full Sem]**

An introductory survey, comparing and contrasting political ideas, institutions and processes in the political systems of the world to gain a deeper knowledge of, and a broader perspective on, political phenomena.

POLS 2300 SS - Introduction to Political Theory

Credits: (3)
Typically taught:
Spring [Full Sem]

An examination of the arguments behind and the implications of the dominant theories of politics. Theories that are studied include liberalism, conservatism, socialism, and republicanism, among others. In studying these theories, the works of such theorists as Plato, Aristotle, Locke, Rousseau, Marx, and Mill will be examined.

POLS 2400 SS - Introduction to Law and Courts

Credits: (3)
Typically taught:
Spring [Full Sem]

An introductory survey of law and courts emphasizing the structure of courts, different forms of law, and the various actors involved in legal conflicts.

POLS 2500 SS/DV - Human Rights in the World

Credits: (3)
Typically taught:
Fall [Full Sem]

Human rights (HR) are a powerful idea in the modern world, but also the focus of controversy. This course will provide students with a broad foundation in human rights including the ability to analyze HR in domestic and int'l law, examine prevention and prosecution techniques, and debate current issues at home and abroad. Emphasis will be placed on women and gender studies (including LGBT issues), vulnerable populations such as refugees, and atrocity crimes.

POLS 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-3)
Typically taught:
Not currently being offered

Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated once up to 6 credit hours with a different title.

POLS 2930 - Peacebuilding in Rwanda

Credits: (3)
Typically taught:
Summer [1st Blk]

In this course, students will travel to Rwanda (Africa) to participate in a Peacebuilding Institute (PBI) with Weber State University and Never Again Rwanda. Weber State students and Rwandan University students will work together for an unforgettable academic experience. Through readings, site visits, lectures from specialists, and group discussions, students will explore themes of genocide, human rights, transitional justice, and good governance. In addition they will develop skills in cross-cultural dialogue exchange.

~~**POLS 3060 - Mock Trial**~~

~~**Credits: (2)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~

~~An introduction to some of the basic principles of trial advocacy. Students will prepare for participation on the Weber State University Mock Trial team. May be repeated for a total of four hours. May be repeated once for a total of four credit hours.~~

POLS 3140 - Foreign Policy of the United States

Credits: (3)
Typically taught:
Spring [Full Sem] even years

An analysis of the making of American foreign policy with reference to the role and influences of beliefs, interests, public opinion, media and especially the institutional struggle between President & Congress. The challenges facing contemporary U.S. foreign policy will also be examined.

POLS 3150 - Model United Nations

Credits: (3)
Typically taught:
Spring [Full Sem]

A study of the current events before the United Nations General Assembly as well as in-depth research on selected countries; includes preparation for the Model United nations of the Far West and the Northern Utah Model UN. May be repeated once for 6 credit hours.

POLS 3210 - Politics and Governments of Europe

Credits: (3)
Typically taught:
Fall [Full Sem]

A study of European political systems with special emphasis on the politics and governments of the United Kingdom, France, and Germany.

POLS 3220 - Politics and Governments of Asia

Credits: (3)
Typically taught:
Spring [Full Sem] odd ~~years~~
~~Summer [Online] even~~ years

A study of politics and governments of the major states in the area with particular reference to India, Japan, and China.

POLS 3290 - Introduction to Politics and Governments of Developing Nations

Credits: (3)
Typically taught:
~~Fall~~Spring [Full Sem] ~~even~~odd years

A survey of the political patterns of human beings in the process of modernization by studying the role of colonialism, charismatic leader, political parties, ideologies, military, civil service, and social and economic structures, and the impact of development on stability and integration of nations in Africa, Asia, and Latin America.

POLS 3330 - American Political Thought

Credits: (3)
Typically taught:
~~Fall~~Spring [Full Sem] ~~even~~odd years

Historical examination of American thought with stress on its influences on the development of the American Government.

POLS 3340 - Environmental Political Theory

Credits: (3)
Typically taught:
Fall [Full Sem] even years

This is an upper division course in political theory, with the specific focus being environmental political theory. The course examines a range of theoretical perspectives on a range of issues including how we conceptualize humans, nature, and politics.

POLS 3400 - Sexual Orientation, Politics, and Law

Credits: (3)
Typically taught:
Fall [odd years]

Social movements employ a variety of methods to achieve the protection of their members' rights and interests. This course focuses on these issues through the study of LGBT persons in the United States from the mid-twentieth century to the present. It examines the political and legal strategies of LGBT groups in a variety of areas including parental rights, employment, military service, schools, and relationship recognition.

POLS 3600 - Political Parties

Credits: (3)
Typically taught:
~~Spring~~Fall [Full Sem] ~~even~~odd years

A study of the organization and function of the American political parties, political organizations that play a role alongside political parties in the American political system, such as interest groups, and a comparative study of political parties in other countries.

POLS 3610 - Campaigns and Elections

Credits: (3)
Typically taught:
Fall [Full Sem] even years

A study of the electoral process in the United States with an examination of national institutional elections, state and local elections, as well as election rules. Also a study of campaigning techniques in elections at all levels.

POLS 3620 - Political Behavior

Credits: (3)
Typically taught:
Spring [Full Sem] odd years

This course is designed to introduce students to the nature of mass political behavior and its role in the political process. Further, it examines the interaction between and among diverse social groups, the media, and policy makers. The course will also emphasize the political psychology of public opinion formation and political decision of those outside the mainstream political institutions.

POLS 3630 - Identity Politics

Credits: (3)
Typically taught:
Fall [Full Sem] even years

A study of the nature of identity politics and its role in the political process. This course examines the interaction among diverse social groups and emphasizes the effect of socio-demographic differences on political decisions.

POLS 3700 - ~~Introduction to Public Administration~~Bureaucratic Politics

Credits: (3)
Typically taught:
Spring [Full Sem]

Presents basic theories, concepts, and analysis of current practices and problems in governmental administration.

POLS 3750 - Urban Government and Politics

Credits: (3)
Typically taught:
Fall [Full Sem] odd years

A study of local government organization and policy problems, with an emphasis on problems of the metropolitan areas.

POLS 3760 - State Government and Politics

Credits: (3)
Typically taught:
~~Fall~~Spring [Full Sem] even years

An examination of governmental organization, operation, policy making, and electoral politics of state governments and the dynamics of relationships with other levels of government.

POLS 3990 - Political Analysis

Credits: (3)
Typically taught:
Spring [Full Sem]

An introduction to the scope and methods of political science. This course focuses on the formulation of hypotheses, the collection of data, appropriate study design, and study analysis through statistical testing and interpretation. Prerequisite: POLS 1010.

POLS 4020 - American Constitutional Law I~~: Governmental Powers~~

Credits: (3)
Typically taught:
Fall [Full Sem]

An introduction to many of the ~~basic~~ doctrines of American Constitutional Law ~~relating to government power including: Essential questions in~~ from the Founding to the New Deal. Topics include constitutional theory; ~~the role of the federal judiciary – particularly the United States Supreme Court; congressional power under the Constitution;~~congressional, executive ~~authority under the Constitution;~~, and ~~federalism~~judicial power; the relationship between federal and state governments; and fundamental rights.

POLS 4030 - American Constitutional Law II~~: Civil Liberties and Civil Rights~~

Credits: (3)
Typically taught:
Spring [Full Sem]

An introduction to many of the ~~basic~~ doctrines of American Constitutional Law ~~relating~~from the New Deal to ~~civil rights and civil liberties including: The process of selective incorporation – why~~current experience. Topics include constitutional theory; judicial, executive, and ~~how the Bill of Rights applies to the states; property rights in the United States, those rights afforded to criminal defendants; First Amendment liberties – freedom of speech, press,~~congressional power; the relationship between federal and ~~freedom of religion; the rights~~state governments;

and ~~liberties that have emerged from the~~ fundamental rights, in particular free speech, religious freedom, equal protection~~ clause of the Fourteenth Amendment;~~, and~~, finally, the controversial and evolving "right of~~ privacy~~."~~ rights.

POLS 4060 - Law and Society

Credits: (3)
Typically taught:
~~**Spring [Full Sem]**~~**Not currently being offered**

This course explores how law operates in society and how society influences the nature of the law. Topics may include the role of race in law, legal consciousness, efficacy of legal action, and the nature of the legal profession.

POLS ~~4070 - Sex Roles~~4100 - Free Speech in Law and ~~the Law~~Politics

~~**Credits: (3)**~~
~~An examination of the ways law affects men and women differently and the way law is changing to reflect economic and political change.~~
Credits: (3)
Typically taught:
Spring [Full Sem]

This course explores the historical meaning of free speech in the United States, the modern development and application of free speech principles in constitutional law, and how other countries deal with free speech disputes.

POLS 4160 - Topics in World Politics

Credits: (3)
Typically taught:
Not currently being offered

The study of selected contemporary problem areas in world politics to assess their impact within the international arena. Diversity credit is available when the selected topic is "~~"~~Topics in World Politics: Third World Women~~."~~." May be repeated for a maximum of 6 hours toward the hours required for Political Science majors and only 4 hours will be counted toward the political science minor requirement.

POLS 4180 - International Law and Organization

Credits: (3)
Typically taught:
Fall [Full Sem]

An examination of the basic principles of international law and organization. Emphasis is given to the sources and evolution of international law, and a study of the League of Nations and the United Nations.

POLS 4190 - Theories of International Politics

Credits: (3)
Typically taught:

~~Spring~~Fall [Full Sem] ~~odd~~even years

An analysis of traditional and contemporary theories offered to explain politics in the international arena.

POLS 4280 - Foreign Policies of Major Powers

Credits: (3)
Typically taught:
Spring [Full Sem] even years
Summer [Online]

An examination of the foreign policies of major powers including the United States, Britain, China, France, Germany, India, Japan, and Russia.

POLS 4360 - Classical Political Thought

Credits: (3)
Typically taught:
~~Summer [Online] odd~~Spring [Full Sem] even years

An examination of ideas of God, human nature, society, the state, the problem of evil, etc., from Ancient Greece to the middle ages.

POLS 4380 - Modern Political Thought

Credits: (3)
Typically taught:
~~Spring~~Fall [Full Sem] even years

A survey of political theory from the 17th century to the present, with a focus on theoretical formulations and critiques of democratic government and the political subject.

POLS 4600 - American Congress

Credits: (3)
Typically taught:
Fall [Full Sem] odd years

A study of the United States Congress and its members. This course examines the legislative decision making process as well as an emphasis on the history of the institution.

POLS 4620 - The U.S. Supreme Court

Credits: (3)
Typically taught:
~~[odd~~Fall [Full Sem] even years~~]~~

A study of the U.S. Supreme Court as a legal and political institution. This course examines the historical development of the Supreme Court, its relationship to other institutions, and judicial decision-making.

POLS 4640 - American Presidency

Credits: (3)
Typically taught:
Spring [Full Sem] even years

A study of the United States presidency and the people who have held the office. This course examines individual presidential character and personality as well as providing a survey of the history of the institution.

POLS 4700 - Politics of Administration

Credits: (3)
Typically taught:
Fall [Full Sem] even years

A study of public administration from a conflict/power perspective rather than authority. A survival course for public managers.

POLS 4750 - Public Policy Analysis

Credits: (3)
Typically taught:
Fall [Full Sem] ~~even~~odd years

A study of the American policy process, with an emphasis on the dynamics involved in the creation, adoption and implementation of selected domestic policies.

POLS 4760 - Rwanda: Genocide and Aftermath

Credits: (3)
Typically taught:
Summer [Online]

This course will examine the 1994 Rwandan genocide and its aftermath. The class will discuss the historical legacy of colonialism and the impact that post-colonial policies had in pre-genocide Rwanda. Next, the events surrounding the genocide within Rwanda will be discussed in addition to its immediate impact on the surrounding Great Lakes countries of Africa. Finally, the legacy of the Rwandan genocide will be examined, especially in regards to politics and international law. Specific issues to be addressed include the complex relationship between political and legislated memories, ethnic identities before and after the genocide, the creation and implementation of transitional justice measures including the national courts, gacaca courts, and the International Criminal Tribunal for Rwanda.

POLS 4800 - Individual Projects and Research

Credits: (1-2)
Typically taught:

Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

A maximum of 6 hours may be counted toward the major or 3 hours toward the minor. Prerequisite: Department approval required.

POLS 4830 - Directed Readings

Credits: (1-2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

A maximum of 6 hours may be counted toward the major or 3 hours toward the minor. Prerequisite: Department approval required.

POLS 4860 - Washington D.C. Internships

Credits: (1-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

A maximum of 6 hours may be counted toward the major or 3 hours toward the minor. Prerequisite: Department approval required.

POLS 4861 - International Internships

Credits: (1-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Internships located outside of the United States. Department approval required. A maximum of 6 hours may be counted toward the major or 3 hours toward the minor.

POLS 4865 - State and Local Internship

Credits: (1-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

State or Local internship credits. Professor approval required. May be repeated up to 5 times and up to 6 credit hours.

POLS 4870 - Internship in Perspective

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

This course is designed to put the internship experience in broader context. Students will read books and articles on current issues and then focus on the way that government and non-governmental institutions combine to make policy. In this students will take their political science knowledge and apply it to practical politics. Co-Requisite: POLS 4860.

POLS 4880 - Internship Research

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

This course is designed to complement the student intern's experience while in the placement. This course is designed to give the student a chance to do a research project based on his or her experience in the internship. The research evolves out of assignments given at the internship. Prerequisite: POLS 4860.

POLS 4920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-3)
Typically taught:
Not currently being offered

Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated once up to 6 credit hours with a different title.

POLS 4940 - Topics in American Politics & Thought

Credits: (3)
Typically taught:
~~**Fall [Full Sem] odd years**~~**Not currently being offered**

The study of selected contemporary problem areas in American politics and thought to assess the impact and implication within the U.S. domestic arena. This course may count once to satisfy a subfield requirement at the discretion of the department chair. This course may be repeated once up to 6 credit hours (in different topics).

POLS 4990 - Senior Seminar/Senior Thesis

Credits: (3)
Typically taught:
Fall [Full Sem]

A seminar in the field of political science. Students will be required to produce a major paper out of this seminar. Required for Political Science majors. Prerequisite: POLS 1010. Department approval required. Note: Political Science BS students must take POLS 3990 before POLS 4990.

PS 1143 - Fundamental Selling Techniques

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

A retail, wholesale, and direct selling course. Emphasis upon mastering and applying the fundamentals of selling. Preparation for and execution of sales demonstrations required.

PS 1303 - Sales Channels

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

Examination of the distribution process of goods and services, the interrelationships of customer demands, production, pricing, promotion, and the movement of goods from producer to consumer.

PS 1401 - Introduction to Sales and Service Technology

Credits: (1)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

This course is designed to help those new PS majors or those exploring the PS major field learn more about the career/ employment options available. This course is also designed to review the various academic emphases, major requirements, and decision making process.

PS 1403 - Introduction to Customer Care

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A study of the basic techniques for providing quality service to clients.

PS 1503 - Introduction to Fashion Merchandising

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]

A study of the Fashion Merchandising industry, including careers in design, manufacturing, wholesaling, promotion, and retailing, including well-known designers, manufacturers, promotion media and apparel and accessory retail institutions.

PS 1890 - Work Experience

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem~~]~~
~~Summer [Online~~]

Open to all first year declared majors in Professional Sales. Provides academic credit for on-the-job experience. Grade and amount of credit will be determined by department. May be repeated a maximum of 3 times or until a maximum of 6 credit hours is reached.

PS 2182 - Credit and Collection Methods

Credits: (2)
Typically taught:
Fall [Full Sem Online]
Spring [Full Sem Online]

The study of specific credit and collection methods for retail, wholesale, and service industries; including cost of retail credit, credit investigation, methods of collecting bad accounts, securing new business through credit applications, and credit control.

PS 2383 - Retail Merchandising and Buying Methods

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

The study of the retail buyer's duties, different buying organizations, and techniques, procedures of purchasing merchandise for resale and retail merchandising strategies.

PS 2443 - Advertising Methods

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

A study of advertising methods as they relate to local retail, wholesale, and service industries, including newspaper, magazine, radio, TV, mail, outdoor and special promotion events.

PS 2603 - Advanced Selling Techniques

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

Study of advanced techniques including, opening, investigating, demonstrating capability and obtaining commitment of the consultative and strategic seller.

PS 2703 - Internet Sales and Service

Credits: (3)
Typically taught:
Fall [Full Sem Online]
Spring [Full Sem Online]

The study of Internet sales, service and technology. Understanding the process of establishing an online business, setting up online shopping capabilities and database integration. Online customer service and retention, buyer behavior and current Internet sales issues are presented.

PS 2890 - Work Experience II

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
~~**Summer [Online]**~~

Open to second year declared majors in Professional Sales. A continuation of PS 1890. May be repeated a maximum of 3 times or until a maximum of 6 credit hours is reached.

PS 2903 - Professional Selling Methodologies

Credits: (3)
Typically taught:
Fall [Full Sem]

Spring [Full Sem]

The study of selling and customer service techniques as they apply to virtual, inside and field sales.

PS 2991 - Sales/Service Technology Seminar

Credits: (1-3)
Typically taught:
Spring [Full Sem]

Directed studies, group discussions, and analysis of selected topics pertinent to sales and service technology. Also designed to prepare sales and service majors for the job market and career opportunities. May be repeated until a maximum of 3 credit hours is reached.

PS 3103 - Sales Personalities and Profiles

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

Utilization of personality profiling and behavioral styles profiling assessment instruments as applied to account representatives, retail salespersons, sales engineers, industrial product salespersons non-technical and service salespersons. Prerequisite: PS 1143.

PS 3203 - Customer Service Techniques

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

A study of customer service techniques required in order to sell and service products, systems, or services needed by industrial manufacturing, processing, mining, construction firms, or other related technical areas.

PS 3303 - Social Media in Sales

~~Credits: (3)~~Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

This course will teach professional sales people to use social media to (1) attract new clientele (2) strengthen customer relationships (3) expand existing accounts and (4) establish a position as an authority in the field. Prerequisite: PS 1143.

PS 3363 - Contract and Sales Negotiation Techniques

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

Principles, techniques and analysis of strategies involved in contract and sales negotiations. Development of integrated strategies through group and individual interaction. Prerequisite: PS 1143.

PS 3403 - Pharmaceutical and Medical Device Sales

Credits: (3)
Typically taught:
Spring [Full Sem]

A study of the opportunities that exist in the medical field as it pertains to selling. The course examines the integral relationship that pharmaceutical and medical device representatives have within the medical community. Prerequisite: PS 1143 and PS 2603.

PS 3503 - Sales Planning and Forecasting

Credits: (3)
Typically taught:
~~Spring~~Fall [Full Sem]
Summer [Full Sem Online]

A study of sales planning and forecasting. Special emphasis will be given to goal setting, prioritizing, sales forecasting and establishing and managing a sales territory. The student will also learn techniques for individual goal setting and time management. Prerequisite: ~~PS 1143, PS 2603, PS 3103~~MATH 1030 or higher.

PS 3563 - Principles of Sales Supervision

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

Practical application of first-line supervisory skills including choosing, organizing, training, and evaluating entry-level employees; making supervisory decisions; and solving first-line supervisory problems. Understanding the basic responsibilities of a supervisor in production organizations and service organizations.

PS 3702 - Developing Team Leadership Skills

Credits: (2)
Typically taught:
Fall [Full Sem]

Spring [Full Sem]
Summer [Full Sem, Full Sem Online]

A skills based course designed to develop the interpersonal and leadership skills necessary to work effectively in teams and guide teams through the group stages of development. This course will be facilitated in such a way the participants will learn how to diagnose team developmental level and develop a high performing team by applying the principles of situational leadership and the DISC personality profiles system. Prerequisite: PS 3563.

PS 3803 - Sales Proposals

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

A study of selling techniques required in order to sell products, systems, or services needed by industrial manufacturing, processing, mining, construction firms, or other related technical areas. Prerequisite: PS 3563.

PS 3903 - Sales Presentation Strategies and Techniques

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [1st Blk Online]

Principles and practices for the five major categories of professional sales consultants. Prerequisite: PS 1143 and PS 3803.

PS 4203 - Ethical Sales and Service

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

Principles, techniques and analysis of ethics in the sales and service professions. Utilizes group interaction, individualized hands-on experiences and a field based experience. Prerequisite: PS 3563.

PS 4610 - Senior Project I

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

A capstone project for students in their final year of the professional sales degree. Provides hands-on experiences in the areas of sales and service including sales, customer service techniques, presentation strategies, and team leadership development. This course focuses on working with sales and service problems in a departmentally approved work environment. Prerequisite: PS 3103, PS 3363, PS 3903.

PS 4620 - Senior Project II

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

A continuation of PS 4610. Prerequisite: PS 3103, PS 3363, PS 3903.

PS 4830 - Directed Readings

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Individual readings supervised by a faculty member. Prerequisite: Approval of instructor. May be repeated twice for a maximum of 3 credit hours.

PS 4920 - ~~Short Courses, Workshops, etc~~Workshop Lecture

Credits: (1-2)
Typically taught:
Fall [Full Sem]

~~Consult the semester~~Upper division workshop class ~~schedule for the current offering under this number. The~~based on honing the skills of identifying a specific ~~title~~target market, investigating the value proposition of a degree and ~~credit authorized will appear on the student transcript~~career in Professional Sales and applying sales strategies and packaging a presentation for area high school students. May be repeated up to 3 times for a maximum of 4 credit hours with different content.

PS 4993 - Sales Career Seminar

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

Research and discussion of sales and service related problems. Also designed to prepare sales and service majors for the job market and career opportunities.

PSY 1010 SS - Introductory Psychology

Credits: (3)
Typically taught:
Fall [Full Sem, 1st Blk, 2nd Blk, Full Sem Online]
Spring [Full Sem, 1st Blk, 2nd Blk, Full Sem Online]
Summer [Full Sem, 1st Blk, 2nd Blk, Full Sem Online]

Introduction to the scientific study of human behavior.

PSY 1540 - Psychology of Adjustment and Growth

Credits: (3)
Typically taught:
~~**Fall [Full Sem]**~~
~~**Summer**~~**Spring [Full Sem]**

This course is designed to introduce students to psychological concepts that are involved with understanding their identity, psychological adjustment, and potential for growth. Students will have an opportunity to learn the psychological principles and processes underlying psychological health and apply the issues in the course to their personal lives. Topics include: managing stress, love and intimacy, relationships, gender issues, sexuality, work and recreation, loneliness and solitude, death and loss, meaning and values, and personal growth.

