

Course Descriptions

ACCOUNTING (ACCT)

ACCT 2010 Accounting Principles (3)
This course provides a thorough study of basic accounting principles. The accounting cycle is introduced using an appropriate mix of conceptual and procedural problems. A real-world problem using computer applications is also covered. This is a basic course, which aids in building a foundation for financial analysis and decision-making. (Fall, Spring)

ACCT 2020 Managerial Accounting (3)
A study of the accumulation and flow of managerial accounting information and its impact on decisions within a business entity. Emphasizes cost behavior, cost-volume profit analysis, and management's use of quantitative tools for planning and control. (Fall, Spring)

ACCT 2360 Business Law I (3)
In this class students study the origins of the law, parts of the U.S. Constitution, which apply to businesses; the court system, how a lawsuit begins and progresses, torts, contracts, personal property, bailment, and the UCC Article 2 on sales. (Fall, Spring)

ACCT 3010 Financial Accounting I (3)
Comprehensive core of accounting knowledge essential to the student entering one of the several areas of the accounting profession. Study of generally accepted accounting principles, the conceptual framework, and financial accounting reporting requirements. Includes in-depth conceptual analysis of the various financial statement elements. Prerequisite: ACCT 2010, acceptance into advanced standing or approved minor in department (Fall, Spring)

ACCT 3020 Financial Accounting II (3)
Continuation of ACCT 3010. Prerequisite: ACCT 3010 and acceptance into advanced standing. (Fall, Spring)

ACCT 3100 Accounting Information Systems (3)
Students, working in teams, will understand the "traditional" and "state of the art" AIS knowledge. Students will better understand modeling business processes, flowcharting and diagramming techniques, business information and information process rules, risks, and controls, and AIS designing techniques. Advanced Microsoft Access and QuickBooks Pro projects. (Fall, Spring)

ACCT 3200 Tax I (3)
A study of current federal income tax laws and preparation of individual income tax rules; Emphasis is on analyzing and interpreting tax rules; developing the ability to research tax rules. Prerequisite: acceptance into advanced standing or approved minor in department. (Fall, Spring)

ACCT 3300 Cost (3)
Analysis of costs in a business organization. Includes cost development in both service and manufacturing situations. Areas discussed include: job order costing, process costing, standard costing and variance analysis. Prerequisites: ACCT 2020, acceptance into advanced standing or approved minor in the department. (Fall, Spring)

ACCT 3400 Auditing I (3)
This is the first of three semester 3-credit hour courses dealing with auditing: Auditing I, Auditing II, and Fraud Examination. The latter two courses are graduate level courses. This course will study auditing standards, internal accounting control systems, compliance and substantive audit procedures applied to accounts and transaction cycles, and audit reports. Review of the auditing concepts of materiality and risk, types of evidence and documentation, and an

introduction to the ethical and legal responsibilities of the Certified Public Accountant. Prerequisite: ACCT 3020. (Fall, Spring)

ACCT 4030 Advanced Accounting (3)
Advanced accounting topics, including business combinations, foreign currency translation, partnership accounting, SEC accounting. Prerequisite: ACCT 3020 and advanced standing. (Fall and Spring)

ACCT 4200 Tax II (3)
A study of current federal income tax laws as they apply to corporations. Also includes the preparation of the tax forms for filing a corporate tax return. Prerequisites: ACCT 3200 and advanced standing. (Fall, Spring)

ACCT 4890 Internship (P/F) (Fall, Spring) (1-3)

ACCT 4900 Special Topics (Fall, Spring) (1-3)

ACCT 6000 Foundations of Accounting (3)
This course provides an accelerated overview of both the theories and methods of accounting in support of the common body of knowledge core required for all MBA students not having previous business coursework. (As needed)

ACCT 6100 Accounting for Decision-Making & Control (3)
This course reviews the development and use of management accounting information systems in planning and control activities. Using case studies of actual companies, its focus is on new management accounting practices adopted by innovative companies around the world. Prerequisite: Acceptance into Masters of Accountancy program or MBA program. (Fall)

ACCT 6240 Estate and Gift Taxes (3)
A study of taxation of estates and gifts. Prerequisite: ACCT 4200 and acceptance into the Macc program (Spring)

ACCT 6260 Taxes for Pass Through Entities (3)
A study of taxation for partnerships. The course will include choice of entity considerations. Prerequisite: ACCT 4200 and acceptance into the Macc program (Fall)

ACCT 6280 Fiduciary Income Tax (3)
Accounting theory and practices of the federal income taxation laws, rules, and regulations to the income taxation of estates and trusts. Prerequisites: Acceptance into Master of program and ACCT 3200 (Spring every other year and Summer)

ACCT 6320 Advanced Cost Accounting (3)
Topics include balanced scorecard, cost allocation, profitability analysis, process costing, quality, theory of constraints, capital budgeting, transfer pricing, and performance measurement. Prerequisite: ACCT 3300 and acceptance into Masters of Accountancy program. (Spring)

ACCT 6360 Business Law II (3)
To enhance their knowledge of business law, students will study negotiable instruments; secured transactions; debtor- creditor rights and duties; bankruptcy; agency; employment law; insurance law; wills, trusts, and estates; organizational structures such as sole proprietorships, partnerships, limited liability companies, corporations, and franchises; federal securities laws; and accountant's legal liability. Prerequisites: admission to Masters of Accountancy Program (Fall)

ACCT 6400 Auditing II (3)
Auditing II is a continuation of the Auditing I course. The course focuses on the assertion-based audit approach theory, an introduction to audit sampling theory and application, in-depth coverage of the theory of audit program generation, a review of required communications for the vast array of attest and non-attest

functions, and a sophisticated and complex audit case activity with over 400 Microsoft Excel files. The student will improve automated work paper preparation skills and other required auditing communication skills with responsible parties. Prerequisites: ACCT 3400 and acceptance into the Master of Accounting. (Spring)

ACCT 6450 Fraud Examination (3)
Fraud examination is a course about the growing science of forensic accounting. The accounting graduate is introduced to the Certified Fraud Examiner's Code of Ethics and information about the forensic accounting industry. The graduate will become knowledgeable about fraud theory, the variety of fraud schemes perpetrated in business enterprises, and how to detect and prevent such fraud. The graduate will become more proficient at diagnostic measures used to identify the possibility of fraud being perpetrated in business entities. Prerequisites: Acceptance into Master of Accounting. (Summer)

ACCT 6600 Practice & Theory Seminar (3)
Special accounting problems related to accounting practice and theory, with emphasis on conceptual analysis and historical development of generally accepted accounting principles. Readings cover current theory as well as current accounting issues. Problems requiring in-depth research into pronouncements issued by FASB and predecessor standing-setting bodies are used. Prerequisite: ACCT 3020 and accepted into Masters of Accountancy program. (Spring)

ACCT 6700 Graduate Readings (Fall, Spring) (1-4)

ACCT 6890 Accounting Internship Program (1-3)
Experience in accounting functions within industry and government as well as public accounting firms. Prior approval of the instructor required. A maximum of three credit hours will be granted. Prerequisite: Acceptance into the Macc program. (P/F) (Fall, Spring)

ACCT 6900 Special Topics (1-3)
Special Topics in accounting. Prerequisite: Acceptance into the Macc program. (Fall, Spring)

APPAREL DESIGN & TEXTILES (ADT)

ADT 1210 Intro to Apparel Selection and Construction (2)
Exploration of historical aspects of clothing and its psychological, sociological and physiological effects. Selection, care, and coordination of wardrobe is examined using individual tastes, lifestyles, and physical attributes. Co-requisite: ADT 1220. (Fall, Spring)

ADT 1220 Intro to Apparel Selection/Const Lab (1)
Basic clothing construction techniques for the beginner. Includes experience and skill development using sewing machine, serger, and a variety of fabrics. Co-requisite: ADT 1210. (Fall, Spring)

ADT 1260 Instructional Weaving and Lab (2)
Introduction to the fundamentals of weaving through a sampler and individual weaving projects. The basic skills emphasized will be warping, threading, denting and interpreting weaving patterns. Co-requisite ADT 4260. (Fall, Spring)