PSY 2000 SS - The Psychology of Human Relationships

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem, Full Sem Online]

A systematic review of the research on interpersonal relationships, including the study of multiple factors that contribute to relationship development and functioning and the diverse socio-cultural contexts in which relationships occur.

PSY 2010 - Science and Profession of Psychology

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]

The purpose of this course is to build upon Introductory Psychology so that students may better understand the discipline as both a science and a profession. The course covers a range of topics, including research, statistics, ethics, career options, graduate school options and preparation, critical to all fields of psychology and provides the skills necessary for students to succeed in upper-division courses and career preparation. This course is designed for students who are interested in or beginning to pursue psychology as an academic major or minor. Prerequisite: PSY 1010.

PSY 2250 - Learning and Memory

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem, Full Sem Online]

This course will involve a survey and analysis of the basic processes involved in acquisition, retention, and expression of new behaviors and alterations of existing behaviors in animals and humans. The course will examine the central theoretical concepts and issues in the fields of learning and memory. Prerequisite: PSY 1010.

PSY 2370 - Psychology of Women and Gender

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem, Full Sem Online]

The philosophical, theoretical, and empirical issues of psychology of gender. Issues include gender differences, stereotypes, androgyny, sexuality, health issues, achievement motivation, gender stereotypes, global women's issues, sexual orientation, issues for women with disabilities, and violence. Prerequisite: PSY 1010.

PSY 2730 - Biopsychology

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Biological basis of human & animal behavior, with emphasis upon sensory and nervous system processes underlying motivation, learning, perception, emotion, & abnormal behavior. Prerequisite: PSY 1010.

PSY 2800 - Projects and Research

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Supervised participation in faculty research projects in various areas of psychology. Written report required at end of semester; oral report assigned at discretion of faculty supervisor. Prerequisite: PSY 1010 and permission of the instructor. May be repeated 4 times for a maximum of 4 credit hours.

PSY 2830 - Directed Readings

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Independent readings or secondary research on advanced special topics under the direction of a faculty mentor. For each hour of credit in a readings project the student is required to read an appropriate number of primary research journal articles and book chapters. A paper written in APA style and oral report are required at the end of the term. Prerequisite: PSY 1010 and faculty mentor permission. May be repeated 4 times for a maximum of 4 credit hours.

PSY 2890 - Cooperative Work Experience

Credits: (1-2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Open to all students who meet the following requirements. Provides academic credit for on-the-job learning experience. Learning experiences will be specified in a learning contract. Grade and amount of credit will be determined by the department. Limited to two credit hours per semester and four credit hours counted toward the psychology major and minor from the following courses: PSY 2890, PSY 4890, PSY 4380 and PSY 4390. Federal regulations restrict all Cooperative Work Experience to no more than six semester hours. Must be employed in a position that uses psychological training. By prior permission of instructor only. Prerequisite: PSY 1010. May be repeated 4 times for a maximum of 4 credit hours.

PSY 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-3)
Variable Title
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. Prerequisite: PSY 1010.

PSY 3000 - Child Psychology

Credits: (3)
Typically taught:
Fall [Full Sem, ~~2nd Blk~~Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [1st Blk, Full Sem Online]

Principles and theories of physiological, psychological, emotional, cognitive, personality and social child development and parent-child relations and developmental problems.

PSY 3010 - Abnormal Psychology

Credits: (3)
Typically taught:

Fall [Full Sem, ~~2nd Blk~~Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [1st Blk, Full Sem Online]

An overview of abnormal human behavior, its etiology, symptoms and treatment as seen by current psychological paradigms.

PSY 3020 - Child and Adolescent Psychopathology

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An overview of the etiology, diagnosis, developmental course, treatment, and prevention of disorders first evident in childhood and adolescence. Prerequisite: PSY 1010.

PSY 3100 - Psychology of Diversity

Credits: (3)
Typically taught:
Spring [~~Online~~Full Sem]
Summer [1st Blk]

This course examines the psychological issues associated with human diversity including culture, disabling conditions, gender, class, ethnicity, and others. It addresses the psychological principles underlying these issues and offers effective ways of dealing with these issues. Prerequisite: PSY 1010.

PSY 3140 - Adolescent Psychology

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [2nd Blk, Full Sem Online]

Principles and theories of physiological, psychological, emotional, cognitive, personality and social adolescent development and parent-adolescent relations and developmental problems.

PSY 3200 - Psychology of Sport, Injury & Rehabilitation

Credits: (3)
Typically taught:
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~**Not currently offered**

This course is designed to provide a basic understanding of the psychology of sport, injury, and rehabilitation. Topics covered include: emotion, motivation, mental skills training and use, psychological antecedents of injury, psychology of injury and rehabilitation, career transition and termination, disabilities, rehabilitation/exercise adherence, eating

disorders, alcohol and drug/substance abuse, gender and cultural diversity, and research methods related to psychology of sport, injury and rehabilitation. Prerequisite: PSY 1010 or HLTH 1110. Cross-listed with AT 3200.

PSY 3240 - The Psychology of Drug Use and Abuse

Credits: (3)
Typically taught:
~~Once every 2 years at~~Summer [Full Sem] SLCC Miller Campus

The course addresses the biopsychology factors influencing the use and abuse of drugs and the behavioral and social consequences of such use and abuse. Prerequisite: PSY 1010.

PSY 3255 - Conditioning, Learning, & Behavior Modification

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course will involve an analysis of the complex processes involved in the acquisition, retention, and expression of new behaviors and the mechanisms related to altering existing behaviors in all types of animals (human and nonhuman). The course will examine the historical and current central theoretical concepts and issues in the fields of conditioning and learning. Additionally, the course will provide you with an understanding of the principles of applied behavioral analysis and modification. Prerequisite: PSY 1010.

PSY 3270 - Motivation and Emotion

Credits: (3)
Typically taught:
~~Spring~~Fall [Full Sem] SLCC Miller Campus

Theories, content areas, research methods, measurement and practical applications in the psychology of motivation and emotion. Prerequisite: PSY 1010.

PSY 3430 - Theories of Personality

~~Credits: (3)~~Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [1st Blk]

A survey of the major theories of personality. Prerequisite: PSY 1010.

PSY 3450 - Psychology of Language

Credits: (3)
Typically taught:

Spring [Full Sem] even years

This course will provide a comprehensive overview of psycholinguistics. It will focus on the cognitive and social aspects of language production and comprehension in both spoken and written language. Prerequisite: PSY 1010 or ENGL 3010.

PSY 3460 - Social Psychology

~~**Credits: (3)**~~**Credits: (3)**
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

An empirically based survey of the effects of social influence on the basic psychological processes of individuals. Included are the individual in culture and society, the development of attitudes, and the impact of the group. Prerequisite: PSY 1010.

PSY 3500 - Cognition

~~**Credits: (3)**~~**Credits: (3)**
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem, Full Sem Online]

Principles of cognition and thinking including attention, memory, concept learning, decision making, and problem solving. Prerequisite: PSY 1010.

PSY 3550 - Psychology of Consciousness

Credits: (3)
Typically taught:
Not currently offered

The study of the nature, origins, evolution, and functions of brain, mind and consciousness as these pertain to sensation, perception, learning, memory, cognition, motivation, emotion, behavior, and social relationships from a contemporary neuro-cognitive science perspective. Prerequisite: Introductory Psychology (PSY 1010), Biopsychology (PSY 2730) and instructor consent required; recommend some background in Introductory Philosophy, Perception, and/or Cognition.

PSY 3560 - Group Dynamics and Counseling

Credits: (3)
Typically taught:
Not currently offered

Principles of effective small group behavior. Awareness of group forces and pressures and development of insights

into personal relationships in groups. Theoretical and experiential approaches to Group Counseling. Prerequisite: PSY 1010.

PSY 3600 - Statistics in Psychology

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [1st Blk]

Techniques of data collection and analysis for application to experimental research in Psychology. Prerequisite: MATH 1010 or equivalent.

PSY 3605 - Psychology Statistics Lab

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

This course covers the application of statistical, database, and graphical software for psychological research analysis and presentation. Prerequisite/Co-requisite: Pre-requisite or co-requisite: PSY 3600 or equivalent.

PSY 3610 - Research Methods in Psychology

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Scientific methods of behavioral research. Emphasis upon design, conducting, and analysis of experiments on human and animal behavior as well as proposal writing and critiques of experimental literature. Prerequisite: PSY 1010 and PSY 3600 or equivalent with prior approval from the Department Chair. Prerequisite/Co-requisite: PSY 3605 or equivalent with prior approval from the Department Chair.

PSY 3615 - Psychological Statistics and Methods I

Credits: (4)
Typically taught:
Fall [Full Sem]

This course will focus on the scientific methods of behavioral and psychological research. Specific emphasis will be placed upon research design, study preparation, data collection, and analysis of experiments on human and animal behavior as well as proposal writing and critiques of experimental literature. Prerequisite: MATH 1010 or equivalent and PSY 1010.

PSY 3616 - Psychological Statistics and Methods II

Credits: (4)
Typically taught:
Spring [Full Sem]

This course will focus on the scientific methods of behavioral and psychological research. Specific emphasis will be placed upon research design, study preparation, data collection, and analysis of experiments on human and animal behavior as well as proposal writing and critiques of experimental literature. The course will cover experimental and quasi-experimental approaches and the statistical tools associated with these approaches (e.g., ANOVAs). Prerequisite: MATH 1010 or equivalent, PSY 1010 and PSY 3615.

PSY 3730 - Perception

Credits: (3)
Typically taught:
Spring [Full Sem] even years

Sensory and perceptual processes whereby living organisms acquire information about the world through the sensory structures, and then select, organize and interpret that information. Prerequisite: PSY 1010.

PSY 3740 - Neuropsychopharmocology

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course provides an in depth analysis of drugs on behavior. Topics include how drugs affect the brain, and consequently behavior, the underlying brain and environmental factors thought to be responsible for drug addiction, tolerance, and sensitivity, pharmacological treatment of major psychological disorders, the classification of common psychoactive drugs, and mechanisms of action of commonly abused drugs. Prerequisite: NEUR 2050 or PSY 2730 or instructor approval.

PSY 3850 - Forensic Psychology

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]

A survey course examining the application of fundamental issues in psychology to the criminal justice system. Prerequisite: PSY 1010.

PSY 4000 - Advanced General

Credits: (3)
Typically taught:
Fall [Full Sem]

Spring [Full Sem]

A senior level review of modern concepts in all the major areas of psychology. Designed to help a student prepare for the advanced part of the GRE in psychology. Strongly recommended for those who plan to teach psychology. Prerequisite: PSY 1010.

PSY 4050 - Evolutionary Psychology

Credits: (3)
Typically taught:
Not currently offered

Examines origins and evolutionary development of early hominid and contemporary human behavior, e.g., competition and cooperation, mating, reproductive and care-giving strategies, and kinship behaviors. Includes ethological, sociobiological, and social psychological perspectives. Prerequisite: PSY 1010.

PSY 4090 - History and Systems of Psychology

Credits: (3)
Typically taught:
Not currently offered

Early philosophical origins and contributions to psychology; critical contrasts of systems and schools on major issues. Prerequisite: PSY 1010.

PSY 4310 - Introduction to Counseling Theories

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A didactic introduction to the major theories of counseling and therapy plus an introduction to the research findings associated with effectiveness of therapy and principles of behavioral change. Prerequisite: (Required) PSY 1010 and PSY 3010.

PSY 4340 - Skills and Techniques of Counseling

Credits: (3)
Typically taught:
Not currently offered

Provides skills and techniques for counselors, ministers, social workers, and other professionals who serve a helping function. Three hours of lecture and two hours of lab/week. Prerequisite: (Recommended) PSY 4310 or equivalent and permission of the instructor.

PSY 4380 - Practicum

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Placement of students in state and community agencies for the purpose of providing supervised practice in application of psychological skills and knowledge. A maximum of four credit hours counted toward the psychology major and minor from the following courses: PSY 2890, PSY 4890, 4380 and PSY 4390. Prerequisite: 18 credit hours of psychology courses, one of which must be PSY 1010. Other courses will be at the discretion of the supervising instructor. Also, permission of the instructor is required. May be repeated 2 times for a maximum of 4 credit hours.

PSY 4390 - Capstone Practicum

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Capstone version of 4380 in which students are placed in state or community agencies for the purpose of providing supervised experiences in applying psychological skills and knowledge. The capstone practicum additionally provides students with an extensive reading list to review with the instructor to better apply their skills and knowledge and understand their experiences on site. Prerequisite: PSY 3610 or PSY 3616 (or equivalent) and other specific courses at the discretion of the supervising instructor. Also, permission of the instructor is required.

PSY 4510 - Industrial and Organizational Behavior

Credits: (3)
Typically taught:
Not currently offered

The psychological aspects of the work setting including selection, training, motivation, attitudes, and the effects of the organization. Prerequisite: (Recommended) PSY 1010.

PSY 4575 - Psychology of Criminal Behavior

Credits: (3)
Typically taught:
Spring [Full Sem]

A comprehensive account of the biological, psychological, and social factors underlying criminal behavior. Prerequisite: PSY 3850.

PSY 4760 - Tests and Measurements

Credits: (3)
Typically taught:
Fall [Full Sem]

Survey of methods, techniques, and instruments for measuring individual differences in behavior, a critical analysis of

representative tests, values and limitations of test, methods of test selection, lab experience with tests. Prerequisite: PSY 1010, PSY 3600 and PSY 3010.

PSY 4800 - Projects and Research

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Supervised participation in projects and/or primary research with a faculty mentor in various areas of psychology. Limited to advanced students upon consent of psychology mentor and department chair. A paper written in APA style and an oral report are required at the end of the semester. Prerequisite: PSY 1010, PSY 3600 (Statistics), and PSY 3610 (Research Methods) or equivalent, and faculty mentor permission. May be repeated 3 times for a maximum of 6 credit hours.

PSY 4805 - Capstone Projects and Research

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Capstone version of PSY 4800, supervised participation in projects and/or primary research with a faculty supervisor in various areas of psychology. Limited to advanced students upon consent of psychology supervisor and department chair. A paper written APA sytle and an oral report are required at the end of the semester. Prerequisite: PSY 3610 or PSY 3616 or equivalent, and permission of a faculty supervisor and the chair.

PSY 4830 - Directed Readings

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Independent readings or secondary research on advanced special topics under the direction of a faculty mentor. For each hour of credit in a readings project the student is required to read an appropriate number of primary research journal articles and book chapters. A paper written in APA style and oral report are required at the end of the term. Prerequisite: PSY 1010, PSY 3600 (Statistics), PSY 3610 (Research Methods) or equivalent, and faculty mentor permission. PSY 3610 may be taken concurrently with PSY 4830. May be repeated 3 times for a maximum of 6 credit hours.

PSY 4835 - Capstone Directed Readings

Credits: (3)
Typically taught:

Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Capstone version of PSY 4830 which involves independent readings or secondary research on advanced special topics under the direction of a faculty supervisor. Limited to advanced students upon consent of psychology supervisor and department chair. A paper written in APA style and an oral report are required at the end of the semester. Prerequisite: PSY 3610 or PSY 3616 (or equivalent) and permission of a faculty supervior and the chair.

PSY 4890 - Cooperative Work Experience

Credits: (1-2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Open to all students. Provides academic credit for on-the-job learning experience. Learning experiences will be specified in a learning contract. Grade and amount of credit will be determined by the department. Limited to two credit hours per semester and four credit hours counted toward the psychology major and minor from the following courses: PSY 2890, 4890, PSY 4380 and PSY 4390. Federal regulations restrict all Cooperative Work Experience to no more than six semester hours. Must be employed in a position that uses psychological training. By prior permission of instructor only. Prerequisite: PSY 1010. May be repeated 4 times for a maximum of 4 credit hours.

PSY 4900 - Selected Topics in Psychology

Credits: (2-3)
Variable Title
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An in-depth exploration of selected topics and issues in the discipline, designed as an upper division course. May be repeated 3 times for a maximum of ~~6~~9 credit hours.

PSY 4905 - Capstone Selected Topics in Psychology

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An in-depth exploration of selected topics and issues in the discipline, which fulfills the goals of a capstone class in the discipline. Students will be expected to read, analyze, and integrate research. Prerequisite: PSY 3610 or PSY 3616 (or equivalent) and permission of the instructor.

PSY 4910 - Senior Thesis

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

A research project to be written by a senior student under the supervision of a faculty member. Successful completion of the research project will fulfill the capstone requirement of the major (as an alternative to PSY 4000 or PSY 4090) and the senior project requirement for honors. The student must apply for acceptance into the course (applications available from the chair), and the research proposal and the final project must be approved by a faculty committee. It is expected that the course will be taken once for the writing and defense of a proposal and repeated for the writing and defense of the final project. May be repeated once for a maximum of 6 credit hours.

PSY 4920 - Workshops, Institutes and Special Programs

Credits: (1-3)
Variable Title
Typically taught:
Not currently offered

Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated 2 times for a maximum of 3 credit hours.

PSY 4950 - Capstone Experience: Promoting Psychological Literacy

Credits: (1)
Typically taught:
Fall [Full Sem Online]
Spring [~~Online]~~
~~Summer [~~Full Sem Online]

This course is designed for graduating seniors to reflect on and integrate their training in psychology. Prerequisite/Co-requisite: Prerequisite or Co-requisite: Any designed capstone class (PSY 4000, PSY 4050, PSY 4090, PSY 4310, PSY 4805, 4385, PSY 4760, PSY 4835, PSY 4905, or PSY 4910).

PSY 4990 - Seminar

Credits: (1)
Variable Title
Typically taught:
Not currently offered

Readings and active discussions of selected psychological topics. Repeatable for up to a total of 2 hours.

QUAN 2400 - Business Calculus

Credits: (3)
Typically taught:
Fall [Full Sem]

Spring [Full Sem]
Summer [Full Sem]

Emphasis on applications of quantitative tools to problems in business. Topics include profit maximization, cost functions, demand analysis, and output maximization with budget constraints and resource allocation. Prerequisite: MATH 1050 or 1080 or 1210 with a "C" or higher grade or equivalent as determined by the Math Department.

QUAN 2600 - Business Statistics I

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Introduction to concepts and applications of statistics in business and economics. Topics include summary statistics, probability distributions of random variables, sampling, and estimation. Class will include use of computers. Prerequisite: MATH 1050 or 1080 or 1210 with a "C" or higher grade or equivalent as determined by the Math Department.

QUAN 3610 - Business Statistics II

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [~~2nd~~1st Blk]

Continuation of QUAN 2600. Topics include test of hypotheses, correlation, time series, and multiple regression analysis with specific application to problems in business and economics. Computers will be used extensively in regression analysis. Prerequisite: QUAN 2600.

RADT 1022 - Introduction to Radiologic Technology

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Program orientation, elementary radiation protection and basic darkroom procedures.

RADT 1303 - Principles of Radiographic Exposure I

Credits: (3)
Typically taught:
Fall [Full Sem]

Theory of x-ray production; image production and radiographic equipment.

RADT 1502 - Radiographic Anatomy and Positioning I

Credits: (2)
Typically taught:
Fall [Full Sem]

Terminology, pathology and radiographic positioning.

RADT 1512 - Radiographic Anatomy and Positioning II

Credits: (3)
Typically taught:
Spring [Full Sem]

Continuation of RADT 1502. Prerequisite: RADT 1502.

RADT 1522 - Radiographic Anatomy and Positioning III

Credits: (2)
Typically taught:
Summer [Full Sem]

Continuation of RADT 1512.

RADT 1532 - Radiographic Anatomy and Positioning IV

Credits: (3)
Typically taught:
Fall [Full Sem]

Continuation of RADT 1522. Prerequisite: RADT 1522.

RADT 1542 - Radiographic Anatomy and Positioning V

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Continuation of RADT 1532.

RADT 1601 - Laboratory Experience

Credits: (2)
Typically taught:
Fall [Full Sem]

Patient positioning, darkroom experience and review of radiographic quality.

RADT 1621 - Laboratory Experience

Credits: (2)
Typically taught:
Spring [Full Sem]

Continuation of RADT 1601. Prerequisite: RADT 1601.

RADT 1641 - Laboratory Experience

Credits: (1)
Typically taught:
Summer [Full Sem]

Continuation of RADT 1621.

RADT 1661 - Laboratory Experience

Credits: (1)
Typically taught:
Fall [Full Sem]

Continuation of RADT 1641.

RADT 1681 - Lab Experience

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

RADT 2043 - Patient Care and Assessment I

Credits: (2)
Typically taught:
Spring [Full Sem]

Patient care and management in radiology.

RADT 2272 - Basic Sectional Anatomy

Credits: (2)
Typically taught:
Spring [Full Sem]

The anatomical appearance of each organ system and common pathology on sectional medical images.

RADT 2403 - Principles of Radiographic Exposure II

Credits: (2)
Typically taught:
Spring [Full Sem]

Radiographic imaging, instrumentation, image production and factors affecting radiologic quality.

RADT 2803 - Independent Research

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Individualized projects. May be repeated 3 times for credit.

RADT 2833 - Directed Readings and Research

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Selected readings and/or a research project on medical imaging procedures. May be repeated 5 times with a maximum of 15 credit hours.

RADT 2861 - Clinical Education

Credits: (3)
Typically taught:
Fall [Full Sem]

Experience gained in a health care facility. Prerequisite: Acceptance into the program.

RADT 2862 - Clinical Education

Credits: (3)
Typically taught:
Spring [Full Sem]

Continuation of RADT 2861.

RADT 2863 - Clinical Education

Credits: (3)
Typically taught:
Summer [Full Sem]

Continuation of RADT 2862.

RADT 2864 - Clinical Education

Credits: (3)
Typically taught:
Fall [Full Sem]

Continuation of RADT 2863.

RADT 2865 - Clinical Education

Credits: (2)
Typically taught:
Spring [Full Sem]

Continuation of RADT 2864.

RADT 2866 - Final Competency Evaluation

Credits: (2)
Typically taught:
Spring [Full Sem]

Demonstration of competency performing the procedures required by the certification agency.

RADT 2913 - Comprehensive Review

Credits: (2)
Typically taught:
Spring [Full Sem]

Review of didactic and clinical applications.

RADT 2921 - Workshop, Conferences and Telecourses

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

May be repeated twice for a maximum of 3 credit hours.