ADT 2220 Apparel Construction Techniques (3)
Application of principles of clothing construction and selection for students majoring in Family and Consumer Sciences. Consideration is given to construction techniques, basic speed, and fitting. Prerequisite: ADT 1210, 1220. (Spring)

ADT 3240 Textiles and Lab (3)
Study of fibers, yarns, fabric construction and finishes as related to selection, use and care. Prerequisite: CHEM 1110/1120. (Fall)

ADT 4210 Advanced Construction/Flat Pattern Design (3)
Demonstration and practice in pattern making including traditional and technological methods. Practice in designing various garment features and styles. Creative and advanced construction skills will be developed. Research, demonstration, consumer skills, and experience with specialty techniques and fabrics will be required. Prerequisite: ADT 2220. (Fall)

ADT 4260 Advanced Weaving Instruction (2)
Emphasis will be on designing and improving basic weaving skills learned in beginning weaving class. Projects will be selected by students. May be repeated for credit (ADT 4270). Pre-requisite: ADT 1260. (Fall, Spring)

ADT 4270 Advanced Weaving Instruction (4)
A continuation of the knowledge learned in ADT 1260/4260, including planning and executing weaving projects from beginning to end. Emphasis will be placed on designing profile drafts and understanding basic weave structures, enabling one to weave original patterns. May be repeated for credit. Pre-requisite: ADT 1260, 4260. (Fall, Spring)

ADT 4830 Readings and Conferences (P/F) (1-9)

ADT 4840 Cooperative Education (P/F) (1-9)

ADT 4890/5890 Internship (3)

AGRICULTURAL SCIENCE (AGSC)

AGSC 1010 Agriculture and Society (L) (3)
This course is designed to increase the student's awareness of the significant role agriculture plays in today's society, covering areas of science, economics, politics, culture and history. Agriculture topics are used to teach critical thinking skills and other problem-solution methodologies. Will satisfy the general education Life Science requirement. (Spring)

AGSC 1100 Principles of Animal Science (L) (3)
A survey of scientific principles applied to the production of agricultural animals and the products they yield. The course is a series of instructional modules covering domestic animal products and bio-economics, health and behavior, genetics, reproduction, and feeding and nutrition. Will satisfy general education – life science requirement. (Fall)

AGSC 1110 Crop Production (3)
A general course involving the principles and practices used in the production of agronomic crops. Will cover small grains, corn, legumes and root crops. (Spring)

AGSC 1120 Crop Production Lab (1)
Application and hands-on experience of concepts covered in the lecture. Co-requisite: AGSC 1110. (Spring)

AGSC 1750 Horsemanship I (1)
A basic course in the riding and handling of horses. An understanding of horse behavior and safe conduct around horses are central to the course. Students will be introduced to the fundamentals of riding, handling, and grooming, as well as becoming familiar with the parts of the horse, common tack, and grooming equipment. Horse boarding available. Limited enrollment. May be repeated for credit. (Fall, Spring)

AGSC 1950 Agricultural Enterprise Practicum-Production (1-4)
Practicum credit is given for a supervised, structured work experience related to farming or ranching, agribusiness, veterinary or agricultural science situations. The experience may be provided at the SUU Farm or another approved work site. The student must confer with an

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adviser and complete a minimum of 3 hours work per week for each credit of practicum. Four credits are required for the Certificate in Livestock Farm Management and an additional four credits are required for an AAS degree (see AGSC 2950). (Fall, Spring, Summer)

AGSC 1990 Agriculture Leadership (1)
Provides students an opportunity to gain an understanding of the value of leadership in the field of agriculture. Students develop and demonstrate leadership abilities, interpersonal skills, and a sense of service. May be taken three times for credit. (Pass/Fail) (Fall, Spring)

AGSC 2600 Swine Production Practices (2)
Students develop hands-on skills and learn the theoretical basis for the various techniques related to the selection, production, care and handling of swine. (Spring)