RADT 2942 - Career Planning and New Technology

Credits: (2)
Typically taught:
Fall [Full Sem]

Assistance with career planning and an introduction to specialized imaging procedures and new and future imaging procedures.

RADT 2992 - Seminar

Credits: (1-2)
Typically taught:
Fall [Full Sem]

Patient case studies and critical care situations. May be repeated once for credit.

RADT 3003 - Psycho-Social Medicine

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Designed to prepare students to better understand their patient and the patient's family through comparison of diverse populations based on their value systems, cultural and ethnic influences, communication styles, socio-economic influences, health risks and life stages. Study of factors that influence the interrelationships with patients and professional peers. Understanding multicultural diversity assists the student in providing better patient care.

RADT 3043 - Medical Ethics and Law

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Medical ethics and law and case studies in medical imaging and radiation therapy.

RADT 3123 - Sectional Anatomy

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Anatomical study of the body in the sagittal, transverse and coronal imaging planes.

RADT 3143 - Imaging Pathophysiology

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Imaging adaptations and alterations in anatomy and physiology with variation outside of the normal range.

RADT 3243 - Patient Care and Assessment II

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

System analysis and advanced level of patient care, assessment and management in radiology.

RADT 3253 - Patient Care and Assessment III

Credits: (3)
Typically taught:
Spring [Full Sem]

Intravenous therapy, patient care procedures and monitoring during imaging studies.

RADT 3263 - Diagnostic Services Pharmacology

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Concepts of pharmacology including modes of action, uses, modes of excretion effects, side effects and patient care required for specific pharmacologic agents.

RADT 3403 - Radiobiology & Health Physics

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Effects of ionizing radiation on the human body, patient and personnel protection, exposure monitoring health physics and oncology.

RADT 3423 - Federal Regulations

Credits: (3)
Typically taught:
Spring [Full Sem]
Summer [Full Sem]

Regulations governing health care, equipment and application of ionizing radiation.

RADT 3443 - Quality Assurance in Radiology

Credits: (3)
Typically taught:
Spring [Full Sem]
Summer [Full Sem]

Development of a quality assurance program and manual to meet accreditation requirements.

RADT 3463 - Computerized Imaging

Credits: (3)
Typically taught:
Fall [Full Sem]

Digital radiography, image acquisition, image processing and digital image management.

RADT 3563 - Managing Clinical Information

Credits: (3)
Typically taught:
Fall [Full Sem]

Digital and volumetric imaging, emerging technologies, secure computerized management practice, and patient privacy regulations.

RADT 3863 - Clinical Internship

Credits: (2-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Experience in a radiology specialty area. Consent of instructor is required. May be repeated twice for credit.

RADT 4203 - Patient Education in Radiology

Credits: (3)
Typically taught:
Fall [Full Sem]
Summer [Full Sem]

Skills necessary to assess, plan and evaluate a variety of educational programs specific to radiology patients.

RADT 4213 - Supervision and Staff Development

Credits: (3)
Typically taught:
Fall [Full Sem]
Summer [Full Sem]

Federal regulations, developing department protocol, designing departments personnel supervision and quality of care assessment.

RADT 4223 - Promotional Strategies

Credits: (3)
Typically taught:
Summer [Full Sem]

Assessment of needs, development and implementation of promotional strategies for Radiology Departments.

RADT 4233 - Fiscal Analysis in Radiology

Credits: (3)
Typically taught:
Spring [Full Sem]

Justification, acquisition and leasing of imaging equipment and accessories, staffing formulas and review of maintenance contracts.

RADT 4243 - Quality Management in Radiology

Credits: (3)
Typically taught:
Spring [Full Sem]

Concepts and principles of quality management, collection and analysis of data.

RADT 4253 - Risk Management

Credits: (3)
Typically taught:
Fall [Full Sem]

Study of management of risk associated with the delivery of health care in clinical and non-clinical settings.

RADT 4303 - Cardiology

Credits: (3)
Typically taught:
Spring [Full Sem]
Summer [Full Sem]

Detailed study of the heart: anatomy, physiology, pathophysiology, pharmacology, EKGs and imaging modalities.

RADT 4313 - Visceral, Pelvic and Extremity Angiography

Credits: (3)
Typically taught:
Fall [Full Sem]

Anatomy, pathology, protocols and interventional procedures of abdominal viscera, extremities and pelvis.

RADT 4333 - Head and Neck Angiography

Credits: (3)
Typically taught:
Summer [Full Sem]

Anatomy, pathology, protocols and interventional procedures of the aortic arch, brachiocephalic, thyroid and other facial and neck arteries.

RADT 4343 - Thoracic and Venous Procedures

Credits: (3)
Typically taught:
Spring [Full Sem]

Anatomy, pathology, protocols and interventional procedures of the venous and cardiac systems.

RADT 4403 - Imaging Pathology

Credits: (3)
Typically taught:
Fall [Full Sem]

Radiographic presentation of pathological conditions, abnormalities and anomalies.

RADT 4413 - Forensic Radiology

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course provides a comprehensive study of medical imaging's role in forensic medicine. Forensic Radiology is used to determine identity of remains, evaluate injury or cause of death and assist in the detection of abuse. Junior or Senior standing required.

RADT 4433 - PACS Administration

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Digital imaging and communication standards, PACS administration, image quality, and emerging technology standards.

RADT 4443 - Imaging Informatics

Credits: (3)
Typically taught:
Spring [Full Sem]

Analyzing system needed, project management, quality improvement, bioinformatics, clinical informatics, and medical informatics.

RADT 4543 - Bone Densitometry

Credits: (3)
Typically taught:
Summer [Full Sem]

This course comprehensively covers the methods of bone density measurement (bone densitometry, DEXA), the pathogenesis of osteoporosis, quality management issues, therapies for osteoporosis and a review of additional analysis methods.

RADT 4553 - Breast Anatomy, Physiology and Pathology

Credits: (3)
Typically taught:
Fall [Full Sem]

Normal breast anatomy and physiology compared to pathological conditions.

RADT 4563 - Mammographic Positioning/Imaging Techniques

Credits: (3)
Typically taught:
Fall [Full Sem]

Routine positions, risk versus benefit; tissue variations, specialized procedures and imaging modalities.

RADT 4572 - Patient Education and Clinical Examination

Credits: (2)
Typically taught:
Spring [Full Sem]

Breast disease and reconstruction methods, breast examination, rehabilitation, medical-legal considerations.

RADT 4573 - The Female Patient and Medical Imaging

Credits: (3)
Typically taught:
Spring [Full Sem]
Summer [Full Sem]

This course will familiarize the student to disease processes specific to the female patient and the imaging methods that may be used in diagnosis and treatment. The clinical pathways that are commonly used, involving all radiologic imaging modalities, will be explored. Students who enroll in this course must be certified by the American Registry of Radiologic Technologists.

RADT 4583 - Mammographic Equipment and Quality Assurance

Credits: (3)
Typically taught:
Fall [Full Sem]

Equipment operation, technical factors and quality assurance procedures in mammography.

RADT 4603 - Magnetic Resonance Imaging Physics and Instrumentation

Credits: (3)
Typically taught:
Fall [Full Sem]

Physical principles and theories of magnetic resonance, instrumentation, imaging sequences and methods in normal and abnormal tissue, and computer parameters of magnetic resonance.

RADT 4613 - Computed Tomography of the Torso and Limbs

Credits: (3)
Typically taught:
Spring [Full Sem]

Sectional anatomy, pathology and imaging protocols of the abdominal viscera, pelvis, thorax and extremities.

RADT 4623 - Advanced MRI Procedures and Safety

Credits: (3)
Typically taught:
Spring [Full Sem]

Evaluation of organ function and diagnosis of disease process using advanced MRI procedures with emphasis on spectroscopy and functional MR. Includes an in-depth study of MRI safety.

RADT 4633 - Magnetic Resonance Imaging of the Central Nervous System

Credits: (3)
Typically taught:
Summer [Full Sem]

Sectional anatomy, pathology and imaging protocol of the head, spine and central nervous system.

RADT 4643 - Magnetic Resonance of the Torso and Limbs

Credits: (3)
Typically taught:
Spring [Full Sem]

Sectional anatomy, pathology and imaging protocols of the abdominal viscera, pelvis, thorax and extremities.

RADT 4653 - Computed Tomography of the Central Nervous System

Credits: (3)
Typically taught:
Summer [Full Sem]

Sectional anatomy, pathology and imaging protocols of the head, spine and central nervous system.

RADT 4663 - Computed Tomography Physics and Instrumentations

Credits: (3)
Typically taught:
Fall [Full Sem]

Interactions of electromagnetic waves, instrumentation, imaging sequences and computer parameters of computerized tomography imaging.

RADT 4803 - Individual Research

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Research projects developed for district, state, regional or national presentation. May be repeated for a maximum of 3 credit hours.

RADT 4833 - Directed Readings and Research

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Synthesis and analysis of journal articles resulting in a research paper for the purpose of publication.

RADT 4850 - Study Abroad

Credits: (1-6)
Variable Title
The purpose of this course is to provide opportunities for students in health professions to experience a study abroad program that is designed to explore healthcare, culture, and clinical experience. May be repeated 5 times with a maximum of 6 credit hours.

RADT 4861 - Clinical Internship

Credits: (2)
Experience in a radiology specialty area. Consent of instructor is needed.

RADT 4862 - Clinical Internship

Credits: (2)
Experience in a radiology specialty area. Consent of instructor is needed.

RADT 4863 - Clinical Internship

Credits: (2-4)
Typically taught:
Fall [Full Sem]
Summer [Full Sem]

Experience in a radiology specialty area. Consent of instructor is needed. May be repeated twice for credit.

RADT 4911 - Comprehensive Review/CT

Credits: (2)
Typically taught:
Fall [Full Sem]
Summer [Full Sem]

Preparation for advanced certification examination.

RADT 4912 - Comprehensive Review/MRI

Credits: (2)
Typically taught:
Fall [Full Sem]
Summer [Full Sem]

Preparation for advanced certification examination.

RADT 4913 - Comprehensive Review/CIT

Credits: (2)
Typically taught:
Summer [Full Sem]

Preparation for advanced certification examination.

RADT 4914 - Comprehensive Review/M

Credits: (2)
Typically taught:
Summer [Full Sem]

Preparation for advanced certification examination.

RADT 4915 - Comprehensive Review/QM

Credits: (2)
Preparation for advanced certification examination.

RADT 4922 - Workshop, Conferences and Telecourses

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

RADT 4933 - Research Methods

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Apply research strategies in health care and clinical practice, obtain certificate for human subject research, formulate a research proposal, and complete an institutional review board application.

RADT 4942 - Current Issues and Trends

Credits: (2)
Typically taught:
Summer [Full Sem]

Current issues and trends in the health care industry and environment affecting radiology.

RADT 4943 - Baccalaureate Thesis

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Research in health professions utilizing the scientific inquiry method.

RADT 4992 - Seminar

Credits: (1-2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

New developments and procedures in imaging and therapy and preparing for the future. May be repeated for a maximum of 2 credit hours.

~~**RADT 5403 - Evaluation of the Osseous System**~~

RADT 5443 - Clinical Pathways

Credits: (3)
Typically taught:
Fall [Full Sem]

~~Imaging evaluation of pathological conditions, abnormalities and anomalies of the osseous system.~~

~~**RADT 5413 - Evaluation of the Chest**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Spring [Full Sem]**~~

~~Imaging evaluation of pathological conditions, abnormalities and anomalies of the chest.~~

~~**RADT 5423 - Evaluation of the Abdomen and G I System**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~

~~Imaging evaluation of pathological conditions, abnormalities and anomalies of the abdomen and gastrointestinal system.~~

~~**RADT 5433 - Evaluation of the Genitourinary System**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~

~~Imaging evaluation of pathological conditions, abnormalities and anomalies of the genitourinary system.~~

~~**RADT 5443 - Clinical Pathways**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Spring [Full Sem]**~~

Studying clinical pathways for patients based on disease processes and trauma. Prerequisite: ~~RADT 5403~~ MSRS 6403 and ~~RADT 5413~~MSRS 6413.

~~**RADT 5453 - Evaluation/CNS and Facial Structures**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Spring [Full Sem]**~~

~~Imaging evaluation of pathological conditions, abnormalities and anomalies of the central nervous system and facial structures.~~

RADT 5463 - Problem Patient Management

Credits: (3)
Typically taught:
Spring [Full Sem]

Determination of pathological conditions utilizing problem-solving case studies.

RADT 5473 - Invasive Imaging Procedures

Credits: (3)
Typically taught:
Summer [Full Sem]

Patient preparation and performance of medical imaging invasive procedures are presented.

~~**RADT 5861 - Clinical Preceptorship**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~

~~Experience in a radiology department. Consent of instructor needed.~~

~~**RADT 5862 - Clinical Preceptorship**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Spring [Full Sem]**~~

~~Continuation of RADT 5861.~~

~~**RADT 5863 - Clinical Preceptorship**~~

~~**Credits: (3)**~~
~~**Typically taught:**~~
~~**Summer [Full Sem]**~~

~~Continuation of RADT 5862.~~

RADT 5864 - Clinical Preceptorship

Credits: (3)
Typically taught:
Fall [Full Sem]

Continuation of RADT ~~5863~~6863.

RADT 5865 - Clinical Preceptorship

Credits: (3)
Typically taught:
Spring [Full Sem]

Continuation of RADT 5864.

RADT 5867 - Competency Assessment/Residency

Credits: (3)
Assessment of competency knowledge and skills in the clinical setting.

RADT 5868 - Final Competency Assessment

Credits: (3)
Typically taught:
Spring [Full Sem]

Review and evaluation of student competencies.

RADT 6863 - Clinical Preceptorship

Credits: (3)
Typically taught:
Summer [Full Sem]

Continuation of MSRS 6862.

RATH 4330 - Radiation Therapy Physics

Credits: (3)
Typically taught:
Fall [Full Sem]

An overview of the profession of radiation therapy. Radiation therapy physics, dosimetry, isodose distribution for isotopes and electrically-produced beams. Mechanics of Linear accelerators and Cobalt.

RATH 4342 - Introduction to Treatment Planning

Credits: (3)
Typically taught:
Spring [Full Sem]

Basic quantities and concepts in radiotherapeutic dosimetry. Current aspects of the anatomical and physical consideration involved in planning and delivery of the therapy prescription.

RATH 4410 - Radiation Oncology I

Credits: (3)
Typically taught:
Fall [Full Sem]

Pathology of cancer; combined therapy and surgery; chemotherapy and radiation therapy; clinical application of treatment techniques; and case studies.

RATH 4412 - Radiation Oncology II

Credits: (3)
Typically taught:
Spring [Full Sem]

Pathology of cancer; combined therapy and surgery; chemotherapy and radiation therapy; clinical application of treatment techniques; and case studies.

RATH 4414 - Radiation Oncology III

Credits: (3)
Typically taught:
Summer [Full Sem]

Pathology of cancer; combined therapy and surgery; chemotherapy and radiation therapy; clinical application of treatment techniques; and case studies.

RATH 4444 - Advanced Treatment Planning/Brachytherapy

Credits: (3)
Typically taught:
Summer [Full Sem]

Prescription interpretation, nuclide implants, brachytherapy and treatment techniques involving hyperthermia. Beam modification devices and theory of beam placement will be discussed.

RATH 4446 - Quality Assurance

Credits: (3)
Typically taught:
Fall [Full Sem]

Establishment of a quality assurance program for linear accelerators, simulators and therapeutic isotopes.

RATH 4448 - New Technology in Radiation Therapy

Credits: (3)
Typically taught:
Spring [Full Sem]

Exploration of the emerging technology and new equipment used in radiation therapy. Prerequisite: Graduate of an approved Radiography Program or equivalent.

RATH 4861 - Clinical Education I

Credits: (3)
Typically taught:
Fall [Full Sem]

Clinical education designed to facilitate transference of didactic instruction to practical clinical practice.

RATH 4862 - Clinical Education II

Credits: (3)
Typically taught:
Spring [Full Sem]

Clinical education designed to facilitate transference of didactic instruction to practical clinical practice.

RATH 4863 - Clinical Education III

Credits: (3)
Typically taught:
Summer [Full Sem]

Clinical education designed to facilitate transference of didactic instruction to practical clinical practice.

RATH 4913 - Comprehensive Review

Credits: (3)
Typically taught:
Summer [Full Sem]

Review of all didactic and clinical courses and competencies. Guest lecturer and multiple mock registry examinations will be presented.

~~**REC 2890 - Cooperative Work Experience**~~

~~**Credits: (1-9)**~~
~~Provides academic credit for on-the-job experience. Grade and amount of credit will be determined by the department. Open to all students in Recreation who meet the minimum Cooperative Work Experience requirements of the department. May be repeated 8 times up to 9 credit hours.~~

~~**REC 3050 - Recreation and Leisure in Society**~~

~~**Credits: (3)**~~
~~Content, nature, extent and significance of recreation and leisure; their role in our lives, relevant service delivery agencies/organizations/businesses, leadership functions and styles, and a introduction to team-building/adventure programming activities.~~

~~**REC 3230 - Wilderness Nutrition & Backcountry Cooking**~~

~~**Credits: (4)**~~
~~**Typically taught:**~~
~~**Spring [1st Blk]**~~

~~For outdoor professionals and those who spend extensive time in the outdoors, wilderness nutrition and backcountry cooking are critical components to providing safe, healthy, and enjoyable outdoor recreation experiences. Concepts of nutritional balance, energy needs, menu planning, and cooking are explored and applied within the context of a backcountry setting. A one-week backcountry field experience is required. Prerequisite: HLTH 1030 or NUTR 1020.~~

~~**REC 3600 - Outdoor Adventure Recreation**~~

~~**Credits: (3)**~~
~~Outdoor recreation agencies/businesses/organizations, site visits, services delivery, environmental impacts, legal issues, management. Skills: backpacking/hiking/camping/ropes course leadership, and use of technology in leisure research and programming. Overnight Outing(s) and Field Trips required.~~

~~**REC 3610 - Introduction to Outdoor Living Skills**~~

~~**Credits: (2)**~~
~~This course will provide students with an overview of backcountry skills. Students will learn about backcountry travel and camping skills, equipment use, and hazard identification. One lecture and 3 hour field trip are required each week.~~

~~**REC 3810 - Recreation and Sport Leadership**~~

~~**Credits: (3)**~~
~~Customer/client-based leisure services, role delineation, settings, site visits, extended "laboratory" experience, programming, pricing, pitching. Skills: Feasibility analysis, assessment.~~

~~**REC 3840 - Inclusive Recreation**~~

~~**Credits: (3)**~~
~~Students will explore and apply concepts of leisure and recreation experiences and the related social impacts across a wide variety of populations including: ethnicity, race, ability, gender, age, religion and nationality.~~

~~**REC 4550 - Outdoor Education Philosophies & Principles**~~

~~**Credits: (2)**~~
~~Provides basic concepts of outdoor education, and direct, firsthand experience with learning resources beyond the classroom.~~

~~**REC 4800 - Individual Projects**~~

~~**Credits: (1-3)**~~
~~A comprehensive study of a significant problem in the field of recreation. Hours to be arranged. For seniors only. May be repeated 2 times up to 3 credit hours.~~

~~**REC 4890 - Cooperative Work Experience**~~

~~**Credits: (1-6)**~~
~~A continuation of REC 2890. May be repeated 5 times up to 6 credit hours.~~

~~**REC 4930 - Outdoor Education Workshop**~~

~~**Credits: (2)**~~
~~A broad inter-disciplinary approach to the methodology of outdoor education teaching techniques; experiential learning-course taught almost totally outdoors.~~

~~**REC 6930 - Outdoor Education Workshop**~~

~~**Credits: (2)**~~
~~A broad interdisciplinary approach to the methodology of outdoor education teaching techniques; experiential learning-course taught almost totally outdoors.~~

REC 1316 - Stand-Up Paddleboard

Credits: (1)
Typically taught:
Fall [1st Blk]
Summer [1st Blk]

This physical activity course is intended to introduce students to the fundamental skills and knowledge necessary to enjoy Stand Up Paddleboarding (SUP). The course will cover: 1) technical knowledge (i.e., history, terminology, equipment, regulations, safety); 2) technical skills (i.e., carrying, launching, landing, balance, stances, strokes, maneuvers, equipment maintenance); and) 3 rescue/safety (i.e. self-rescues).

REC 1350 - Scuba Diving, Level I

Credits: (1)
Typically taught:
Fall [Full Sem, 1st Blk, 2nd Blk]
Spring [Full Sem, 1st Blk, 2nd Blk]
Summer [Full Sem, 1st Blk, 2nd Blk]
Offered through Continuing Education only.

REC 1351 - Scuba Diving, Level II

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A physical activity that engages students in the underwater activity of scuba diving. This Level II course allows students to build on skills developed in Level I. Prerequisite: REC 1350.

REC 1505 - Kayaking, Level I

Credits: (1)
Typically taught:
Spring [2nd Blk]

A physical activity course that introduces students to the outdoor activity of kayaking. The fundamental skills of kayaking will be addressed for both beginning and recreational paddlers.

REC 1510 - Fishing, Level I

Credits: (1)
A physical activity course that allows students to learn and develop the skills needed to practice fishing.

REC 1511 - Fishing, Level II

Credits: (1)
A physical activity course that allows students to learn and develop the skills needed to practice fishing.

REC 1512 - Fishing, Level III

Credits: (1)
A physical activity course that allows students to learn and develop the skills needed to practice fishing.

REC 1520 - Hiking, Level I

Credits: (1)
Typically taught:
Fall [1st Blk]
Spring [2nd Blk]
Summer [1st Blk]

A physical activity course that allows students to learn and develop the skills needed to safely enjoy hiking through the use of trail resources, environmental conscientiousness, planning, and conduct.

REC 1521 - Hiking, Level II

Credits: (1)
A physical activity course that allows students to learn and develop the skills needed to safely enjoy hiking through the use of trail resources, environmental conscientiousness, planning, and conduct.

REC 1522 - Hiking, Level III

Credits: (1)
A physical activity course that allows students to learn and develop the skills needed to safely enjoy hiking through the use of trail resources, environmental conscientiousness, planning, and conduct.

REC 1527 - Rock Climbing, Level I

Credits: (1)
Typically taught:
Fall [Full Sem, 1st Blk]
Spring [Full Sem, 2nd Blk]
Summer [1st Blk]

A beginner level physical activity course that allows students to learn and develop the skills and knowledge needed to safely enjoy rock climbing.