AGSC 2610 Beef Production Practices (2)
Students develop hands-on skills and learn the theoretical basis for the various techniques related to the selection, production, care and handling of commercial and purebred beef cattle. Taught at Beef Cattle Center at the SUU Valley Farm. Field trip required. (Fall)

AGSC 2620 Sheep Production Practices (2)
Students develop hands-on skills and learn the theoretical basis for the various techniques related to the selection, production, care and handling of commercial and purebred sheep. Taught at Sheep Operational Unit at the SUU Valley Farm. Field trip required. (Spring)

AGSC 2630 Horse Production Practices (2)
Students will gain exposure to various techniques and practices related to the selection, feeding, handling, and management of horses. Practices related to care of "using" and breeding horses will be emphasized. Field trips are required. (Spring)

AGSC 2760 Horsemanship II (2)
An intermediate-level course designed to increase students' horsemanship abilities. Emphasis on developing good riding practices and a foundation for advanced training. Limited enrollment. Horse boarding available at university farm. Prerequisite; AGSC 1750 or instructor permission. May be repeated twice for credit. (Fall, Spring)

AGSC 2820 Artificial Insemination of Cattle (2)
A training course in the reproductive management and artificial insemination of cattle. The course follows the National Association of Animal Breeders recommendations for herdsman- inseminator training. Limited enrollment. Taught as an intensive short course on a demand basis. Prerequisite: AGSC 1100 and instructor permission. (Spring)

AGSC 2890 Agricultural Internship (2-8)
Designed to provide an exploratory on-the-job training experience in an agriculture-related enterprise. Training site must be pre-approved at the agriculture program faculty level. Requires 3 hours work per week per hour credit. (P/F). (Fall, Spring, Summer)

AGSC 2950 Agriculture Enterprise Practicum-Management (1-4)
A continuation of AGSC 1950 intended to include increased responsibility and, where appropriate, decision making situations. Four credits each of AGSC 1950 and AGSC 2950 are required for an AAS degree. Requires 3 hours work per week per hour credit. Under special circumstances and with adviser approval, specific courses may be substituted for AGSC 2950. Prerequisite: AGSC 1950. (Fall, Spring, Summer)

AGSC 3020 Agribusiness Management (3)
Principles and practices of successful farm, ranch and agribusiness management. Budgeting and decision making based on economic

principles will be central to the course. Students will be required to develop and submit an agricultural enterprise plan. (Fall)

AGSC 3030 Forage Crops (3)
This course covers the principles of forage production, harvesting, storage, marketing and utilization. In-depth study of alfalfa with general coverage of other legumes and grasses used as forage. Prerequisite: AGSC 1110. (Fall)

AGSC 3040 Forages Lab (1)
Application and hands-on experience of concepts covered in the lecture. Required in conjunction with AGSC 3030. (Fall)

AGSC 3100 Beef Management (3)
A course in the application of scientific principles to the economic management of the beef cattle enterprise. The course includes application of modern methods of management of nutrition, breeding, reproduction, and decision making to the profitability of the beef cattle business. Prerequisites: AGSC 1100. Recommended: ASGC 3400 and 3500. Previous or concurrent enrollment in AGSC 2610 is advised. (Fall)

AGSC 3150 Genetics of Livestock and Horse Improvement (3)
Application of the science of genetics to the improvement of livestock and horses. The course will focus on breeding systems, selection methods, predicted outcomes and evaluation of the results of various breeding plans affecting important traits in livestock and horses. Prerequisite: AGSC 1100 and MATH 1030 or higher or the equivalent. Recommended: BIOL 3060, 3070. (Fall)

AGSC 3200 Swine Management (3)
Systems of production and management with emphasis on modern methods which are suited to western conditions. Incremental enterprises as well as farrow-to-finish production will be discussed. Prerequisite: AGSC 1100. Recommended: Concurrent or previous enrollment in AGSC 2600. (Fall)

AGSC 3230 Pests and Pest Management (3)
A survey of pests of economic importance. Weed, insect and disease identification and life cycles with concentration on methods of control. (Spring)

AGSC 3240 Pests Lab (1)
Required in conjunction with AGSC 3230. (Spring)