REC 1528 - Rock Climbing, Level II

Credits: (1)
Typically taught:
Fall [1st Blk]
Spring [2nd Blk]
Summer [1st Blk]

An intermediate level physical activity course that allows students to learn and develop the skills and knowledge needed to safely enjoy rock climbing.

REC 1529 - Rock Climbing, Level III

Credits: (1)
An advanced level physical activity course that allows students to learn and develop the skills and knowledge needed to safely enjoy rock climbing.

REC 1610 - Skiing, Level I

Credits: (1)
Typically taught:
Spring [1st Blk]

A physical activity course that allows students to learn and develop the skills and technique needed to safely enjoy skiing and advance through specified skill levels.(CR/NC).

REC 1611 - Skiing, Level II

Credits: (1)
Typically taught:
Spring [1st Blk]

A physical activity course that allows students to learn and develop the skills and technique needed to safely enjoy skiing and advance through specified skill levels. (CR/NC).

REC 1612 - Skiing, Level III

Credits: (1)
Typically taught:
Spring [1st Blk]

A physical activity course that allows students to learn and develop the skills and technique needed to safely enjoy skiing and advance through specified skill levels. (CR/NC).

REC 1620 - Snowboarding, Level I

Credits: (1)
Typically taught:
Spring [1st Blk]

A physical activity course that allows students to learn and develop the skills and technique needed to safely enjoy snowboarding and advance through specified skill levels. (CR/NC).

REC 1621 - Snowboarding, Level II

Credits: (1)
Typically taught:
Spring [1st Blk]

A physical activity course that allows students to learn and develop the skills and technique needed to safely enjoy snowboarding and advance through specified skill levels. (CR/NC).

REC 1622 - Snowboarding, Level III

Credits: (1)
Typically taught:
Spring [1st Blk]

A physical activity course that allows students to learn and develop the skills and technique needed to safely enjoy snowboarding and advance through specified skill levels. (CR/NC).

REC 1630 - Cross-Country Skiing, Level I

Credits: (1)
Typically taught:
Spring [1st Blk]

A physical activity course that allows students to learn and develop the skills and technique needed to safely enjoy cross-country skiing. (CR/NC).

REC 1631 - Cross-Country Skiing, Level II

Credits: (1)
Typically taught:
Spring [1st Blk]

A physical activity course that allows students to learn and develop the skills and technique needed to safely enjoy cross-country skiing. (CR/NC).

REC 1632 - Cross-Country Skiing, Level III

Credits: (1)
Typically taught:
Spring [1st Blk]

A physical activity course that allows students to learn and develop the skills and technique needed to safely enjoy cross-country skiing. (CR/NC).

REST 1540 - Survey of Respiratory Therapy

Credits: (1)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [1st Blk, 2nd Blk]

This course is designed to introduce allied health and other students to the profession of respiratory therapy. It includes field trips, group discussions, lecture/demonstrations and limited lab activities. Open to all students.

REST 1560 - Multi-Skilled Health Care Worker

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

This course prepares students from different health care disciplines to understand the hospital environment, patient needs, and perform basic skills of patient care. Topics include the patient's right to privacy, confidentiality, ethical, legal, and cultural issues, documentation, team building, age related concerns, medical terminology, and death and

dying. Patient skills include vital signs, oxygen administration, specimen collection, personal care and cleanliness, environmental cleanliness, nutrition and diet, elimination, positioning and ambulating, patient safety and comfort, and OSHA guidelines for healthcare worker safety.

REST 2140 - Introduction to Basic Therapeutic Modalities Lab

Credits: (3)
Typically taught:
Fall [Full Sem]

Introductory Laboratory course emphasizing basic patient interaction and assessment skills. Includes infection control, the administration of medical gases, humidity and aerosol, pharmacologic agents, hyperinflation therapy, airway clearance techniques and methods of care, and artificial ventilation.

REST 2160 - Equipment Management Lab

Credits: (3)
Typically taught:
Spring [Full Sem]

Laboratory course emphasizing patient assessment skills relating to ventilation techniques and equipment. Includes equipment used by the respiratory care practitioner in initiating, troubleshooting, monitoring, and weaning from mechanical ventilation.

REST 2210 - Elementary Cardiopulmonary Anatomy and Physiology

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Cardiopulmonary anatomy and physiology specifically for the entry-level respiratory care practitioner. Includes physics of respiration, oxygen and carbon dioxide transport, and control of ventilation.

REST 2230 - Cardiopulmonary Pathophysiology

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A synopsis of medical and surgical cardiopulmonary disorders for the entry-level practitioner. Etiology, symptomatology, pathology, diagnosis, treatment, and prognosis of these disorders are presented.

REST 2250 - Basic Patient Assessment

Credits: (2)
Typically taught:

Fall [Full Sem]
Spring [Full Sem]

A basic orientation to patient assessment techniques used to obtain a patient medical history and physical examination. Discussion of pulmonary disease integrates assessment information with laboratory and radiographic data.

REST 2270 - Application of Cardiopulmonary Diagnostics

Credits: (4)
Typically taught:
Spring [Full Sem]

Introduction to theory and clinical application of basic cardiopulmonary diagnostic studies, including simple spirometry, arterial and mixed venous blood gases, and electrocardiograms. Course emphasizes critical thinking skills in the application of diagnostic findings and utilizes case studies, class discussions, and extensive study guides.

REST 2300 - Basic Modalities in Respiratory Care I

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Theory and clinical application of basic therapies. Course includes indications, complications, hazards, equipment needed, side effects, and assessment for medical gases, humidity, aerosols, airway clearance, hyperinflation therapy, and pharmacologic agents. Course emphasizes patient assessment and critical thinking skills. Concurrent enrollment in REST 2140.

REST 2310 - Basic Modalities in Respiratory Care II

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Theory and clinical applications of airway management and artificial ventilation, including IPPB and introduction to modes of mechanical ventilation. Also includes the theory of invasive and non-invasive monitoring technology, and equipment decontamination.

REST 2320 - Essentials of Mechanical Ventilation

Credits: (2)
Typically taught:
Spring [Full Sem]

Course provides a basic understanding of essentials for mechanical ventilation. Includes determining the need for ventilatory support, the associated physiology and how ventilatory support is initiated, maintained, monitored, and discontinued.

REST 2330 - Entry Level Respiratory Therapy Review

Credits: (1)
Typically taught:
Spring [Full Sem]

Course is a comprehensive review intended to prepare the student for the entry-level certification/licensure examination. The material covered is based on the examination matrix provided by the National Board for Respiratory Care (N.B.R.C.).

REST 2500 - Survey of Polysomnography

Credits: (1)
Typically taught:
Summer [1st Blk]

Introduction to polysomnography as a profession. Course includes an overview of the polysomnogram, sleep disorders as they affect the general population, typical employment in the field, and employment opportunities. Also includes an introduction to the professional organization of sleep and requirements to become a registered polysomnographic technologist (R.PSG.T). Students taking REST 3500 are required to write a 6-10 page paper outlining the assessment of sleep disorders or neurodiagnostics. Students taking REST 2500 cannot take REST 3500 for credit. Prerequisite: Medical terminology, anatomy, and physiology or completion of respiratory therapy program or C.R.T., R.R.T., or R.N. credential.

REST 2501 - Anatomy and Physiology of Sleep

Credits: (3)
Introduction to the anatomy and physiology of the neurologic, cardiac, and respiratory systems during sleep. Basic anatomy and physiology of wake-sleep cycles are studied, with emphasis on changes that occur during varying stages of sleep and during common sleep disorders. Introduction to the EEG, EOG, EKG, EMG, and other polysomnography data recorders. Students taking REST 3501 are required to write a 6-10 page paper outlining physiologic components affecting quality of sleep. Students taking REST 2501 cannot take REST 3501 for credit. Prerequisite: medical terminology, anatomy, and physiology or completion of respiratory therapy program or C.R.T., R.R.T., or R.N. credential.

REST 2502 - Introduction to Sleep Disorders

Credits: (2)
Typically taught:
Summer [1st Blk]

Course provides an overview of the history of sleep medicine, normal sleep physiology, effects of the sleep-wake stage, sleep disorders and abnormal sleep physiology, and an introduction to polysomnography (including patient interaction, sensor and lead placements, and instrumentation). Course also introduces the fundamentals of therapeutic interventions utilized to treat sleep disorders. Students taking REST 3502 are required to r a 6-10 page paper outlining the implications for assisted ventilation to sleep disorders. Students taking REST 2502 cannot take REST 3502 for credit. Prerequisite: medical terminology, anatomy, and physiology or completion of respiratory therapy program or C.R.T., R.R.T., or R.N. credential.

REST 2503 - Instrumentation and Computers in Polysomnography

Credits: (2)
Course provides study of equipment, instrumentation, and recording devices utilized in polysomnography. Includes EEG waves, signal pathway and derivation of waves, impedance, sensitivity, time constants, amplifiers, filters, calibration, electrodes, artifacts (both equipment and patient-generated), computer basics, and monitoring devices. Students taking REST 3503 are required to write a 6-10 page paper outlining specific instrumentation in polysomnography assessing sleep disorders. Students taking REST 2503 cannot take REST 3503 for credit. Prerequisite: REST 2500/REST 3500 and REST 2502/REST 3502 or medical terminology, human anatomy and human physiology.

REST 2505 - Therapeutics of Managing Sleep Apnea

Credits: (2)
Course provides current therapies and interventions for treatment of sleep apneas. Interventions include positive airway pressure therapy (nocturnal CPAP and bi-level CPAP), surgery, and dental devices. Patient compliance and outcomes of these treatments are included. Students taking REST 3505 are required to write a 6-10 page paper outlining strategies managing sleep apnea. Students taking REST 2505 cannot take REST 3505 for credit. Prerequisite: REST 2501/REST 3501 and REST 2502/REST 3502 or medical terminology, human anatomy and human physiology.

REST 2520 - Principles of Pharmacology

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Introduction to pharmacology, including general principles, autonomic and central nervous system agents, and cardiovascular agents. Also includes drugs used in managing renal, GI tract, endocrine, and infectious or neoplastic diseases and disorders.

REST 2700 - Clinical Applications

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Clinical rotations in various medical settings performing skills learned and practiced in REST 2140. Recommending and modifying basic therapies will be emphasized utilizing patient assessment skills and review of patient medical history. Concurrent enrollment in REST 2140.

REST 2710 - Specialty Clinical Experiences

Credits: (1)
Typically taught:
Spring [Full Sem]
Summer [Full Sem]

Clinical rotations in various medical settings providing the opportunity to observe and participate in various specialty areas within the profession, including PFTs, cardiac testing, EKGs, ABGs, and longterm artificial airway care. Concurrent enrollment in REST 2160.

REST 2720 - Clinical Applications

Credits: (3)
Typically taught:
Spring [Full Sem]
Summer [Full Sem]

Clinical rotations in various medical settings performing skills learned and practiced in REST 2140. Initiating, monitoring, and weaning from mechanical ventilation will be emphasized utilizing patient assessment skills. Case studies will be used to practice critical thinking skills in the management of ICU patients. Concurrent enrollment in REST 2160.

REST 2800 - Independent Projects

Credits: (1-3)
Projects must meet departmental and professional goals and standards and must have instructor approval prior to beginning project; enrollment by permission only. May be repeated twice for a maximum of 3 credit hours.

REST 2830 - Directed Readings

Credits: (1-2)
Typically taught:
Spring [Full Sem]

Readings must meet departmental and professional goals and standards and must have instructor approval prior to beginning; enrollment by permission only. May be repeated twice for a maximum of 3 credit hours.

REST 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-3)
Consult semester schedule for current offerings. The specific title and credit authorized will appear on student transcript. May be repeated 5 times with a maximum of 6 credit hours with different course content.

REST 3210 - Advanced Cardiopulmonary Anatomy and Physiology

Credits: (2)
Typically taught:
Fall [Full Sem]

Cardiopulmonary anatomy and physiology specifically for the therapist-level practitioner. Includes advanced anatomical considerations of the cardiac, pulmonary, and renal systems.

REST 3220 - Advanced Cardiopulmonary Pathophysiology

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Pathophysiology and diagnosis of coronary artery disease, fungal lung disease, neoplasms, HIV, ARDS, chest injuries, shock in relation to the care of the trauma patient, and a differentiation of the intracellular and extracellular fluid compartments.

REST 3230 - Advanced Cardiopulmonary Technology

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Advanced diagnostic procedures and interpretive skills in cardiopulmonary function, lung dynamics, specialty gases, blood gas analysis, and metabolic assessment.

REST 3260 - Neonatal/Pediatric Respiratory Care

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Pediatric and neonatal respiratory care with emphasis on intensive care activities, therapeutic procedures, life support modalities and fetal, neonatal, pediatric pathophysiology.

REST 3270 - Adult Critical Care

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Advanced adult respiratory intensive care, including hemodynamic monitoring, ventilation/perfusion monitoring, pulmonary assessment and airway management.

REST 3280 - Patient Care Continuum/ Quality Management

Credits: (3)
Typically taught:

Fall [Full Sem]
Spring [Full Sem]

Theory and principles of pulmonary and spinal cord rehabilitation, polysomnography, discharge planning, patient education, quality management, home and self care, legal, ethical, and moral considerations of chronic and extended care.

REST 3500 - Survey of Polysomnography

Credits: (1)
Typically taught:
Fall [1st Blk]
Spring [1st Blk]

Introduction to polysomnography as a profession. Course includes an overview of the polysomnogram, sleep disorders as they affect the general population, typical employment in the field, and employment opportunities. Also includes an introduction to the professional organization of sleep and requirements to become a registered polysomnographic technologist (R.PSG.T). Students taking REST 3500 are required to write a 6-10 page paper outlining the assessment of sleep disorders or neurodiagnostics. Students taking REST 2500 cannot take REST 3500 for credit. Prerequisite: Medical terminology, anatomy, and physiology or completion of respiratory therapy program or C.R.T., R.R.T., or R.N. credential.

REST 3501 - Anatomy and Physiology of Sleep

Credits: (3)
Typically taught:
Summer [1st Blk]

Introduction to the anatomy and physiology of the neurologic, cardiac, and respiratory systems during sleep. Basic anatomy and physiology of wake-sleep cycles are studied, with emphasis on changes that occur during varying stages of sleep and during common sleep disorders. Introduction to the EEG, EOG, EKG, EMG, and other polysomnography data recorders. Students taking REST 3501 are required to write a 6-10 page paper outlining physiologic components affecting quality of sleep. Students taking REST 2501 cannot take REST 3501 for credit. Prerequisite: medical terminology, anatomy, and physiology or completion of respiratory therapy program or C.R.T., R.R.T., or R.N. credential.

REST 3502 - Introduction to Sleep Disorders

Credits: (2)
Course provides an overview of the history of sleep medicine, normal sleep physiology, effects of the sleep-wake stage, sleep disorders and abnormal sleep physiology, and an introduction to polysomnography (including patient interaction, sensor and lead placements, and instrumentation). Course also introduces the fundamentals of therapeutic interventions utilized to treat sleep disorders. Students taking REST 3502 are required to r a 6-10 page paper outlining the implications for assisted ventilation to sleep disorders. Students taking REST 2505 cannot take REST 3502 for credit. Prerequisite: medical terminology, anatomy, and physiology or completion of respiratory therapy program or C.R.T., R.R.T., or R.N. credential.

REST 3503 - Instrumentation and Computers in Polysomnography

Credits: (2)
Typically taught:
Fall [1st Blk]
Spring [1st Blk]
Summer [1st Blk]

Course provides study of equipment, instrumentation, and recording devices utilized in polysomnography. Includes EEG waves, signal pathway and derivation of waves, impedance, sensitivity, time constants, amplifiers, filters, calibration, electrodes, artifacts (both equipment and patient-generated), computer basics, and monitoring devices. Students taking 3503 are required to write a 6-10 page paper outlining specific instrumentation in polysomnography assessing sleep disorders. Students taking REST 2503 cannot take REST 3503 for credit. Prerequisite: REST 2500/REST 3500 and REST 2502/REST 3502 or medical terminology, human anatomy and human physiology. May be repeated twice with a maximum of 6 credit hours.

REST 3504 - Laboratory Practice of Instrumentation in Polysomnography

Credits: (1)
Course provides practice and application of operating principles of equipment, instrumentation, and recording devices utilized in polysomnography. Includes EEG waves, signal pathway and derivation of waves, impedance, sensitivity, time constants, amplifiers, filters, calibration, electrodes, artifacts (both equipment and patientgenerated), computer basics, and monitoring devices. Prerequisite: REST 3502/REST 2502 or medical terminology, human anatomy and human physiology Concurrent enrollment with REST 3503.

REST 3505 - Therapeutics of Managing Sleep Apnea

Credits: (2)
Course provides current therapies and interventions for treatment of sleep apneas. Interventions include positive airway pressure therapy (nocturnal CPAP and bi-level CPAP), surgery, and dental devices. Patient compliance and outcomes of these treatments are included. Students taking REST 3505 are required to write a 6-10 page paper outlining strategies managing sleep apnea. Students taking REST 2505 cannot take REST 3505 for credit. Prerequisite: REST 2501/REST 3501 and REST 2502/REST 3502 or medical terminology, human anatomy and human physiology. May be repeated once for a maximum of 4 credit hours.

REST 3506 - Advanced Technical Procedures

Credits: (3)
Course provides detailed description and discussion of specific diagnostic procedures in PSG, including multiple sleep latency tests, maintenance of wakefulness test, REM behavior disorder studies, MMPI, movement disorders, TCM, nocturnal seizure disorders, esophageal balloon procedures, and others. Prerequisite: REST 3502 and REST 3503. May be repeated once for a maximum of 6 credit hours.

REST 3507 - Event Recognition and Polysomnography Scoring

Credits: (3)
Course provides advanced study of sleep stages and recognition of EEG characteristics of each stage. Multi-channel recording of breathing events, leg movements, ocular movements, cardiac and oxygenation monitoring, parasomnias, and interictal and ictal epileptic events are also presented. Course will include review and scoring of 12-hour polysomnography records to determine the overall sleep score. Prerequisite: REST 3501 and REST 3502.

REST 3508 - Sleep Center Management

Credits: (1)
Course is designed to prepare students for sleep center management in hospitals and independent facilities. Course includes sleep laboratory requirements for accreditation, personnel requirements and training, PSG study documentation, technician manuals, quality assurance, policies and procedures, and lab protocols. REST 3500 or credentialed as C.R.T., R.R.T., or R.N.

REST 3509 - Cases in Sleep Medicine

Credits: (2)
Typically taught:
Spring [1st Blk]
Summer [1st Blk]

Course will include physician presentations or case studies of patients with a variety of sleep disorders. Case-based learning is applied in the context of patient presentation and initial interview and diagnostic findings, determination of appropriate sleep medicine studies, interpretation of patient findings, recommendation for patient therapy, and follow-up of patient compliance and outcome(s) of therapeutic intervention. Prerequisite: REST 3502 and REST 3505. May be repeated once for a maximum of 4 credit hours.

REST 3510 - Clinical Practice I in Polysomnography

Credits: (2)
Introduction to the sleep laboratory and the set-up, monitoring, and therapeutic interventions associated with polysomnography. Students will be oriented to patient interviewing and selection, OSHA standards, sleep laboratory standards, and confidentiality. Competency is demonstrated in patient set-up, producing a reliable PSG, recognizing artifact, and basic therapeutic interventions for common sleep disorders. Prerequisite: REST 3502. Concurrent enrollment in REST 3503 and REST 3504. May be repeated twice for credit.

REST 3511 - Clinical Practice II in Polysomnography

Credits: (2)
Case-based clinical applications course. Course requires competency in complete patient management (patient referral and interview, physician consult, patient study[ies], therapeutic intervention and follow-up of patient compliance). Students will develop the patient history and physical, perform the study, score the patient record, interpret the report, apply therapy, and follow-up patient compliance. Prerequisite: REST 3502 and REST 3510. Concurrent enrollment in REST 3505. May be repeated once for a maximum of 4 credit hours.

REST 3512 - Clinical Practice III in Polysomnography

Credits: (4)
Clinical applications course providing experience in performing advanced technical procedures, including multiple sleep latency tests, maintenance of wakefulness tests, REM behavior disorders studies, MMPI, movement disorders, TCM, nocturnal seizure disorders, esophageal balloon procedures, and others. Prerequisite: REST 3502, REST 3510, and REST 3511. Concurrent enrollment in REST 3506. May be repeated once for a maximum of 8 credit hours.

REST 3760 - Clinical Applications of Neonatal/Pediatric Respiratory Care

Credits: (4)
Typically taught:
Spring [Full Sem]

The clinical application of pediatric and neonatal assessments as they relate to selection and use of respiratory care procedures and equipment specific for this patient population.

REST 3770 - Clinical Applications of Adult Critical Care

Credits: (4)
Typically taught:
Fall [Full Sem]

Adult respiratory care in the intensive care setting [shock-trauma, thoracic, burn ICUs] with emphasis on hemodynamic monitoring, ventilation/perfusion monitoring, pulmonary assessment and airway management. To be taken concurrently with REST 3270.

REST 3780 - Clinical Applications

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Clinical experiences related to REST 3280: rehabilitation, extended care, home care agencies, polysomnography, patient assessment and planning for discharge, and quality management. To be taken concurrently with REST 3280.

REST 3900 - Clinical Simulation Seminar

Credits: (3)
Typically taught:
Spring [Full Sem]

Problem-based clinical concepts course: comprehensive program review including written and clinical simulation examinations. Prerequisite: Enrollment in baccalaureate respiratory therapy program; CRT credential, or equivalent.

REST 4610 - Advanced Patient Assessment

Credits: (1-2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

The advanced patient assessment project is designed to be a physician intensive, interactive experience that emphasizes an understanding of diagnostic processes involved in assessing, evaluating, and treating patients with cardiopulmonary diseases. Enrollment by permission only.

REST 4620 - Health Promotion

Credits: (1-2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

The health promotion project addresses the growing role of the Respiratory Care Practitioner (RCP) in patient education, public education, and health promotion in general. Enrollment by permission only.

REST 4630 - Continuous Quality Improvement

Credits: (1-2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

The continuous quality improvement project enhances an understanding of how to construct and conduct a quality improvement (quality assurance) project in the workplace. Enrollment by permission only.