AGSC 3250 Sheep and Wool Management (3)
An accelerated course in the application of scientific principles to the economic management of the sheep enterprise. The course will include application of modern methods of nutrition, breeding, reproduction and decision making to the profitability of the purebred and commercial lamb and wool business. Prerequisite: AGSC 1100. Recommended: AGSC 3400 and 3500. Previous or concurrent enrollment in AGSC 2620 is advised. (Spring)

AGSC 3350 Horse Science and Industry (3)
A comprehensive study of horses and the economic importance of the horse industry. The biological bases for conformation and faults, reproduction, nutrition, behavior and genetics will be examined. Prerequisite: AGSC 1100 or instructor permission. (Fall)

AGSC 3400 Feeding and Nutrition of Horses and Livestock (3)
An applied feeding and nutrition course emphasizing the functional digestive anatomy of horses and farm animals. Emphasis will be placed on nutritional value of feedstuffs, requirements of horses and various classes of livestock, ration balancing, and ration formulation. Prerequisite: AGSC 1100. Co-requisite: AGSC 3410. (Spring)

AGSC 3410 Feeding and Nutrition of Horses & Livestock Lab (1)
Required in conjunction with AGSC 3400. (Spring)

AGSC 3500 Applied Reproduction in Livestock and Horses (3)
Macro and micro functional anatomy of reproduction in livestock and horses. Includes theories and applied methodologies for increasing the reproductive efficiency of the animals upon which the course will focus. Prerequisite: AGSC 1100. Co-requisite: AGSC 3510. (Spring)

AGSC 3510 Applied Reproduction in Livestock & Horses Lab (1)
Required in conjunction with AGSC 3500. A group research project is required. (Spring)

AGSC 3560 Soils (3)
A general study of soil formation, chemical and physical properties, soil water, soil biology, classification and taxonomy, fertility and soil conservation. Prerequisite: College chemistry or the equivalent. (Fall)

AGSC 3570 Soils Lab (1)
Required in conjunction with AGSC 3560. (Fall)

AGSC 3600 Directed Studies in Agriculture (3)
Discussions and projects dealing with contemporary issues and challenges, science, technology, or economics related to agriculture. Students may apply for and receive Directed Studies credit by submitting a proposal or being assigned a project, searching the literature, carrying out the project, and reporting the results at a seminar. Prerequisite is advanced standing in an agriculture component program and sufficient reference courses related to the project as determined by a faculty adviser. (Fall, Spring, Summer)

AGSC 3700 Principles of Irrigation (3)
Study of irrigation history, irrigation methods, watersheds, irrigation equipment and structures, soil moisture determinations, irrigation scheduling, water rights and water law. Will cover the design of residential and commercial turf as well as large scale agriculture systems. (Fall)

AGSC 3710 Irrigation Lab (1)
Required in conjunction with AGSC 3700.

AGSC 3750 Horsemanship III: Advanced Performance & Training (1)
An advanced riding course focusing on equine behavior and learning. Development of sound riding and training practices will be stressed. Limited enrollment. Horse boarding available at university farm. Prerequisite: AGSC 2750 or instructor permission. May be repeated twice for credit. (Fall, Spring)

AGSC 4890 Agricultural Internship (2-8)
Designed to provide specific on-the-job training which requires an understanding of agricultural sciences and industry expected of students who have taken upper division course work and /or who have advanced standing in an agricultural program. Requires 3 hours work per week per hour credit. Internship site must be pre-approved at the agriculture program faculty level. (P/F) (Fall, Spring, Summer)

AGSC 4920 Workshop in Agriculture (1-3)
Designed to give credit for intensive agricultural learning situations outside of the traditional class and lab. Students may receive workshop credit for activities such as seminars, short courses, in-service training, and travel study. Workshop credit must be arranged by an agriculture program faculty member and receive approval at the departmental, as well as the college level. Pass/Fail Grading. (Fall, Spring)

AGSC 4990 Agricultural Seminar (1)
Required of all students who will receive a four-year agriculture component degree. This is capstone course which takes a broad overview of agriculture as a profession and looks at employment opportunities from the perspective of current trends and

developments. Students may substitute other seminars or workshop courses with prior adviser approval. (Fall, Spring)

AMERICAN SIGN LANGUAGE (ASL)

ASL 1050 American Sign Language I (H) (2)
A course designed for students with no previous knowledge of ASL and deaf culture. This course develops basic skills in ASL vocabulary, grammar, and use.