REST 4800 - Independent Projects

Credits: (1-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Student designed, instructor approved projects which will further develop cognitive or psychomotor skills for the baccalaureate level respiratory care practitioner. Projects must meet departmental and professional goals and standards and must have instructor approval prior to beginning project. Enrollment by permission only. May be repeated for a maximum of 6 credit hours.

REST 4830 - Directed Readings

Credits: (1-3)
Typically taught:
Spring [Full Sem]

Student designed, instructor approved readings which will further develop professional knowledge or understanding for the baccalaureate level respiratory care practitioner. Readings must meet departmental and professional goals and standards and must have instructor approval prior to b beginning. Enrollment by permission only. May be repeated twice with a maximum of 3 credit hours.

REST 4850 - Study Abroad

Credits: (1-6)
(Variable Title)
Typically taught:
Summer [Full Sem]

The purpose of this course is to provide opportunities for students in health professions to experience a study abroad program that is designed to explore healthcare, culture, and clinical experience. May be repeated 5 times with a maximum of 6 credit hours.

REST 4990 - Senior Seminar

Credits: (2)
Moderated discussion and/or laboratory experiences relating to current events in health care, legislative and ethical issues, and emergent technologies in respiratory care.

SCM 3050 - Operations and Supply Chain Management

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [~~1st Blk~~Full Sem]

Supply chain management is the value creation engine of every organization. The focus of this course is to acquaint students with the core elements of supply chain management: 1) customer value, 2) collaborative value creation, and 3) systems thinking. The course introduces and defines the three primary functions that compose supply chain activities- 1) purchasing, 2) operations, and 3) logistics-and shows how they need to work together to create the high-quality, low-cost, and innovative products and services that customers expect to find in today's marketplace. Important analytical tools are introduced. Prerequisite: QUAN 2600 (or Business Admin. Dept. approval for engineering majors with comparable statistics ~~backgrond~~background)

SCM 3500 - Spreadsheet Modeling for Decision-Making

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Spreadsheet software enables business people to model and analyze quantitative problems in a wide variety of business contexts. This course covers spreadsheet modeling in terms of optimization models for deciding the best set of decisions to meet constraints and performance objectives; simulation models for considering uncertainty in business operations and decisions; and other decision models and tools. Through conceptual and applied topics, this course will enhance one's problems solving and modeling capabilities as well as Excel spreadsheet skills. Prerequisite: BSAD 2899; QUAN 2600; QUAN 3610; SCM 3050. Recommended pre-or co-requisite: QUAN 2400.

SCM 3600 - Logistics & Transportation

Credits: (3)
Typically taught:

Spring [Full Sem]

This course incorporates readings, site visits, and case analysis to convey state-of-the-art and emerging business logistics practices. The focus of this course is on forecasting, inventory management, transportation, distribution and warehousing, with an introduction to contemporary issues in logistics such HADR and sustainability. Development of leading-edge strategies, which promote a firm's ability to differentiate itself in terms of its supply chain performance is emphasized. Prerequisite: BSAD 2899; SCM 3050. Prerequisite/~~Corequisite~~Co-requisite: SCM 3500.

SCM 3700 - Purchasing & Strategic Sourcing

Credits: (3)
Typically taught:
~~Fall~~Spring [Full Sem]

This course provides students an introduction to the supply management discipline, focusing on the development of ~~catagory~~category management skills and the purchasing process. Companies have always sourced a large percent of their COGS--up to 50-80%. However, today's emphasis on core competencies and increased use of outsourcing makes sourcing even more strategic. Sourcing managers are responsible for managing supplier capacity and capabilities. The course emphasizes costing and relationship management tools. This course builds the foundation for students to pass the Certified Profession in Supply Management (CPSM) exam. Prerequisite: BSAD 2899; SCM 3050. Prerequisite/~~Corerequisite~~Co-requisite: SCM 3500.

SCM 4100 - Quality Management and Process Improvement

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Introduces principles and practices for achieving quality, customer satisfaction, and performance excellence. Emphasis on process improvement, problem-solving, variation and statistical thinking, customer and supplier relationships, service quality, employee involvement, project management, and quality management frameworks. Presents tools and methods for analyzing and improving business processes, including Six Sigma, lean, and theory of constraints. This course builds the foundation for students to pass the ASQ Certified Quality Process Analyst exam. Prerequisite: BSAD 2899; QUAN 3610; SCM 3050; or Instructor Permission.

SCM 4400 - Global Supply Chain Management

Credits: (3)
Typically taught:
~~Fall~~Spring [Full Sem]

Globalization has changed the rules of competition. Globalization also raises complex and controversial issues such as job displacement and worker exploitation. Winning companies now use worldwide resources to meet the needs of global consumers. This course introduces and is built around a scanning model. Students are expected to actively scan, using emerging information to identify inflection points and determine their strategic and tactical implication. From this analysis, strategic objectives are renewed to guide the design of a global supply

chain. Effective communication and teamwork are emphasized via the in class activities and projects. Prerequisite: BSAD 2899 and SCM 3050.

SCM 4500 - Supply Chain Relational Strategies

Credits: (3)
Typically taught:
Fall [Full Sem]

This course focuses on the soft side of supply chain management, addressing both the internal (including individual) and external relationships that allow a supply chain to function. Key elements of the course include the perspective on supply chain strategic relationships, managing cultural disparities and conflict between businesses and functional units within them, and change management issues. Students will learn core processes around initial exploration and assessment of supply chain relationships, establish metrics/expectations for the relationship, craft and manage teams and work groups, and develop negotiation skills. Prerequisite: BSAD 2899; SCM 3050, SCM 3500, 3600, 3700; MGMT 3200 or ~~NTM~~NET 3250; should be taken concurrently with SCM 4550.

SCM 4550 - Strategic Supply Chain Design

Credits: (3)
Typically taught:
Fall [Full Sem]

Supply chain management is integrative in nature, requiring a systems approach to process design and management. The goal is to co-create value across organizational boundaries. This capstone SCM course emphasizes the analytical aspects of identifying the right capabilities required to design a collaborative business model and create distinctive customer value. This analysis answers the question, "Who should be on the value-creation team?" The course is designed as a collaborative laboratory, employing extensive experiential learning and case analysis. Prerequisite: BSAD 2899; SCM 3050, SCM 3500, 3600, 3700; MGMT 3200 or ~~NTM~~NET 3250; should be taken concurrently with SCM 4500, but can be taken after.

SCM 4700 - Supply Chain Case Analysis, Logic, and Presentation

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course is designed around the case analysis methodology and has the explicit goal of preparing student teams for participation in specific competitive supply chain case competitions (both regionally and nationally). Preparation time will be extensive and students must possess an advanced level of SCM mastery prior to enrollment in this class. Class meetings will be scheduled with the students throughout the semester for presentation and preparation. Please see the instructor for information on enrollment eligibility. Credit/no credit grading. Prerequisite: SCM 3050, instructor approval.

SCM 4800 - Independent Research

Credits: (1-3)
Directed research and study on an individual basis. Prerequisite: Business Foundations; BSAD 2899; Senior Standing; Written Instructor Approval. May be repeated until a total of 4 hours credit is accumulated.

SCM 4850 - Supply Chain Management Study Abroad

Credits: (1-3)
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~
~~**Summer [Full Sem]**~~

This course is designed for students who wish to explore supply chain management theory and practice in countries other than the U.S. Students will study global supply chain management as offered through a partner university (or other university with department chair approval). Prerequisite: BSAD 2899. Can be repeated once up to 6 credits.

SCM 4860 - Supply Chain Management Internship

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

A structured professional-level field experience. The student will be counseled and supervised as he/she applies and integrates the knowledge and skills obtained through operations management and logistics courses. Prerequisite: Business Foundations; BSAD 2899; Senior Standing; Instructor approval.

SOC 1010 SS/DV - Introduction to Sociology

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [1st Blk, Full Sem Online]

An introduction to the study of Sociology through the concepts and principles used to understand and evaluate society. It focuses on all aspects of society: culture; social interaction; institutions; group processes; deviance and social control; stratification, diversity, and inequality based on race, ethnicity, class, gender, etc.; and social stability and change.

SOC 1020 SS/DV - Social Problems

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [1st Blk, Full Sem Online]

A study of major social problems in contemporary society, including issues of age, gender, family, race, ethnicity, wealth and poverty, politics, education, public safety, health care, substance abuse, and environment. Special emphasis is given to these issues and their consequences for today's global and diverse society.

SOC 2810 - Experimental Course Offerings

Credits: (2-3)
May be repeated 5 times up to 6 credit hours.

SOC 2920 - Short Courses, Workshops, Institutes, and Special Programs

Credits: (1-3)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated 5 times up to 6 credit hours.

SOC 3000 - Self and Society

Credits: (3)
Typically taught:
Spring [Full Sem] odd years

Sociological Social Psychology is the study of individual, group, and social behavior through analysis of the relationship between individuals and social institutions. Individuals actively create social structure while they are simultaneously shaped by it. Students will analyze how social interaction, processes, roles, and statuses are created and maintained by individuals. Students will also analyze how these same processes, roles, and statuses shape their individual behavior. Social Psychological theories and methodologies are also addressed. Prerequisite: SOC 1010 or SOC 1020.

SOC 3010 - Social Inequality

Credits: (3)
Typically taught:
Spring [Full Sem] ~~even~~odd years

The study of social stratification and inequality in the United States and globally. The course focuses on economic class and status groups, such as gender, race and ethnicity, age, sexuality, and physical ability. Prerequisite: SOC 1010 or SOC 1020.

SOC 3030 - Classical Sociological Theory

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A study of the classical tradition of sociological thought in late 18th to early 20th century Europe and 19th to early 20th century U.S. The course introduces the main theories of Comte, Martineau, Marx, Weber, Simmel, Durkheim, and others, including early theorists of gender and race. To be taken before SOC 4030. Prerequisite: SOC 1010.

SOC 3110 - Sociology of Family

Credits: (3)
Typically taught:
Spring [Full Sem] ~~even~~odd years

Analyzes family arrangements and structure, changes in such arrangements over time, and contemporary issues facing families in our ever-changing world. Emphasis is placed on variations in family experiences with regard to race, gender, social class, and sexual orientation. Family, as it relates to other social institutions such as politics, religion, and the economy, is also explored.

SOC 3130 - Sociology of Gender

Credits: (3)
Typically taught:
Fall [Full Sem] odd years

This course is an examination as to how and why communities create gender categories as well how gender influences individuals' identities, behaviors, and life experiences. Students will study gender within a variety of contexts, such as the workplace, family, politics, athletics, education, health, media, and religion. Attention will also be given to sociological theories of gender, gender socialization, and the intersection of gender, race, class, and sexuality. Prerequisite: SOC 1010 or SOC 1020 or WGS 1500 or permission of instructor.

SOC 3250 - Deviance and Social Control

Credits: (3)
Typically taught:
Spring [Full Sem] ~~odd~~even years

Introduces the student to the various sociological concepts of deviance and social control. Deviance and social control are examined in their positive and negative forms. The benefits and contributions as well as the consequences and disruptions of these forms are considered in the context of the formal and informal socialization processes and the internalization of social norms. Prerequisite: SOC 1010 or SOC 1020.

SOC 3260 - Juvenile Delinquency

Credits: (3)
Typically taught:
Fall [Full Sem] even years

Juvenile delinquency as a social phenomenon and its causes involving definitions, agencies of law enforcement, and the courts. Prerequisite: SOC 1010 or SOC 1020.

SOC 3270 - Criminology

Credits: (3)
Typically taught:

Fall [Full Sem] ~~even~~odd years

Study of the nature, extent, causes, and treatment of crime. Prerequisite: SOC 1010 or SOC 1020.

SOC 3300 - Environment and Society

Credits: (3)
Typically taught:
Spring [Full Sem] even years

An in-depth study of societal-environmental interactions including population, technology and organization impacts of human societies on the physical environment, and environmental impacts on human behavior and social organization.

SOC 3400 - Social Change

Credits: (3)
Typically taught:
Fall [Full Sem] odd years

The factors which change society and how society changes, emphasizing technological innovations and its implications, social movements, and the role of individuals. Prerequisite: SOC 1010 or SOC 1020.

SOC 3410 - Sociology of Religion

Credits: (3)
Typically taught:
Spring [Full Sem] even years

Examination of religion and religious activities globally from the theoretical perspectives of Sociology.

SOC 3420 - Sociology of Education

Credits: (3)
Typically taught:
Fall [Full Sem] even years

Analysis of the structure and function of education as a central social institution in contemporary society.

SOC 3430 - Medicine and Healthcare in Society

Credits: (3)
Typically taught:
Fall [Full Sem] odd years

Utilizes the Sociological perspective to explore the Institution of Medicine and the Medical Healthcare Delivery System; its function as a social institution and its capability, accessibility, and the related issues of providing Healthcare. The various organizational system structures, and their economic and political dimensions are also

examined. Further emphasis is placed on the various professional roles, supporting roles, and patient behaviors. Additional focus is placed upon selected international comparisons, as well as medical research, ethical considerations, and international health issues.

SOC 3550 - Organizations in Society

Credits: (3)
Typically taught:
Spring [Full Sem] odd years

Surveys the nature and structure of organizations in general and modern formal organizations and globalization in specific. How organizations work, function and affect contemporary society and individuals' lives and behavior. Sociological theories about modern organizations and globalization will be examined. Prerequisite: SOC 1010.

SOC 3600 - Social Statistics

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem] ~~**odd years**~~
Summer [1st Blk]

Introduction to descriptive and inferential statistical analysis techniques and the presentation of results. Prerequisite: MATH 1010 or equivalent.

SOC 3660 - Sociological Research

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [1st Blk]

Examines the scientific foundations of Sociology and methods of Sociological Research. Prerequisite: SOC 1010 or SOC 1020.

SOC 3840 - Cities and Urban Life

Credits: (3)
Typically taught:
Fall [Full Sem] even years

In-depth analysis of the urbanization, modernization, and development of the system of cities. The relationship between cities and culture, mental illness, and social problems are examined.

SOC 3850 - Race & Ethnicity

Credits: (3)
Typically taught:
Spring [Full Sem] even years

Examines the social construction of race and ethnicity and the conditions of racial and ethnic groups in the United States and globally, based on statistical and ethnographic data. Includes a survey of theories of the origins, causes, and dynamics of ethnic and race relations.

SOC 4030 - Contemporary Sociological Theory

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The works of major contemporary theorists (Mead, Parsons, Merton, Goffman, Garfinkel, etc.) and the emergence of current schools of sociological thought. Prerequisite: SOC 1010 and SOC 3030.

SOC 4220 - Life in a Consumer Society

Credits: (3)
Typically taught:
Spring [Full Sem] even years

Examination of consumption, consumerism, and the increasing commercialization of contemporary life. Students study the history of consumerism and advertising; explore how consumer culture influences their own consumption choices; and analyze the relationship between consumerism and social inequality.

SOC 4270 - Sociology of Law

Credits: (3)
Typically taught:
Spring [Full Sem] odd years

A study of the interchange between law and society, where society creates the law, yet law regulates society. Prerequisite: SOC 1010 or SOC 1020.

SOC 4410 - Sociology of Globalization

Credits: (3)
Typically taught:
Fall [Full Sem] odd years

Study of economic, political, and cultural globalization in the late 20th and early 21st century. The course examines the history, theories and critiques of globalization, the key actors in global political-economy, the institutions and events that shape global processes, and globalization's impact on local economies, politics, culture, and the natural environment.

SOC 4550 - Sociology of Work

Credits: (3)
Typically taught:
Fall [Full Sem] even years

Explores the relationship between work and social class, gender, technology, race, and ethnicity. Additionally, the nature of occupational subcultures is analyzed.

SOC 4810 - Experimental Course Offerings

Credits: (2-3)
Individual courses offered on an experimental basis, identified by specific name and description. The specific title will appear on student's transcript along with the authorized credit. May be repeated 5 times up to 6 credit hours.

SOC 4830 - Readings and/or Projects

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Individual readings and/or projects for sociology majors or minors. (Maximum of 5 hours applied toward graduation, 3 of which can be applied toward the sociology major or minor.) Prerequisite: SOC 1010, senior standing, permission of instructor, approval of program coordinator. May be repeated 4 times up to 5 credit hours.

SOC 4890 - Internship

Credits: (1-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Qualified juniors and seniors may apply for internships among federal, state and private agencies. Internships are anticipated to provide the student with both practical and research experiences. A student may complete up to 9 hours, but not more than 6 hours in any one type of internship. A maximum of 3 hours may be applied towards the sociological major or sociological minor. Prerequisite: SOC 1010, junior or senior status, approval of program coordinator. May be repeated 8 times up to 9 credit hours.

SOC 4900 - Senior Capstone Course

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A course designed to organize all of the knowledge that the student has gleaned from his/her major into an integrated

whole. This course will help the student make relevant the knowledge that he/ she has learned. This will be accomplished by having the student write a senior thesis as well as attend lectures. Prerequisite: SOC 1010, SOC 3030, SOC 3600, SOC 3660, senior standing.

SOC 4920 - Short Courses, Workshops, Institutes, and Special Programs

Credits: (1-3)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript. May be repeated 5 times up to 6 credit hours.

SOC 4990 - Seminar in Sociology

Credits: (3)
Variable Title
Typically taught:
Spring [Full Sem]

An advanced course allowing in-depth study of selected topics in Sociology. When the course number is used, it will be accompanied by a specific title with the credit authorized, which will appear on the student transcript. Prerequisite: SOC 1010 or consent of instructor. May be repeated 3 times up to 9 credit hours. (Formerly Contemporary Issues.)

SW 1010 SS - Introduction to Generalist Social Work

Credits: (3)
Typically taught:
Fall [Full Sem, 1st Blk, Online]
Spring [Full Sem, 1st Blk, Online]
Summer [Full Sem, Online]

A generalist introduction to the relationships between social systems (individuals, groups, and communities) and the social welfare networks which impact them, including the role of the social work profession. Open to all Weber State University students.

SW 2100 - Human Behavior and the Social Environment I

Credits: (3)
Typically taught:
Fall [Full Sem, 2nd Blk, Online]
Spring [Full Sem, 2nd Blk, Online]
Summer [Full Sem, Online]

This is the first course in the Human Behavior and the Social Environment sequence. It identifies the relationships between human developmental stages (from conception to death) and the problems associated with environmental interactions. Systems and theory are examined in the biological, psychological, and sociological arenas. Prerequisite: (It is recommended for Social Work Majors that SW 1010 be taken before or concurrently with SW 2100. It is also suggested that ZOOL 1020 be taken before or concurrently with SW 2100.)

SW 2200 - Issues in Diversity

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

A study of diversity among individuals, groups, communities, and of issues social workers will need to understand when interfacing with diverse populations.

SW 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~

Consult the semester class schedule for the current offering under this number. The specific title and credit authorized for these elective courses will appear on the student transcript. May be repeated up to 3 times for a maximum of 4 credits.

SW 3000 - Death and Dying

Credits: (3)
Typically taught:
~~**Summer**~~**Fall [Full Sem]**
Spring [Full Sem]

An in-depth study of death, death-related issues and social institutions and practices dealing with death in American society, with special emphasis on the social processes surrounding death and constructive responses to death and dying. Cross-listed with GERT 3000.

SW 3100 - Human Behavior and the Social Environment II

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [1st Blk]

This second course in the Human Behavior and the Social Environment sequence is designed to present basic principles and fundamental concepts necessary for acquiring and organizing knowledge for practice with individuals, families, groups, organizations, and communities and on the interaction among these systems. Alternative paradigms on human behavior and the social environment are also explored. Prerequisite: SW 1010, SW 2100 and formal admittance to the Social Work Program.

SW 3120 - Aging: Adaptation and Behavior

Credits: (3)
Typically taught:
Fall [Full Sem]

An examination of the physical and psychological processes of aging. The emphasis is upon behavioral and social adaptation to these processes. Cross-listed with GERT 3120.

SW 3200 - Child and Family Welfare

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A historical and contemporary examination of child and family welfare issues, and social work intervention strategies. Prerequisite: SW 1010.

SW 3320 - Ethnicity and Older Women in the American Society

Credits: (3)
Typically taught:
Fall [Full Sem]

The importance of special populations (ethnic, racial and women) as they relate to the aging process. Cross-listed with GERT 3320.

SW 3500 - Social Welfare & Gerontological Policy Development and Service

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The history, mission, philosophy and human service aspects used in the development of social work/gerontology as a profession will be covered. Examples of social, public and social welfare policy will be identified and studied. Knowledge of local, state, and federal legislation, professional organizations, and membership organizations will assist in review of lobby, funding and implementation practices used in meeting human service needs. Methods for the political and organizational analysis of processes and policy will be covered. Prerequisite: SW 1010 or GERT 1010. (SW/GERT 3500 must be completed before entering Field Practice.)

SW 3600 - Social Statistics

Credits: (3)
Typically taught:
Fall [Full Sem, ~~2nd~~1st Blk, Online]
Spring [Full Sem, 2nd Blk, Online]
Summer [Online]

Introduction to analysis and presentation of data. Prerequisite: Meet WSU Quantitative Literacy requirement. Cross-listed with GERT 3600.

SW 3700 - Social Work Research

Credits: (3)
Typically taught:
Fall [Full Sem, 2nd Blk]
Spring [Full Sem, 1st Blk]

Social work research and its relationship to social work theory and practice. The class will include content on qualitative, quantitative and single system research methodologies; analysis of data, including statistical procedures; systematic evaluation of practice; analysis and evaluation of theoretical bases, research questions, methodologies, statistical procedures, and conclusions of research reports; and relevant technological advances. The course will also identify how the research curriculum contributes to the student's use of scientific knowledge for practice. Prerequisite: SW 1010. (Must be completed before entering SW 4861.) Recommended prerequisite: completion of social statistics class.

SW 3800 - Writing in Social Work

Credits: (3)
Typically taught:
Spring [Full Sem]

This course is designed to help students develop and sharpen professional writing skills and become more effective in various forms of written communication in social work and the broader social welfare delivery system. The course will offer an in-depth overview of APA writing style guidelines and apply these, as appropriate, in the preparation of written documents common in professional practice in social and behavioral sciences. Prerequisite: University Composition (ENGL 2010 or equivalent). (It is recommended that this course be taken concurrently with SW 3700 and/or SW 4860.)

SW 3900 - Social Work Methods, Values, and Ethics

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [1st Blk]

An ecological system and generalist approach to social work practice methods. Content is germane to various systems and subsystems typically implicated in problems encountered by social workers. A study of values and ethics will assist the social worker to understand the proprieties of professional practice. Prerequisite: SW 1010, SW 2100, SW 2200 and formal admittance to the social work program. (May be taken prior to or concurrently with SW 3910.)

SW 3910 - Social Work Practice I

Credits: (3)
Typically taught:
Fall [Full Sem]

Spring [Full Sem]
Summer [2nd Blk]

An intensive knowledge-based generalist course concentrating on micro social work intervention skills combining lecture and hands-on experiences. Prerequisite: Formal admittance to the social work program. (May be taken prior to or concurrently with SW 3900.)

SW 3920 - Social Work Practice II

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [1st Blk]

A generalist course directed at understanding and demonstrating the principles, concepts and techniques of planned change in mezzo settings including families and small groups. Prerequisite: SW 3910. (Must be taken concurrently with SW 3930 and SW 4860.)

SW 3930 - Social Work Practice III

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [2nd Blk]

A generalist course designed to illustrate the principles, concepts and techniques of planned change in macro settings including institutions, organizations, and communities. (Must be taken concurrently with SW 3920.)

SW 4140 - Perspectives on Drug Use and Substance Abuse

Credits: (3)
Typically taught:
Spring [Full Sem]

This course examines drug use and substance abuse across the lifespan and addresses issues such as prevention, treatment, and public policy as they affect and relate to individuals, groups, families, organizations, and communities. Course material draws on current research, theory, and practice experience.

SW 4150 - DSM-5

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

This elective course is designed to familiarize the student with the Diagnostic Statistical Manual of Mental Disorders

(DSM-5 classification). The DSM-5 provides the practitioner with a systematic diagnostic tool for practice and research.

SW 4220 - Societal Responses to Aging

Credits: (3)
Typically taught:
Fall [Full Sem]

This course is designed to cover aspects of retirement relating to job change or discontinuance. The processes, events, social roles, and phases of life will presented. Cross-listed with GERT 4220.

SW 4250 - Medical Social Work

Credits: (3)
Typically taught:
~~Summer~~Spring [Full Sem]

This elective course explores the process and dynamics of the provision of social work services within the medical service delivery system.

SW 4500 - Interventions for Populations at Risk

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [~~Full Sem,~~ 1st Blk]

A course designed to study populations at risk with an emphasis on women and people of color. Interventions to alleviate conditions of human suffering are stressed. Prerequisite: SW 3910.

SW 4600 - Social Work in Special Settings

Credits: (2-4)
This elective course is designed to accommodate special topic areas in Social Work practice. May be repeated once for a maximum of 4 credits.

SW 4650 - Retirement: Adjustment/Planning

Credits: (3)
Typically taught:
~~SSpring [2nd Blk~~Spring [Full Sem]

This course is designed to cover aspects of retirement relating to job change or discontinuance. The processes, events, social roles, and phases of life will presented. Cross-listed with GERT 4650.

SW 4800 - Projects and Research

Credits: (1-3)
This elective course allows for supervised projects and primary research in various areas of social work. Limited to senior students. Prerequisite: Consent of department chair. May be repeated up to 2 times for a maximum of 3 credits.

SW 4810 - Experimental Courses

Credits: (2-3)
This elective course is designed to accommodate new courses under an experimental format. No more than 2 experimental courses may be taken up to a maximum of 6 credits.

SW 4830 - Directed Readings

Credits: (1-3)
This elective course is an individual readings for seniors who are majoring in social work. Permission must be obtained from the instructor. Students are required to complete a minimum of 1000 pages of selected readings per class hour requested for credit. Prerequisite: Consent of department chair. May be repeated up to 2 times for a maximum of 3 credits.

SW 4860 - Social Service Field Experience I

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

This field practice course requires a minimum of 200 hours of supervised field service in an approved social service agency. The emphasis is to include micro, mezzo, and macro practice opportunities. Prerequisite: SW 2200, SW 3100, SW 3900 and SW 3910. Formal admittance to Field Experience required. (Must be taken concurrently with SW 3920 and SW 3930.)

SW 4861 - Social Service Field Experience II

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

This field practice course requires a minimum of 200 hours of supervised field service in an approved social service agency. The emphasis is to include micro, mezzo, and macro practice opportunities. Prerequisite: SW 3700, SW 4860, SW/GERT 3600 (or equivalent). (To be taken concurrently with SW 4990).

SW 4920 - Short Courses, Workshops, Institutes, and Special Programs

Credits: (2-4)
~~**Typically taught:**~~
~~**Fall [Full Sem]**~~
~~**Spring [Full Sem]**~~

Consult the semester class schedule for the current offering under this number. The specific title and credit authorized for these elective courses will appear on the student transcript. May be repeated up to 2 times for a maximum of 6 credits.

SW 4990 - Social Work Senior Seminar

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

This course requires preparation and discussion of social work concepts and topics, and information and techniques in obtaining a job and selecting a graduate school. Prerequisite: SW 4860. (Must be taken concurrently with SW 4861.)

SW 5010 - Professional Development: Human Development in the Social Environment

Credits: (3)
This professional development course is designed for non-social work majors who have or wish to have experience in the delivery of social services. The course explores human development in the context of the broader social environment. It identifies the relationship between human developmental stages (from conception to death) and the problems associated with environmental interactions. Systems and theory are examined in the biological, psychological, sociological, and spiritual arenas. *Credit/No credit*.

SW 5020 - Professional Development: Social Welfare Policy

Credits: (3)
Typically taught:
~~**Fall**~~**Spring [1st Blk]**

This professional development course is designed for non-social work majors who have or wish to have experience in the delivery of social services. The history, mission, philosophy and human service aspects used in the development of social welfare policy will be covered. Examples of social, public, and social welfare policy will be identified and studied. Knowledge of local, state, and federal legislation, professional organizations, and membership organizations will assist in review of lobbying, funding, and implementation practices used in meeting human service needs. Methods for the political and organizational analysis of processes and policy will be covered. *Credit/No credit*.

SW 5030 - Professional Development: Social Work Ethics and Practice Methods

Credits: (3)
Typically taught:
~~**Fall**~~**Spring [2nd Blk]**

This professional development course is designed for non-social work majors who have or wish to have experience in the delivery of social services. Using an ecological and generalist approach to social work practice at the individual, family, group, organization, and community levels, this course provides training in a planned client change process and considers social work roles at various levels. A significant focus of this course is the study of the application of key values and ethical principles, as defined by the National Association of Social Workers (NASW), to professional practice and the resolution of ethical dilemmas. The course also includes content on the evaluation of practice and programs. *Credit/No credit.*

THEA 1013 CA - Introduction to Theatre

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Online]

An introduction to live theatre and drama and the creative heritage of theatre. Students will develop critical awareness of dramatic theory and performance practice through reading and evaluating historical and contemporary drama, and through applied creative activities. Students are expected to attend theatre performances outside of regularly scheduled class time. Note: Theatre majors are required to enroll in the face-to-face class, not the online section.

THEA 1023 CA - Introduction to Film

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

Examination and analysis of film and film techniques. Students will develop critical awareness of film as an artistic, social, and cultural phenomenon. Students may be required to attend film screenings outside of the regularly scheduled class time. A lab fee is required for this class.

THEA 1030 - Voice and Movement for the Actor

Credits: (3)
Typically taught:
Fall [Full Sem]

Natural resources of the human voice and body are studied as artistic resources for the performing artist. The course is designed to examine both the process and products of vocal and physical dynamics. The goal of this course is to integrate vocal and physical skills into the working process of the actor. Prerequisite: THEA 1033. (Theatre majors only).

THEA 1033 CA - Introduction to Acting ~~I~~

Credits: (3)
Typically taught:

Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

~~An overview of dramatic creativity that uses the human body, intellect~~This is an introductory class where students learn basic acting skills through class participation in improvisation, monologue work, and ~~spirit to explore, interpret~~scene study. Students learn a basic understanding of theories and ~~present dramatic scripts. Course includes fundamentals~~methodologies. Skills demonstrated in ares of ~~acting~~ body movement, diction, observation, imagination and ~~stage comportment.~~"action". (For non-theatre majors). Note: Theatre majors are strongly encouraged to enroll in the "majors only section" offered spring semester and concurrently enroll in THEA 1713.

THEA 1043 CA - Introduction to American Musical Theatre

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

An introduction to American Musical Theatre, its history and creative elements. Students will develop critical awareness of the differences between traditional and musical theatre by becoming actively involved in reading, observing, and analyzing musical theatre. Note: Musical Theatre majors are strongly encouraged to enroll in this class fall semester.

THEA 1051 - Freshman (New Student) Seminar

Credits: (1)
Typically taught:
Fall [Full Sem]

An introduction to the Theatre Arts Area devoted to the needs of incoming majors, including: faculty and staff introductions and theatrical personnel responsibilities, audition notices and practices, production and Practicum assignments, and opportunities available within the facility. Includes detailed academic advice for majors and minors, and practical methods of library research for theatre topics at WSU.

THEA 1053 CA - Introduction to Technical Production

Credits: (3)
An introduction to the production components of live theatre in which students will develop an awareness of technical aspects including scenery, lighting, costume, properties and sound. Students are expected to attend theatre performances outside of regularly scheduled class time. This course is recommended for non-theatre majors and minors.

THEA 1223 - Stage Makeup

Credits: (3)
Typically taught:
Spring [Full Sem]

A practical investigation of stage makeup techniques and skills of design and application. A lab fee is required for this class.

THEA 1713 - Script Analysis

Credits: (3)
Typically taught:
Spring [Full Sem]

An introductory course focusing on plot, character, language, and thematic analysis of varied historical and modern performance texts in the context of contemporary staging practice. This course teaches play analysis from a practical perspective. For students who intend to perform, direct, and design within the collaborative production process. Co-Requisite: (Recommended) THEA 1033.

THEA 2012 - Stagecraft

Credits: (3)
Typically taught:
Fall [Full Sem]

Introduction to stage scenery: lecture/demonstration of basic materials, shop and stage equipment, construction principles, and elementary technical drawing and design procedures.

THEA 2022 - Costume Fundamentals

Credits: (3)
Typically taught:
Fall [Full Sem]

Introduction to stage costume: with lectures, demonstrations and projects to introduce the basic materials, fabrics, costume construction methods, costume history, and design principles and procedures for theatrical costumes.

THEA 2032 - Lighting Fundamentals

Credits: (3)
Typically taught:
Fall [Full Sem]

This course provides an introduction to stage lighting. This course includes lectures and demonstration of principles and practical use of electricity, lighting equipment, control systems, elementary technical drawing, and lighting design practice as applied to the stage.

THEA 2033 - Acting II

Credits: (3)
Typically taught:
Fall [Full Sem]

Applies the principles learned in Acting I on a more intense level. Includes two arranged acting studio hours per week. Prerequisite: THEA 1030, THEA 1033, and by audition.

THEA 2203 - Costume Technology

Credits: (3)
Typically taught:
Spring [Full Sem] odd years

A practical exploration of the research and construction techniques used to create contemporary and historic costumes for the stage. A lab fee is required for this class. Prerequisite: (Recommended) THEA 2022. Offered spring semester every odd-numbered year.

THEA 2330 - Dramaturgy and Criticism

Credits: (3)
Typically taught:
Fall [Full Sem] even years

This course will be a practical study of the role and duties of a dramaturg in a production as well as a critic reviewing a finished work. Work will include all facets of dramaturgy: historical research, script analysis, audience outreach, and lobby displays. A completed Dramaturgy workbook for a proposed play or practical work on a department play will be the final assignment. This course may be repeated once up to to 6 credit hours.

THEA 2403 - Production and Stage Management

Credits: (3)
Typically taught:
Fall [Full Sem]

A practical study of stage management techniques necessary for efficient theatre production. A conceptual overview of the rehearsal and performance process will be stressed, including an overview of management techniques as applied to the performing arts in general. Front of house management and company management will be studied.

THEA 2443 - Acting for Musical Theatre

Credits: (3)
Typically taught:
Fall [Full Sem]

A practical study of acting methods unique to the discipline of musical theatre. Emphasis will be placed on the interpretation of modern musical theatre, literature through imagery, action, characterization, and analysis of the score and libretto. Prerequisite: THEA 2033 and admittance to the Musical Theatre program.

THEA 2580 - Computer Software for the Theatre

Credits: (3)
Typically taught:

Fall [Full Sem]

The class provides a basic introduction to several important computer programs used in theatre productions, including Vectorworks, Lightwright, Qlab, Google Sketch Up, and Photoshop.

THEA 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-6)
Consult the semester class schedule for the current offering under this number. The department will determine the specific title and credit authorized.

THEA 3033 - Advanced Acting

Credits: (3)
Typically taught:
Spring [Full Sem] even years

Introduces students to the techniques required to perform in various styles encountered in contemporary theatre, from Greek tragedy to the most modern forms. Includes two arranged studio hours per week. Prerequisite: THEA 2033, and by audition.

THEA 3070 - Voice and Movement for the Actor II

Credits: (3)
Typically taught:
Spring [Full Sem] odd years

An intermediate continuation of intensive voice and movement training for the actor, strong focus in movement and voice for extension of range and availability and for character development. Intermediate development and conditioning of the actor's voice and body with emphasis on dialect work and stylized movement. Prerequisite: THEA 1030. This course may be repeated once up to 6 credit hours.

THEA 3100 - Projection Design

Credits: (3)
Typically taught:
Spring [Full Sem] odd years

This course is a practical application of the tools and processes essential to conceptualizing and implementing projection design. This course also examines of the history of projection design in theatre performance leading up to current practices. Prerequisite: THEA 2580 - Computer Software for the Theatre.

THEA 3103 - Directing I

Credits: (3)
Typically taught:
Fall [Full Sem]

Theory and practical application of directing approaches. Prerequisite: THEA 1033, THEA 1013 and THEA 1713.

THEA 3212 - Scenic Design

Credits: (3)
Typically taught:
Spring [Full Sem] even years

Scenic Design will provide a practical exploration of the methods and materials of scenic design for the theatre. The course includes instruction in visual research, conceptual sketching, rendering, hand and computer aided drafting for theatre, and requires some outside class production contribution. Prerequisite: THEA 2012. Class meets the 2nd block of spring semester every even-numbered year.

THEA 3222 - Lighting Design

Credits: (3)
Typically taught:
Spring [Full Sem] odd years

This course will be an advanced exploration of lighting design for theater. This course is a practical exploration of the equipment, materials, and design processes of stage lighting and stage lighting design. Prerequisite: THEA 2032. May be repeated twice with a maximum of 6 credit hours.

THEA 3232 - Scenic Art and Painting

Credits: (3)
Typically taught:
Spring [Full Sem] odd years

Applied training in basic scene painting/scenic artist techniques for theatre. Surface preparation, priming, base painting, blending and scumbling, texture and detailing lessons are applied in producing finished demonstration flats including wall surfaces, wallpaper, bricks, rocks, wood grain and molding, marble, foliage, and copying a selected original. Prerequisite: THEA 2012.

THEA 3243 - Costume History

Credits: (3)
Typically taught:
Fall [Full Sem]

A study of fashion from ancient Egypt to the 20th century in relation to stage applications and contemporary fashion. Students will gain a basic understanding of major periods in Western clothing history as well as the interrelationship of clothing and culture and a working ability to research clothing of any culture or era.

THEA 3303 - History and Literature of Theatre I

Credits: (3)
Typically taught:
Fall [Full Sem]

A study of theatre and drama from their Pre-Ancient Greek origins through the Renaissance about 1700. The predominantly lecture format course includes significant readings in theatrical practice, historically significant plays, and basics of dramatic criticism. Additional research assignments are required.

THEA 3313 - History and Literature of Theatre II

Credits: (3)
Typically taught:
Spring [Full Sem]

A study of theatre and drama from about 1700 until the present. The predominantly lecture format course includes significant readings in theatrical practice, historically significant plays, and basics of dramatic criticism. Additional research assignments are required.

THEA 3323 HU - History and Literature of Contemporary Theatre

Credits: (3)
A survey of theatre history and literature that will study theatre from the 20th century and into the present time. Specific attention will be given to the plays and producing organizations of minorities and other underrepresented groups.

THEA 3340 - Theatre Management

Credits: (3)
Typically taught:
Spring [Full Sem] even years

An overview of theatre management techniques that includes all the operating functions such as marketing, promotion, fundraising, accounting and personnel management. A functional business plan for a Theatre is the culminating experience of this course.

THEA 3343 - History & Literature of Musical Theatre

Credits: (3)
Typically taught:
Spring [Full Sem] even years

A study of musical theatre from the origins of Opera through contemporary musical theatre. Cultural connections are emphasized through examination of book, score and performance. Prerequisite: admittance to the Musical Theatre program.

THEA 3350 - Marketing and Communication for the Arts

Credits: (3)
Typically taught:
Fall [Full Sem] odd years

This class explores the dynamics of marketing and communication across dance, music, and theatre. The emphasis is on practical application of course content to enhance students' future roles in a variety of arts related careers.

THEA 3443 - Scene Study for Musical Theatre

Credits: (3)
Typically taught:
Spring [Full Sem]

Advanced study of acting methods unique to the discipline of musical theatre. Emphasis will be placed on the interrelationship of characters through the use of dusts, group scenes, and production numbers. Selected composer and lyricists will also be addressed. Prerequisite: THEA 2443 and admittance to the Musical Theatre program.

THEA 3500 - Sound Design

Credits: (3)
Typically taught:
Spring [Full Sem] even years

This class is an introduction to the art and craft of sound design for live theatre productions. This course covers a practical application of the tools and processes essential to conceptualizing and implementing the content of a sound design as well as the sound system for delivery of that content. Prerequisite: THEA 2580 - Computer Software for the Theatre.

THEA 3505 - Playwriting

Credits: (3)
Typically taught:
Fall [Full Sem]

This course will be a practical study of dramatic structure and the process of playwriting, including writing assignments with monologues, scenes, and one-act plays. Extensive writing is required. Prerequisite: ENGL 1010 and ENGL 2010.

THEA 3525 - ArtsBridge

Credits: (1-6)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

ArtsBridge is a course that provides undergraduate students with an internship and academic credit for designing and implementing a comprehensive, needs-based, integrated arts project with community organizations or area schools. ArtsBridge students will work closely with a WSU faculty mentor, community/school stakeholder, peers, and the

ArtsBridge program coordinator throughout the process culminating in the development of an arts integrated project. Prerequisite: Recommendation by education supervisor in fine arts content area faculty mentor. Content methodology course(s) completed or in progress. Following faculty recommendation, please contact the ArtsBridge coordinator for an interview.

THEA 3991 - Junior Seminar

Credits: (1)
Typically taught:
Fall [Full Sem]

A colloquium that draws theatre students from various interests together in a mutual exploration of theatre research, production, and planning for employment opportunities and graduate study. Prerequisite: Theatre major - junior standing.

THEA 4002 - Special Studies in Theatre

Credits: (2)
Typically taught:
Fall [Full Sem]

Allows for the advanced study of a changing series of pertinent theatre topics. All Special Studies in Theatre courses are half-semester. The maximum time a student can repeat this class for credit is four times.

THEA 4002C - Special Studies in Theatre: Stage Combat

Credits: (2)
Physical training in the art and craft of stage combat. Emphasis is on safe application of technique to choreograph stage fights. All Special Studies in Theatre courses are half-semester.

THEA 4002D - Special Studies in Theatre: Auditioning

Credits: (2)
Typically taught:
Fall [2nd Blk]

A practical exploration of professional audition techniques including cold reading, prepared monologues, improvisation and portfolio preparation. Class meets the 2nd block of fall semester.

THEA 4002H - Special Studies in Theatre: Contemporary Topics

Credits: (2)
A diversified exploration of pertinent theatre topics. May be repeated for upper division credit. All Special Studies in Theatre courses are half-semester.

THEA 4103 - Directing II

Credits: (3)
Typically taught:
Spring [Full Sem] odd years

Advanced theory and application of directing approaches. Prerequisite: THEA 3103, and by audition. Offered spring semester every odd-numbered year.

THEA 4120 - Collaboration in the Theatre

Credits: (3)
This class will help theatre students improve collaborative skills specific to production teams in the process of theatrical creation. Students will work in model production teams and explore different modes of communication and collaboration. Prerequisite: THEA 3103 - Directing I or THEA 4203 - Costume Design or THEA 3212 - Scenic Design or THEA 3222 - Lighting Design or THEA 3500 - Sound Design and instructor approval.

THEA 4143 - Directing and Choreographing for Musical Theatre

Credits: (3)
Typically taught:
Spring [Full Sem] even years

Theory and practical application of directing and choreographing approaches as they pertain to Musical Theatre. Prerequisite: THEA 3103. Offered spring semester every even-numbered year.

THEA 4203 - Costume Design

Credits: (3)
Typically taught:
Spring [Full Sem] even years

A practical application of the techniques of visual communication used to create costume renderings for dramatic scripts. Prerequisite: (Recommended) THEA 2022 and THEA 3243. Offered spring semester every even-numbered year.

THEA 4220 - Design Seminar

Credits: (1-3)
Typically taught:
Fall [Full Sem]

A flexible emphasis course devoted to the design processes of theatrical production; a forum through which advanced design students may further their interests and abilities in the design process and/ or portfolio development and presentation that will change in focus from student to student. THEA 4220 Design Seminar may be used as a capstone design project with faculty approval. Prerequisite: at least one Theatre Area design course - THEA 3212 or THEA 3222 or THEA 4203, and permission of the instructor. This class provides an opportunity for in-depth theatrical design work. Since there is only one formal design class in each of the design areas (costume, lighting, and scenery) students can continue their studies in Design Seminar. The course number stays the same from semester to semester but the content; the design projects changes each time. The maximum time a student can repeat this class for credit is eight times.

THEA 4230 - Performance Seminar

Credits: (1-3)
Typically taught:
Fall [2nd Blk]

A flexible emphasis course devoted to the acting and directing process of live theatrical production, a forum through which advanced performance students may further their interests and abilities in the acting/directing process that will change in focus from student to student. THEA 4230 Performance Seminar may be used as a capstone project with faculty approval. Prerequisite: THEA 1033, THEA 2033, THEA 3103 and permission of the instructor. May be repeated twice with a maximum of 6 credit hours.

THEA 4270 - Dramatic Theory and Analysis

Credits: (3)
A study of dramatic theory from early Greek thinkers through contemporary theorists. The class will be based on reading primary and secondary texts and will class time will be spent on projects, activities, discussion, and lecture. Additional research assignments are required.