ASL 1060 American Sign Language II (H) (2)
A course designed for students with some knowledge of ASL and deaf culture. To continue basic methods in ASL vocabulary, grammar, and use. Prerequisites: ASL I or teacher's permission.

ASL 2050 American Sign Language III (2)
This course is designed to develop intermediate ASL conversational skills in a variety of settings, topics, and functions. Introduction to interpreting theories, principles, and special settings of interpretation. Prerequisites: ASL I and ASL II or teacher's permission.

ASL 2060 American Sign Language IV (2)
This is the final course in the ASL series. This course is for students who have passed levels I-III and would like to continue on or would like to improve their translation skills.

APPLIED SCIENCE AND TECHNOLOGY (AST)

AST 2010 Convocation (1)

AST 2120 Service Learning (1)
This course is designed to take the student volunteer through the process of volunteerism and its application to themselves and their academic training through practical experience and critical reflection. May be taken two times for credit. Pass/Fail grade only. (Fall, Spring, Summer)

ART (ART)

ART 1010 Introduction to Art (F) (3)
An art orientation. A study of the principles and ideas underlying visual art expression and a survey of major periods, styles, and artists. Illustrated lectures. (Fall, Spring)

ART 1040 Arts Retrospective (D) (1)
An examination of how the arts both influence and respond to a societal epoch or theme. Through a selected specific topic the course investigates the interrelationship of three fine art disciplines and how they express the spirit of an age. (Three interlocking one-credit courses combine for this three-credit inquiry) Co-requisites 2 of the following: TA 1040, DANCE 1040, or MUSC 1040. (Fall, Spring)

ART 1110 Drawing I (F) (3)
A studio class which explores the elements and compositional principles of visual art through drawing. Assignments are designed to encourage creative solutions, develop drawing skills, and apply the basics of linear representation, shading, perspective, shape (negative and positive) and textural depiction. (Fall, Spring, Summer)

ART 1120 Two-Dimensional Design (F) (3)
A study of design fundamentals with an application in two-dimensional media. Presents the basic design principles and elements employed in all visual expression. (Fall, Spring, Summer)

ART 1240 Three-Dimensional Design (3)
A foundation design course in which the basic principles and vocabulary of visual organization in three dimensions are explored

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through a series of studio problems, i.e., sculptural and spatial problems. Prerequisite: ART 1110 and 1120. (Spring)

ART 1300 Art Major Seminar (5)
Students meet once weekly for seminars featuring professionals in visual art; artists, curators, educators, critics and art administrators. Through lectures, discussions, demonstrations, critiques and hands on experience, students will be introduced to current issues and the practical realities facing professionals in the visual arts. Art majors must repeat this class eight times (transfer students must enroll every semester) for a total of 4 credit hours. (P/F) (Fall, Spring)

ART 1610 Ceramics I (F) (3)
Explore creative solutions and aesthetic ways of working using clay as a medium in a series of studio projects designed to acquaint the student with basic hand-building, throwing, trimming and glazing techniques. Particular attention is paid to the essential skills of creative problem solving and expression, creative thinking, and spatial reasoning. Taught each semester. (Fall, Spring, Summer)

ART 2110 Drawing II (3)
A continuation of approaches and techniques in drawing. Emphasis will be placed on design, composition, subject, content, experimental, and color drawing. Prerequisite: ART 1110. (Fall)

ART 2210 Digital Imaging (3)
Basic course in the study and uses of the computer as a visual arts medium. Training will be given in various software directed toward the production of art and design. (Spring)

ART 2410 Painting I (3)
Introduction of painting material and techniques as well as a brief history of painting with the focus on the theory and process of color mixing and color matching. Prerequisites: ART 1110, 1120. (Fall).