THEA 4603 - Creative Drama

Credits: (3)
Theories and practices incorporating the techniques of creative drama into the elementary school curriculum. Especially recommended to students of elementary education, recreation, and social services.

THEA 4651 - Individual Training in Stage Voice

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Twelve individual lessons on vocal technique for the actor. A list of approved voice instructors is maintained in the department office. Students are responsible for contacting individual instructors to schedule lessons. The Musical Theatre students are required to complete Individual Training in Stage Voice a minimum of six times to complete their degree however it is not uncommon for students to take private voice lessons each semester they are enrolled. The maximum time a student can repeat this class for credit is eight times.

THEA 4713 - Teaching Theatre in the Secondary School

Credits: (3)
Typically taught:
Fall [Full Sem] even years

Application of pedagogy to teaching theatre arts in secondary schools. Requires field experiences supervised by Theatre Arts Faculty. Prerequisite: ENGL 2010 and THEA 1033.

THEA 4801 - College of Arts & Humanities Leadership Lecture Series

Credits: (1)
Typically taught:
Spring [Full Sem]

This one-credit elective course will give arts and humanities' majors the opportunity to interact with successful guest lecturers whose undergraduate backgrounds are in the arts and humanities. Lecturers will clarify how the talents and skills associated with their degrees have contributed to their pursuit of successful careers and lives.

THEA 4830 - Directed Readings

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Advanced level, independent study under the direction of faculty member. Prerequisite: Permission of supervising instructor required for credit. May be repeated 8 times with a maximum of 9 credit hours.

THEA 4851 - Design/Tech/Management Practicum

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Hands on learning through involvement backstage on running crews, through studio work, acting in, or involvement in "front of house" operations for Weber State Theatre productions.

To become a well-rounded theatre student, students are required to participate in the production of the departmental plays as often as their schedule allows. Since there are so many different learning opportunities in the theatre it is though Practicum that they are each exposed to the whole production process. There are 2 different Practicum course numbers, one for performance and the other for the design, technical, and management aspects of theatre. The course numbers stay the same from semester to semester but the content; the plays produced changes each time. Minimally students are required to enroll in a Practicum course 3 times to graduate, however since students are expected to be involved in the production of each play (2 per semester) then they should be completing 4 Practicums each academic year. The maximum time a student can repeat this or any combination of THEA 4851 and THEA 4861 for credit is sixteen times.

THEA 4860 - Advanced Playwriting

Credits: (3)
This course will be an advanced study of dramatic structure and the process of playwriting, focusing on writing full length plays. Extensive writing is required. Prerequisite: THEA 3505 and instructor approval.

THEA 4861 - Performance Practicum

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Practical applied performance work to be registered for by students who are 1) cast in, 2) have a significant assistant directing responsibility, or 3) are the production director for a WSU production.

To become a well-rounded theatre student, students are required to participate in the production of the departmental plays as often as their schedule allows. Since there are so many different learning opportunities in the theatre it is though Practicum that they are each exposed to the whole production process. There are 2 different Practicum course numbers, one for performance and the other for the design, technical, and management aspects of theatre. The course numbers stay the same from semester to semester but the content; the plays produced changes each time. Minimally students are required to enroll in a Practicum course 3 times to graduate, however since students are expected to be involved in the production of each play (2 per semester) then they should be completing 4 Practicums each academic year. Prerequisite: Audition and permission of the instructor/director. The maximum time a student can repeat this or any combination of THEA 4851 and THEA 4861 for credit is sixteen times.

THEA 4890 - Cooperative Work Experience or Internship

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Actual participation with outside performing arts organizations in the day-to-day activity of a performing arts organization will introduce the student to the professional application of classroom skill and knowledge. Students will arrange their own opportunities by interview or audition. A journal of their experience and a letter from a supervisor are required for credit. Possibilities include but are not limited to: Repertory Dance Theatre, Ballet West or Utah Symphony (management or tech only), Utah Shakespeare Festival, Salt Lake Acting Company, and Pioneer Theatre Company. P Prerequisite: ermission of supervising instructor required for credit. May be repeated twice with a maximum of 3 credit hours.

THEA 4900 - Senior Project

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The Senior Project is an opportunity for graduating students to generate and realize a project in an area of primary interest. Typically, the project will reflect the student's emphasis in theatre arts (e.g., Acting, Directing, Design, etc.) and will demonstrate a culmination of previous study and may be a collaborative project. Prerequisite: Faculty approval of the proposal and a faculty advisor and the student must have completed a minimum of 90 credit hours.

THEA 4920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-6)
Consult the semester class schedule for the current offering under this number. The department will determine the specific title and credit authorized. The maximum time a student can repeat this class for credit is four times.

THEA 4950 - Theatre Festival Participation

Credits: (1)
Attend the Kennedy Center/American College Theatre Festival Region VIII annual meeting or other national theatre conference. Students will have the opportunity to attend theatre performances brought to the festival from throughout the region, display designs, audition, act in new 10-minute plays, and participate in workshops. Students may be responsible for their own registration fees and transportation, lodging and meals. Prerequisite: Audition and Permission of Instructor. May be repeated up to 4 times for credit.

UNIV 1105 - Foundations of College Success

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [1st Blk, 2nd Blk]

This course assists incoming students in making a successful transition to college. Topics include the purpose of higher education, goal setting, time management, study and test taking skills, critical thinking, stress management, academic advisement, career and major exploration, using campus resources, and understanding student responsibilities.

UNIV 2900 - Career Planning and Exploration

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

This course is a comprehensive approach to career development, planning, and selection. It assesses personal strengths and identification of job skills, and provides strategies for successfully entering the job market upon graduation. The course assists students to design their future through clarification of personal values and attitudes, identification of career interests and job skills, development of decision-making skills, and labor market information. These skills will help the student in making good career decisions and selecting a major course-of-study at Weber State University.

UNIV 3170 - First Year Experience Mentor Leadership Seminar

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

In this seminar course, FYE Peer Mentors are taught to effectively help Foundations of College Success (UNIV 1105)

students in making a successful transition to college. FYE Mentor requirements are available at www.weber.edu/fye/. Course enrollment limited to FYE Peer Mentors. May be repeated once for 2 more credits and additionally for zero credits.

~~WGS 1500 SS/DV - Introduction to Women's Studies~~

WEB 1010 - Exploring Web and User Experience

Credits: (3)
Typically taught:
Fall [Full Sem]

Capabilities and limitations of multimedia technology, evaluation of multimedia products, and creation of a multimedia portfolio.

WEB 1040 - Speedbuilding Keyboarding

Credits: (1)
Intensive computerized approach for improving speed and accuracy. Keyboarding 25 wpm recommended. The grade for this course is credit/no credit.

WEB 1400 - Web Design and Usability

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Understand the technicalities of the World Wide Web and the Internet. Plan, design, and implement a successful web site using current web technologies. Topics covered include audience analysis, information architecture, wireframing, prototyping, responsive design, usability and accessibility, testing, and analytics.

WEB 1501 TA - Document Creation Competency Exam

Credits: (.5)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

The computer competency exam for this course is a hands-on examination verifying a student's skills at document creation. Practice materials are available on the web for studying the competencies covered on the test. The one-hour exam must be completed during the semester registered. Two repeats of the exam may be taken during the semester with an additional fee charged. The grade for the course is credit/no credit. Call (801-626-7384) or email CIL@weber.edu for more information about the CIL requirement.

WEB 1502 TB - Content, Internet Identity, and Device Management Competency Exam

Credits: (.5)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

The computer competency exam for this course is a hands-on examination verifying a student's skills in content, internet identity, and device management. Practice materials are available on the web for studying the competencies covered on the test. The one-hour exam must be completed during the semester registered. Two repeats of the exam may be taken during the semester with an additional fee charged. The grade for this course is credit/no credit. Call (801-626-7384) or email CIL@weber.edu for more information about the CIL requirement.

WEB 1503 TC - Data Manipulation, Visualization, and Presentation Competency Exam

Credits: (.5)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

The computer competency exam for this course is a hands-on examination verifying a student's skills at data manipulation, visualization, and presentation. Practice materials are available on the web for studying the competencies covered on the test. The one-hour exam must be completed during the semester registered. Two repeats of the exam may be taken during the semester with an additional fee charged. The grade for the course is credit/no credit. Call (801-626-7384) or email CIL@weber.edu for more information about the CIL requirement.

WEB 1504 TD - Information Literacy Competency Exam

Credits: (.5)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

This exam verifies a student's information literacy competency. Web tutorials are available for students to study for this exam at their own pace. Sample questions and a practice test are available online. Students may also request assistance with studying for this exam at the library reference desk. The exam must be completed during the semester registered. Repeats of the exam may be taken during the semester with an additional fee charged. The grade for this course is credit/no credit. Call (801-626-7384) or email CIL@weber.edu for more information about the CIL requirement.

WEB 1700 TE - Introduction to Computer Applications

Credits: (3)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

Students will use current software to produce correctly formatted research papers with an accepted academic reference format, to produce effective employment documents such as a resume and a cover letter, and to use

multiple collaboration mediums to effectively share, communicate, and collaborate with their peers. Students will use currrent software/technology to manage content on local devices and in the cloud, to manage their web identity and presence according to e-safety, security, and privacy best practices and standards, and to manipulate multiple computing platforms to troubleshoot problems. Students will protect local devices from security threats including viruses, malware, and adware using current best practices and technologies. Students will also manipulate and analyze data using various software applications and basic programming, organize data using graphical methods such as charts and infographics, and create an effective, well-designed presentation. Keyboarding 25 wpm recommended.

WEB 1701 TA - Document Creation

Credits: (1)
Typically taught:
Fall [1st Blk, Online]
Spring [1st Blk, Online]
Summer [1st Blk, Online]

Students will use current software to produce correctly formatted research papers with an accepted academic reference format suchas MLA or APA. Students will use current software/technology to produce effective employment documents such as a resume and a cover letter. Students will also be able to use multiple collaboration mediums to effectively share, communicate, and collaborate with their peers. Keyboarding 25 wpm recommended.

WEB 1702 TB - Content, Internet Identity, and Device Management

Credits: (1)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

Students will use current software/technology to manage content on local devices and in the cloud. Students will manage their web identity and presence according to e-safety, security, and privacy best practices and standards. Students will manipulate multiple computing platforms and troubleshoot problems when they arise. Students will protect local devices from security threats including viruses, malware, and adware using current best practices and technologies. Keyboarding 25 wpm recommended.

WEB 1703 TC - Data Manipulation, Visualization, and Presentation

Credits: (1)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]
Summer [Full Sem, Online]

Students will manipulate and analyze data using various software applications and basic programming. Students will organize data using various graphical methods such as charts and infographics to appropriately convey information. Students will create an effective, well-designed presentation using current technologies. Keyboarding 25 wpm recommended.

WEB 2080 - Database Applications

Credits: (1)
Typically taught:
Fall [Full Sem Online]

Use of database software to design and create a database, including objects such as tables, queries, reports, and forms. Use of advanced management features such as macros, switchboards, referential integrity, and compound criteria. Prerequisite: WEB 1700 or WEB 1702/WEB 1502.

WEB 2200 - Image Editing

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

In this course you will be introduced to the fundamentals of a bitmap image editing program such as Adobe Photoshop. You will work primarily with digital photos and scanned images. The following image editing workflow will be learned: image capture, cropping, color correction, tonal adjustments, noise reduction, retouch, creative effects, and exporting. You will merge images into a collage using masking, blend modes, and adjustment layer techniques.

WEB 2210 - Computer Illustrations

Credits: (3)
Typically taught:
Fall [Full Sem]

In this course you will learn the fundamentals of a vector drawing program such as Adobe Illustrator. You will become skilled using the Pen Tool to create vector drawings and will learn various techniques for applying color, attributes, styles, and effects to your artwork. You will also create, edit, and format type to add to your artwork. At the end of the course you will create a project that integrates vector and bitmap images.

WEB 2300 - Video Editing

Credits: (3)
Typically taught:
Fall [Full Sem]

Using video editing software such as Adobe Premiere, students will combine many separate video recordings to create short digital movies. The following steps of the video production process will be completed: creating storyboards; shooting the video and recording the audio; capturing resources to the computer; importing resources into a video project; adding titles, graphics, transitions, and effects; and exporting the video to formats for the computer, television, DVDs, and the Web.

WEB 2410 - Web Animation I

Credits: (3)
Typically taught:
Fall [Full Sem]

This course introduces various web technologies that aid the creation of web animations for distribution on many platforms. Students discuss technical issues affecting animation such as speed and compression. Students will explore several current tools to create animations for the web.

WEB 2500 - User Experience Design

Credits: (3)
Typically taught:
Fall [Full Sem]

This course is designed to introduce students to the elements of user experience design for the web and mobile. The following topics will be covered: history of user experience, user centric design, agile development, user interface best practices for web and mobile applications, and analytics. Using current technologies and tools, students will create a basic web or mobile application.

WEB 2860 - Business Systems Technologies Practicum

Credits: (1-6)
Open to all students who meet the minimum requirements of the department for business-related on-the-job experiences. Approval of instructor and employer is required. Amount of credit will be determined by the department.

WEB 2920 - Short Courses, Workshops, Institutes, and Special Programs

Credits: (1-4)
Consult the class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript.

WEB 3000 - Advanced Word Processing

Credits: (1)
Typically taught:
Spring [Full Sem Online]

Use of word processing software including sorts, tables, columns, reports, merges, graphics, and macros. Prerequisite: WEB 1700 or WEB 1701/WEB 1501.

WEB 3070 - Advanced Spreadsheet Applications

Credits: (1)
Typically taught:
Fall [Full Sem, Online]
Spring [Full Sem, Online]

Use of spreadsheet software including macros, sorts, advanced formulas, graphs, and creative presentations. Prerequisite: WEB 1700 or WEB 1703/WEB 1503.

WEB 3090 - Digital Presentations

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem Online]

Use of electronic slide presentation software to create slides consisting of short paragraphs, bulleted lists, graphic images, movie clips, audio clips, data charts, diagrams, and imported data from other software. Emphasis will also be placed on professional quality presentation design and animation of slide elements. Prerequisite: WEB 1700 or WEB 1701/WEB 1501 and WEB 1702/WEB 1502 and WEB 1703/WEB 1503.

WEB 3100 - Digital Publishing

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Use of professional page layout software such as Adobe InDesign. Topics include analyzing, designing, creating, and editing digital publications. Prerequisite: WEB 2200.

WEB 3300 - Motion Graphics

Credits: (3)
Typically taught:
Spring [Full Sem]

In this course you will use Adobe After Effects to create motion graphics and visual effects for film and video. You will learn how to create sophisticated motion graphics using animated text and objects, compositing videos and images, and adding visual effects to video. You will learn how to set keyframes on a timeline and work with transform properties, motion paths, rotoscoping masks and effects, developing a solid foundation in this increasingly popular and versatile software. Prerequisite: WEB 2200 and WEB 2300 or approval of instructor.

WEB 3400 - Advanced Web Development

Credits: (3)
Typically taught:
Fall [Full Sem]

With a basic foundation in both client side web design and databases, students will move to server side web development. Using server side technologies such as PHP and MySQL student will build and plan dynamic web sites. Students will also gain a better understanding of HTML, CSS, web usability, and visual design. Prerequisite: WEB 1400 or equivalent.

WEB 3410 - Web Animation II

Credits: (3)
Typically taught:

Spring [Full Sem]

Students will explore native web technologies that are useful for animation including JavaScript, SVG, the HTML canvas element and CSS. Using these native web technologies, students will design and produce advanced multimedia projects applicable for business and industry. These projects will be produced by combining web animation, graphics, video, and text into interactive web and mobile multimedia presentations. Prerequisite: WEB 2410.

WEB 3500 - User Interface Prototyping & Design

Credits: (3)
Typically taught:
Spring [Full Sem]

Students will learn the elements of user interface design as it applies to front-end web development and software engineering. Students will identify best practices in user interface design. The following topics will be covered: wire-framing, color palettes, typography, information architecture, contrast, uniformity, and responsive design techniques. Using current technologies and tools, students will wireframe, design, and program effective interfaces. Prerequisite: WEB 2500 or CS 2335, WEB 1400 or CS 1400, or permission from instructor.

WEB 4800 - Independent Research

Credits: (1-4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Directed research and study on an individual basis. Prerequisite: Permission of instructor. May be repeated up to 6 credit hours.

WEB 4860 - Internship

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Students work in the web and user experience field. The student fulfills objectives that have been approved by a business/organization supervisor and a faculty advisor. Must have Senior standing or approval of instructor.

WEB 4890 - Portfolio Design

Credits: (3)
Typically taught:
Spring [Full Sem]

In this project-based course students will design a web portfolio that features their work. Students will also create several portfolio pieces related to web and user experience design. Prerequisite: WEB 2210, WEB 3300, WEB 3110 .

WEB 4920 - Short Courses, Workshops, Institutes, and Special Programs

Credits: (1-4)
Consult the semester class schedule for the current offering under this number. The specific title and credit authorized will appear on the student transcript.

WGS 1500 SS/DV - Introduction to Women and Gender Studies

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

An introduction to the discipline of ~~women's~~Women and Gender studies using multicultural sources based on current feminist scholarship. In this course, we will examine the diversity of women's experiences, perspectives, critiques, and theories across the categories of race, ethnicity, ~~and~~ class, and gender.

WGS 2500 SS/DV - Human Rights in the World

Credits: (3)
Typically taught:
Fall [Full Sem]

Human rights (HR) are a powerful idea in the modern world, but also the focus of controversy. This course will provide students with a broad foundation in human rights including the ability to analyze HR in domestic and int'l law, examine prevention and prosecution techniques, and debate current issues at home and abroad. Emphasis will be placed on women and gender studies (including LGBT issues), vulnerable populations such as refugees, and atrocity crimes.

WGS 2900 - Topics in Women's Studies

Credits: (1-3)
Varied topics as described in the semester schedule. Topics will be drawn from issues related to women's studies. May be repeated 3 times up to 9 credits with different course content.

WGS 3050 - Introduction to Feminist Theories 1700 -- Present

Credits: (3)
Typically taught:
Spring [Full Sem]

An introduction to the study of feminist theories from the 18th Century to the present. Students will study historical accounts of feminism by looking at primary sources written by influential feminists, as well as theoretical treaties on different kinds of feminism, from liberal feminism, to radical feminism, socialist feminism, black feminism, multicultural or global feminism, and so on. The class will be taught using collaborative learning and will rely on class discussion and interaction, rather than traditional lecture format.

WGS 3090 - Gender and Communication

Credits: (3)
This course is designed to help students understand the influence that communication has upon the shaping of gender and the influence that gender has in shaping communication interactions. Students become aware of, sensitive to, and more experienced in the issues, implications and skills necessary to successfully and meaningfully communicate with males and females, and about males and females, in a wide range of communication contexts. Prerequisite: Junior or Senior standing required or instructor permission. Cross listed with COMM 3090.

WGS 4050 - Research Methodologies

Credits: (2)
Typically taught:
~~**Fall [Full Sem]**~~**Not currently being offered**

Designed to introduce students to a variety of approaches to research in women's studies. Students will consider some of the assumptions which underlie research methodologies which may limit our knowledge about women as research subjects and as researchers themselves. Prerequisite: WGS 3050 (or equivalent coursework) or permission of instructor.

WGS 4060 - Research Project

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Directed research project including literature survey and completion of study in area of student's choosing, guided by faculty mentor(s) from Women's Studies program (and, where appropriate, student's major department.) Prerequisite: WGS 4050 (or equivalent coursework) and permission of instructor.

WGS 4150 - Research Methodologies

Credits: (3)
Typically taught:
Spring [Full Sem]

Designed to introduce students to a variety of approaches to research in women and gender studies. Students will consider some of the assumptions which underlie research methodologies which may limit our knowledge about women as research subjects and as researchers themselves. Prerequisite: WGS 3050 (or equivalent coursework) or permission of instructor.

WGS 4250 - Community-Based Research/Internship

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

The purpose of this research/internship is to provide students with community experiences related to issues of women and gender. Students in this practicum will apply knowledge skills learned throughout their course of study in either the Women and Gender Studies minor or BIS. For this research/internship students will be required to check in with their course faculty supervisor weekly during the semester. Prerequisite: WGS 4050.

WGS 4830 - Directed Readings

Credits: (1-3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Directed individual readings in the general area of women's studies. Specific topic selected in consultation with instructor; amount of material to be read determined at discretion of instructor, based on level of topic and degree of difficulty of reading and consistent with any existing university and departmental guidelines. Prerequisite: WGS 1500 (or equivalent coursework) and permission of instructor. May be repeated 5 times up to 6 credit hours.

WGS 4860 - Internship in Women's Studies

Credits: (1-2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Opportunity for service learning with campus/community organizations involved with women's issues, applying principles learned in women's studies coursework to bring about beneficial social change. Prerequisite: completion of WGS 4050 (or equivalent coursework) and permission of the instructor. This course may be repeated once up to two credits toward the minor. When taken to fulfill a program requirement, students must register for 2 credit hours.

WGS 4900 - Topics in Women's Studies

Credits: (1-3)
Varied topics as described in the semester schedule. Topics will be drawn from issues related to women's studies. This course may be taken 3 times up to 9 credits with different course content.

WGS 4990 - Senior Seminar

Credits: (2)
Typically taught:
Spring [Full Sem]

Capstone course including discussion and synthesis of major issues in women's studies. Students will discuss specific projects (completed or in progress) related to their career goals; these projects may have an academic or service orientation. Prerequisite: completion of the women's studies core (or equivalent) courses and permission of the instructor.