ART 2710 Art History I: Ancient (F) (3)
A contextual survey of Prehistoric art in Europe, and of art from the ancient Near East, Egypt, the Aegean, Greece, Etruria, and Rome, and of Early Christendom including art of Byzantium. From paradoxically crude and sophisticated beginnings arise the earliest forms of architecture, pictures, and sculpture which develop into the widest possible diversity of images, ranging from the stylized, graceful Cycladic forms to the hyper-realism of Roman portrait sculpture. There will be exploration of common themes such as the propagation of religious and political views and the exchange of ideas, as evidenced in borrowed visual motifs. (Fall, alternate years)

ART 2720 Art History II: Ages of Faith (F) (3)
A study of Islamic art, the early art of India, China, Japan, the Americas, and Africa, and from Medieval Europe including the Romanesque and Gothic periods. The non-European art will be perused from its earliest manifestations through what might be termed an early medieval period, which will vary with each civilization, and end with a major cultural or political shift, such as the end of the Song Dynasty in AD 1279, in the case of China. The Medieval European section will focus on the "Age of Faith," including some non-Christian influences and rivals, most notably Islam, and then concentrate on the Christian art of Europe from the "Golden Age of Ireland" (c. AD 500) through the Gothic cathedrals and the beginning of the age of painting, ushered in by Giotto. (Spring, every other year)

ART 2730 Art History III: Rebirth, Reason & Regalia (F) (3)
A counterpoint of Western artistic traditions from the fifteenth, sixteenth, and seventeenth centuries against the art of India, China, Japan, and the Americas from roughly the same time. This course will present the conquest of pictorial space that developed in the Renaissance and extended through the Baroque era. It will include forays into the areas of sculpture, architecture, and craft arts and will

contrast all this with the very different sensibilities of the selected Eastern cultures and some native New World cultures. (Fall)

ART 2740 Art History IV: Modern (F) (3)
An introduction to art from Pacific cultures and Africa in the modern era followed by a survey of modern art in Europe and the United States beginning with Neoclassicism and the French Revolution and continuing through the many subsequent artistic revolutions, noting the impact from the Pacific and Africa and the infusion of their motifs into Western images which profoundly influenced the development of modern art. (Spring, every other year.)

ART 3080 Gallery and Museum Practices (3)
Fundamental concepts of gallery and museum practices including in-depth study of the nature of objects, interpretation of objects, and administration responsibilities. (Fall)

ART 3110 Life Drawing & Anatomy (3)
A study of the bones and subcutaneous muscle structure of the human body with an emphasis on the needs of the artists. Objective and interpretive drawing. Prerequisites: ART 1120, and ART 2110. (Spring)

ART 3210 Layout and Typography (3)
A course designed to provide training in the use of text and image and their function in graphic design. Prerequisites: ART 1120, and ART 2110. (Fall, Spring)

ART 3220 Digital Photography (3)
This course is designed to give students the skills to explore a wide variety of photographic solutions to graphic design problems using the digital camera, the computer, and digital printers. (Fall, Spring, Summer.)

ART 3230 Graphic Design I (3)
A course designed to aid students in the development of creative concepts and techniques in graphic design. Prerequisites: ART 1120, ART 2210 or approval of the instructor, ART 3210 (can be taken concurrently) (Fall, Spring)

ART 3240 Typography II (3)
This course builds on the basics addressed in Typography and Layout. Students will gain further understanding of typographic principles through exploration and refinement of their skills to solve complex communication problems in a variety of media. Prerequisites: ART 2210, ART 3210, ART 3230. (Fall, Spring, Summer.)

ART 3250 Web Design I (3)
An introduction to the design of web sites in both functionality and visual appeal. Prerequisites: ART 2210 or approval of instructor. (Fall, Spring)

ART 3260 Publication Design (3)
Publication Design explores the structure of magazines, newspapers, books, and annual reports. This course will examine page layout, typography, pacing, sequencing, the hierarchy of information, and the visual/verbal relationships between text and images on the printed page. Prerequisites: ART 3210, ART 32230. (Fall, Spring, Summer.)