WSU 1450 CA/HU - Perspectives in Creative Arts and Humanities

Credits: (3-5)

WSU 1460 SS/CA - Perspectives in Social Science and Creative Arts

Credits: (3-5)

WSU 1470 PS/CA - Perspectives in Physical Sciences and Creative Arts

Credits: (3-5)

WSU 1480 CA/LS - Perspectives in Creative Arts and Life Sciences

Credits: (3-5)

WSU 1560 SS/HU - Perspectives in Social Science and Humanities

Credits: (3-5)

WSU 1570 PS/HU - Perspectives in Physical Sciences and Humanities

Credits: (3-5)

WSU 1580 HU/LS - Perspectives in Humanities and Life Sciences

Credits: (3-5)

WSU 1670 SS/PS - Perspectives in Social Science and Physical Science

Credits: (3-5)

WSU 1680 SS/LS - Perspectives in Social Science and Life Science

Credits: (3-5)

WSU 1780 PS/LS - Perspectives in Physical Sciences and Life Sciences

Credits: (3-5)

WSU 2120 EN/AI - Perspectives in Composition and American Institutions

Credits: (3-5)

WSU 2130 EN/QL - Perspectives in Composition and Quantitative Literacy

Credits: (3-5)

WSU 2140 EN/CA - Perspectives in Composition and Creative Arts

Credits: (3-5)

WSU 2150 EN/HU - Perspectives in Composition and Humanities

Credits: (3-5)

WSU 2160 EN/SS - Perspectives in Composition and Social Sciences

Credits: (3-5)

WSU 2170 EN/PS - Perspectives in Composition and Physical Sciences

Credits: (3-5)

WSU 2180 EN/LS - Perspectives in Composition and Life Sciences

Credits: (3-5)

WSU 2230 AI/QL - Perspectives in American Institutions and Quantitative Literacy

Credits: (3-5)

WSU 2240 AI/CA - Perspectives in American Institutions and Creative Arts

Credits: (3-5)

WSU 2250 AI/HU - Perspectives in American Institutions and Humanities

Credits: (3-5)

WSU 2260 AI/SS - Perspectives in American Institutions and Social Science

Credits: (3-5)

WSU 2270 AI/PS - Perspectives in American Institutions and Physical Sciences

Credits: (3-5)

WSU 2280 AI/LS - Perspectives in American Institutions and Life Sciences

Credits: (3-5)

WSU 2340 QL/CA - Perspectives in Quantitative Literacy and Creative Arts

Credits: (3-5)

WSU 2350 QL/HU - Perspectives in Quantitative Literacy and Humanities

Credits: (3-5)

WSU 2360 QL/LS - Perspectives in Quantitative Literacy and Life Sciences

Credits: (3-5)

WSU 2370 QL/PS - Perspectives in Quantitative Literacy and Physical Sciences

Credits: (3-5)

WSU 2380 QL/SS - Perspectives in Quantitative Literacy and Social Science

Credits: (3-5)

ZOOL 1010 LS - Animal Biology

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [~~1st Blk, 2nd Blk,~~Full Sem Online]

A non-major's introduction to cell biology, genetics, evolution, ecology, and animal diversity with emphasis on diversity of animal architecture and life strategies in relation to the diverse environments of Earth. The overriding theme is the process of evolution, its basis, and its implications for all animals, including humans. Three lecture/discussion hours a week.

ZOOL 1020 LS - Human Biology

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [~~1st Blk, 2nd Blk,~~Full Sem Online]

Survey course for non-science majors. Course content includes basic structure and function of the human body, homeostasis, heredity, human evolution, and ecology. Implications for personal health, bioethical and environmental issues and the impact of each of these on society will be examined. Three lecture/discussion hours a week.

ZOOL 1030 LS - The Nature of Sex

Credits: (3)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

This course will present an overview of sexual reproduction in animals, including humans. It provides evolutionary, ecological, and behavioral perspectives on sex. Topics cover the value of sex for generating variation among individuals, breeding patterns in nonsocial and social species, mating systems such as monogamy and polygamy, and reproductive behavior. The relevance of this material to human reproduction is addressed.

ZOOL 1110 LS - Principles of Zoology I

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem] ~~when available~~only in select summers

A science major's introduction to the study of cell biology, ecology, evolution and genetics~~,~~ /inheritance~~, and evolutionary processes. In addition, the diversity~~. The nature and ~~comparative biology~~practice of ~~non-vertebrate animals will be examined.~~science is also emphasized and basic skills in data collection, analysis, and presentation are introduced. Three hours of lecture and ~~one 2-hour~~two hours of lab ~~a~~per week.

ZOOL 1120 - Principles of Zoology II

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem~~, 1st and 2nd Blk when available]~~]
Summer [Full Sem] only in select summers

A major's introduction to cellular processes and the diversity and comparative biology of vertebrate animals. Three hours of lecture and one 2-hour lab a week. Prerequisite: ZOOL 1110 or permission of instructor.

ZOOL 1370 LS - Principles of Life Science

Credits: (3)
Typically taught:
Spring [Full Sem]

A survey course recommended for elementary education majors. Course content includes cells, cell chemistry, genetics, plant and animal anatomy, plant and animal classification, physiology, immune systems, evolution, and ecology. Unifying concepts of all living things will be emphasized. Two lecture hours and one 3-hour lab a week. Cross-listed with BTNY 1370 and MICR 1370.

ZOOL 1990 - Zoology Orientation

Credits: (1)
Typically taught:
Not currently offered

This seminar consists of faculty, staff, and professional presentations which will inform students of potential research opportunities in the department and career possibilities in the discipline. One hour a week. This course should be taken concurrently with ZOOL 1110 or ZOOL 1120.

ZOOL 2100 - Human Anatomy

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Systematic study of the organs of the human body with cadaver-based laboratory. ZOOL 1020 or HTHS 1101 strongly recommended prior to enrollment. First semester students are discouraged from registering. Three hours of lecture and one 2-hour lab per week.

ZOOL 2200 LS - Human Physiology

Credits: (4)
Typically taught:
Fall [Full Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [~~Full Sem Online,~~ 1st Blk, 2nd Blk, Full Sem Online]

Functional consideration of the human body. Recommended for all curricula for which a basic understanding of body functions is required. Three lecture hours and one 2-hour lab a week.

ZOOL 2800 - History of Life Sciences

Credits: (3)
Typically taught:
Not currently offered

Examination of the ways in which interaction among personalities, instrumentation, and ideas shape the development of biology - past, present, and future. Three lecture hours a week.

ZOOL 2900 - Topics in Zoology

Credits: (1-4)
Typically taught:
Not currently offered

Variable topics related to zoology as announced in the class schedule; may include medical entomology, biostatistics, primatology, etc., and may be taught with a laboratory section. Prerequisite: ZOOL 1110 and ZOOL 1120, or approval of instructor. May be repeated 3 times with a maximum of 4 credit hours.

ZOOL 2920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Typically taught:
Not currently offered

Consult class schedule for offerings under this number. The specific title and credit authorized will appear on the student transcript. Prerequisite: vary and are determined by instructor. May be repeated 5 times with a maximum of 6 credit hours.

ZOOL 3099 - Teaching the Human Anatomy Laboratory

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The purpose of this course is to introduce students to human dissection and the teaching of human cadaver anatomy. In so doing, we will (1) provide a uniform laboratory experience for Zoology 2100 (Human Anatomy), (2) teach the students what and how to teach the human anatomy laboratories, (3) provide the students with the opportunity to teach their peers thus providing experience at public speaking, and, (4) reinforce the knowledge base of the students (the power of knowing something by teaching something). Prerequisite: Successful completion of ZOOL 2100 with a grade of B+ or higher; completion of interview process, and instructor approval.

ZOOL 3100 - Advanced Human Anatomy

Credits: (3)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The purpose of this course is to further expose and train students in human cadaver dissection and the teaching of human cadaver anatomy. In so doing, we will (1) provide a uniform laboratory experience for Zoology 2100 (Human Anatomy), (2) teach these advanced students what and how to mentor their junior colleagues in teaching the human anatomy laboratories, (3) provide these advanced students with the opportunity to teach both the 2100 students and other student instructors, thus further improving their public speaking, (4) place these advanced students in a more

senior leadership position among their lab instructor peers, and (5) further reinforce the knowledge base of the students (the power of knowing something by teaching something).

Due to the complex and pedagogical nature, this course can be taken up to 4 times. Each semester, the focus of the lecture portion of this course will vary from: histological anatomy, developmental anatomy, evolution and pathological/clinically-relevant anatomy. In addition, the prosection assignments each repeated semester will increase in complexity, difficulty and leadership demand. The student instructor experience is maximized by their ability to repeat this unique course by allowing them to capitalize on and improve their past efforts in both the teaching environment and prosection assignment. Prerequisite: Successful completion of ZOOL 2100 with a grade of B+ or higher, successful completion of ZOOL 3099, completion of interview process, and instructor approval.

ZOOL 3200 - Cell Biology

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

The study of the molecular composition of cells, their evolutionary origins, structural organization, functional variation, and regulatory control. Three lecture hours and one 3-hour lab a week. Prerequisite: ZOOL 1110 and either the CHEM 1110 and CHEM 1120 series or the CHEM 1210 and CHEM 1220 series, or approval of instructor.

ZOOL 3300 - Genetics

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

Principles and concepts of genetics with with an emphasis on animals, including humans. Includes classical genetics, molecular genetics, cytogenetics, and population genetics. Three lecture hours and one 3-hour lab a week. Prerequisite: ZOOL 1110 and MATH 1050 (or equivalent), or approval of instructor.

ZOOL 3340 - Information Resources in the Life Sciences

Credits: (2)
Typically taught:
Not currently offered

A practical introduction to the literature and information resources of the life sciences. Students will expand their research skills and be able to develop effective research strategies to find and synthesize information available in academic libraries. Two lecture hours a week. Prerequisite: ENGL 2010. Cross listed in Botany, Library Sciences and Microbiology.

ZOOL 3450 - Ecology

Credits: (4)
Typically taught:
Fall [Full Sem]

Spring [Full Sem]

Study of the relationships of organisms and their environment. Three lecture hours and one 3-hour lab or field trip a week. Prerequisite: ZOOL 1110 and ZOOL 1120, or approval of instructor. Writing intensive course.

ZOOL 3470 - Zoogeography

Credits: (3)
Typically taught:
Spring [Full Sem] alternate

The study of factors controlling the distribution of animals with emphasis on the vertebrates. Three lecture hours a week. Prerequisite: ZOOL 1110 and ZOOL 1120, or approval of instructor.

ZOOL 3500 - Conservation Biology

Credits: (3)
Typically taught:
~~Spring~~Fall [Full Sem] alternate

The study of how biological principles and concepts are used in conservation. Major emphasis on the preservation and management of biodiversity. Connections between biological and societal issues are explored. Three lecture hours a week. Prerequisite: ZOOL 1110 and ZOOL 1120, or approval of instructor.

ZOOL 3570 - Foundations of Science Education

Credits: (3)
Typically taught:
Spring [Full Sem]

A thorough investigation of research in science learning and curricular standards at the state and national levels. Foundations of the philosophy of science and scientific inquiry as applicable to science teaching at the secondary level. This course serves as a foundation to a preservice science teacher's education coursework. Cross-listed with BTNY, CHEM, GEO, MICR, & PHYS 3570.

ZOOL 3600 - Comparative Physiology

Credits: (4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]

A comparative and evolutionary approach to the study of the way animals function in a variety of environments. Three lecture hours and one three-hour lab a week. Prerequisite: ZOOL 1110 and ZOOL 1120, or approval of instructor.

ZOOL 3720 - Evolution

Credits: (3)
Typically taught:
Fall [Fall Sem, Full Sem Online]
Spring [Full Sem, Full Sem Online]
Summer [Full Sem Online]

The patterns and processes involved in changes in natural populations. Three lecture hours a week. Prerequisite: ZOOL 1110 and ZOOL 1120, or approval of instructor.

ZOOL 3730 - Population Biology

Credits: (3)
Typically taught:
Not currently offered

Principles of genetics and ecology at the population level. Three lecture hours a week. Prerequisite: ZOOL 1110, ZOOL 1120, and ZOOL 3300, or approval of instructor.

ZOOL 4050 - Comparative Vertebrate Anatomy

Credits: (4)
Typically taught:
Spring [Full Sem] alternate

Dissection-based, in-depth comparative study of vertebrate functional anatomy. Three lecture hours and one 3-hour lab a week. Prerequisite: ZOOL 1110 and ZOOL 1120, or approval of instructor.

ZOOL 4100 - Vertebrate Embryology

Credits: (4)
Typically taught:
Spring [Full Sem] alternate

A study of the principles and processes of embryological development in animals. Three lecture hours and one 3-hour lab a week. Prerequisite: ZOOL 1110 and ZOOL 1120, or approval of instructor.

ZOOL 4120 - Histology

Credits: (4)
Typically taught:
Fall [Full Sem] alternate

Microanatomical study of the structure and function of vertebrate tissues and organs, with an emphasis on human systems. Prerequisite: ZOOL 1110, ZOOL 1120, either ZOOL 2100 or ZOOL 4050, or approval of instructor.

ZOOL 4210 - Advanced Human Physiology

Credits: (4)
Typically taught:
~~**Fall [Full Sem]**~~
Spring [Full Sem] alternate

A study of vertebrate physiological processes with human emphasis, focusing on cardiovascular, digestive, and neuromuscular systems. Three lecture hours and one 3-hour lab a week. Prerequisite: ZOOL 1110, ZOOL 1120, and ZOOL 2200, or approval of instructor; a minimum of one year of (preferably Organic) Chemistry.

ZOOL 4220 - Endocrinology

Credits: (4)
Typically taught:
Fall [Full Sem] alternate

The comparative study of the function of the cells, tissues, glands, and organs that secrete hormones and how these hormones affect the physiology of organisms, from invertebrates to vertebrates. Three lecture hours and one 3-hour lab a week. Prerequisite: ZOOL 1110 and ZOOL 1120, and either ZOOL 2200 or ZOOL 3600, or approval of instructor.

ZOOL 4250 - Radiation Biology

Credits: (4)
Typically taught:
Not currently offered

The study of harmful effects of radiation and practical applications of radioactive tracer techniques to biological problems. Three lecture hours and one 3-hour lab a week. Prerequisite: ZOOL 1110, ZOOL 1120, and beginning courses in chemistry and physics, or approval of instructor.

ZOOL 4300 - Molecular Genetics

Credits: (4)
Typically taught:
~~**Spring**~~**Fall [Full Sem] alternate**

A laboratory-based investigation of the molecular properties of the genetic material, including its structure, expression and evolution. Emphasis on applications and the genetics of humans. Three lecture/lab hours and one 3-hour lab per week. Prerequisite: ZOOL 3300, CHEM 1210 and CHEM 1220, or approval of instructor.

ZOOL 4350 - Animal Behavior

Credits: (4)
Typically taught:
~~**Spring**~~**Fall [Full Sem] alternate**

Principles and concepts of animal behavior emphasizing evolution of behavior, and the role of behavior in adaptations of animals to their environment. Three lecture hours and one 3-hour lab a week. Prerequisite: ZOOL 1110 and ZOOL 1120, or approval of instructor.

ZOOL 4470 - Wildlife Ecology and Management

Credits: (4)
Typically taught:
Fall [Full Sem] alternate

Principles of wildlife ecology and the techniques of wildlife population analysis and manipulation. Three lecture hours and one 3-hour lab a week. Prerequisite: ZOOL 1110, ZOOL 1120, and ZOOL 3450, or approval of instructor. Writing intensive course.

ZOOL 4480 - Aquatic Ecology

Credits: (4)
Typically taught:
Fall [Full Sem] alternate

Study of the physical, chemical, and biological interactions of freshwater and marine ecosystems. Three lecture hours and one 3-hour lab a week. Prerequisite: ZOOL 1110, ZOOL 1120, and ZOOL 3450, or approval of instructor. Writing intensive course.

ZOOL 4490 - Tropical Marine Ecology

Credits: (4)
Typically taught:
Not currently offered

Study of the physical, chemical and biological interactions of tropical marine ecosystems, including open oceans, mangrove forests, seagrass beds, and coral reefs. Intensive, three-week, full-time field course taught in the tropics. Independent projects required. Must be able to snorkel or SCUBA dive. Prerequisite: ZOOL 1110, 1120, and 3450, or approval of instructor.

ZOOL 4500 - Parasitology

Credits: (4)
Typically taught:
Not currently offered

Survey of representative external and internal parasites of humans, domestic animals, and wildlife. Emphasis is on their ecology and epidemiology. Three lecture hours and one 3-hour lab a week. Prerequisite: ZOOL 1110 and ZOOL 1120, or approval of instructor.

ZOOL 4570 - Secondary School Science Teaching Methods

Credits: (3)
Typically taught:
Fall [Full Sem]

Acquaintance and practice with various teaching and assessment methods. Development of science curricula including lesson and unit plans. It is recommended that this course be completed immediately before student

teaching. Prerequisite: Admission to the Teacher Education Program. Cross-listed with BTNY, CHEM, GEO, MICR, & PHYS 4570.

ZOOL 4600 - Protozoology

Credits: (4)
Typically taught:
Not currently offered

Structure, function and evolutionary relationships of unicellular organisms. Three lecture hours and one 3-hour lab a week. Prerequisite: ZOOL 1110 and ZOOL 1120, or approval of instructor.

ZOOL 4640 - Entomology

Credits: (4)
Typically taught:
Summer [Full Sem]

Classification and biology of insects as well as their economic importance. Three lecture hours and one 3-hour lab a week. Prerequisite: ZOOL 1110 and ZOOL 1120, or approval of instructor.

ZOOL 4650 - Ichthyology

Credits: (4)
Typically taught:
~~Fall~~Spring [Full Sem] alternate

Classification, ecology and biology of fishes and emphasis on local freshwater forms. Field trips required. Three lecture hours and one 3-hour lab a week. Prerequisite: ZOOL 1110 and ZOOL 1120, or approval of instructor.

ZOOL 4660 - Herpetology

Credits: (4)
Typically taught:
Fall [Full Sem] alternate

Structure, function and evolutionary relationships of amphibians and reptiles. Three lecture hours and one 3-hour lab a week. Prerequisite: ZOOL 1110 and ZOOL 1120, or approval of instructor.

ZOOL 4670 - Ornithology

Credits: (4)
Typically taught:
Spring [Full Sem] alternate

The biology of birds including form, function, behavior and ecology. Lab emphasizes identification of Utah species. Three lecture hours and one 3-hour lab or a field trip each week. Prerequisite: ZOOL 1110 and ZOOL 1120, or approval of instructor.

ZOOL 4680 - Mammalogy

Credits: (4)
Typically taught:
~~Fall~~Spring [Full Sem] alternate

An introduction to the mammals with special reference to species found in Utah. Three lecture hours and one 3-hour lab a week. Prerequisite: ZOOL 1110 and ZOOL 1120, or approval of instructor.

ZOOL 4800 - Problems in Zoology

Credits: (1-4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Directed individual research in zoology guided by faculty member. Prerequisite: ZOOL 1110 and ZOOL 1120, and approval of instructor. No more than 4 hours of ZOOL 4800 may count toward the major. May be repeated up to 12 credit hours for university credit.

ZOOL 4820 - Human Physiology Laboratory Teaching Assistant

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [1st Blk, 2nd Blk]

Students selected to be Laboratory Teaching Assistants (Lab TA) will help in the Human Physiology laboratories. Under the teacher's supervision, they (two teaching assistants per class) will address classes of up to 30 students. They will help set up the instruments, present background information, run the experiments and assess the student's learning by giving and grading short quizzes. Prerequisite: Students will need to have taken the Human Physiology class (ZOOL 2200) and laboratory (ZOOL 2200L) and obtained a minimum of a B+ in the class. Students will need to apply for one of the positions. Approval to be a Laboratory Teaching Assistant will be at the teacher's descretion.

ZOOL 4830 - Readings in Zoology

Credits: (1-4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Directed individual readings in the general area of zoology. Specific topic selected in consultation with faculty member. Prerequisite: ZOOL 1110 and ZOOL 1120, and approval of instructor. ZOOL 4830 and ZOOL 4890 do not

count toward the major but may count toward the upper division credit requirements for the Bachelor of Science degree. May be repeated up to 12 credit hours for university credit.

ZOOL 4890 - Cooperative Work Experience

Credits: (1-4)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

Academic credit for employment in career area related to zoology guided by specific written contract design by student, employer, and Zoology Department Chair. Open to all students; requires approval by Department Chair. ZOOL 4830 and ZOOL 4890 do not count toward the major but may count toward the upper division credit requirements for the Bachelor of Science degree. May be repeated up to 12 credit hours for university credit.

ZOOL 4900 - Topics in Zoology

Credits: (1-4)
Typically taught:
Check with Department

Variable topics related to zoology as announced in the class schedule; may include medical entomology, biostatistics, primatology, etc., and may be taught with a laboratory section. Prerequisite: ZOOL 1110 and ZOOL 1120, or approval of instructor. May be repeated up to 12 credit hours for university credit.

ZOOL 4920 - Short Courses, Workshops, Institutes and Special Programs

Credits: (1-4)
Typically taught:
Not currently offered

Consult class schedule for offerings under this number. The specific title and credit authorized will appear on the student transcript. Prerequisite: vary and are determined by instructor. May be repeated for a maximum of 4 credit hours.

ZOOL 4950 - Field Zoology

Credits: (1-3)
Typically taught:
Check with Department

Study conducted on an extended, supervised field trip. Prerequisite: ZOOL 1110 and ZOOL 1120, or approval of instructor. May be repeated for a maximum of 3 credit hours.

ZOOL 4970 - Thesis

Credits: (2)
Typically taught:
Fall [Full Sem]
Spring [Full Sem]
Summer [Full Sem]

An extended, individual research project planned and completed under faculty supervision. Normally, two semesters of research (ZOOL 4800) will precede registration for this course. Culmination is an oral and written report of results obtained, with the final draft of the latter being due two weeks prior to the beginning of final exam week. Instructor approval required. Prerequisite: thesis committee approved research proposal, advanced class standing, and ZOOL 1110 and ZOOL 1120.

ZOOL 4980 - Research Design

Credits: (2)
Typically taught:
Not currently offered

A basic course in the design and analysis of scientific experiments. Two lecture hours a week. Prerequisite: minimum of two upper division Zoology courses.

ZOOL 4990 - Seminar

Credits: (1)
Typically taught:
Fall [Full Sem]
Spring ~~[Full Sem]~~
~~Summer~~ [Full Sem]

Presentations and discussion concerning a specific topic in zoology. One semester required. May be repeated to fulfill one additional credit of Zoology elective hours if taken beyond the one credit hour required for the major. One hour a week. Prerequisite: ZOOL 1110 and ZOOL 1120, or approval of instructor. May be repeated up to 3 credit hours for university credit.

ZOOL 5030 - Zoology for Teachers

Credits: (1-4)
Typically taught:
Not currently offered

Science content course for teachers in the MEd Science Emphasis Program. To register, select another Zoology course and develop a contract detailing additional work required for graduating credit. Course may be repeated. Contract must be approved by instructor, Department Chair, and Director of the Master of Education Program.