ART 3270 Packaging Design (3)
Students will develop the skills and understanding of how two-dimensional graphics work and apply onto three-dimensional objects. First students will experiment with shapes and construction to develop manual skills; then they will solve pragmatic packaging assignments. Prerequisites: ART 3210, ART 3230. (Spring, Summer.)

- ART 3310 Intaglio/Lithography (3)**
Fundamental concepts of printmaking emphasizing the creative processes of intaglio and lithography. Prerequisites: ART 1120 and ART 2110 or approval of the instructor. (Fall)
- ART 3320 Silkscreen/Relief (3)**
Creative processes of producing multiple fine art prints with silkscreen and relief (block printing). Prerequisites: ART 1120 or approval of the instructor. (Spring)
- ART 3420 Watercolor (3)**
Creative approaches with watercolor medium. Emphasis on pictorial structuring of ideas and development of paint quality. Prerequisites: ART 1110 and 1120, or approval of the instructor. (Spring)
- ART 3450 Portrait & Figure Painting (3)**
Designed to further the study of anatomy in a variety of media. Emphasis will be on the interpretation of the head and figure in paint. Paintings will be accomplished using live models. Prerequisite: ART 3110, and ART 2410. (Spring)
- ART 3510 Illustration I (3)**
A study of art for publication including an introduction to the techniques and media commonly used in illustration. Emphasis will be placed on creative and well designed approaches to solving text problems with visual solutions. Prerequisite: ART 2110, and 2410. (Fall, Spring)
- ART 3610 Ceramics II (3)**
This class is a continuation of ART 1610 *Introduction to Ceramics* which is a prerequisite for this course. Emphasis is on advanced throwing and clay handling skills, covering all aspects of construction processes, kiln firing, glaze formulation and post-firing techniques. (Fall, Spring)
- ART 3710 Sculpture (3)**
A course in which the basic principles of additive and subtractive processes as they relate to the realization of sculptural ideas will be introduced in a series of studio projects. The course presents a variety of traditional as well as contemporary approaches to sculpture using a wide assortment of media, tools and techniques. Prerequisite: ART 1240 and ART 2110. (Fall every other year)
- ART 3750 History of Graphic Design (3)**
This course will focus on design excellence and innovation from the discovery of the written word to the present. The important contributions of discipline's salient practitioners and thinkers will be introduced. (Fall)
- ART 3900 Art for Elementary Teachers (1.5)**
Methods and techniques in understanding the development of creative expression and perceptual awareness. Professional education course for elementary education majors. (Fall, Spring)
- ART 4110 Drawing III (3)**
Advanced drawing class focusing on color media, oil pastel, colored ink and pencil. Prerequisite: ART 2110 and ART 3110. (Spring)
- ART 4210 Corporate Identity/Collateral Design (3)**
This course will concentrate on designing logos from corporate to individual and overseeing their consistent application from basic stationery to complex packaging and signage systems. (Fall, Spring)
- ART 4220 Environmental and Exhibition Design (3)**
Environmental and Exhibition Design seeks to involve an audience in exploring an idea in space and time through the use of graphics, objects, text, sound effects, and participatory opportunities. The emphasis of this course will be on integrating all elements involved. Prerequisites: ART 3210, ART 3260. (Fall, Spring, Summer.)
- ART 4230 Graphic Design II (3)**
Advanced problems in graphic design. Prerequisites: ART 3210, 3230. (Fall, Spring)
- ART 4240 Junior/Senior Design Studio (3)**
This course will operate as a supervised in-house design studio for students to gain practical experience. Professional practices are stressed; students assume responsibility for scheduling, budgeting, sourcing, client communications, and product supervision. Prerequisite: ART 3240, ART 3260, ART 4230 or instructor's approval. (Fall, Spring, Summer)
- ART 4250 Web Design II (3)**
Advanced problems in web design. Prerequisites: ART 3250. (Fall, Spring)
- ART 4260 Multimedia and Interactive Design (3)**
This course focuses on integrating text, graphics, (illustrations, photography, and video) and music, to create rich interactive projects which take into account the relationship between functionality, content, and form. Prerequisites: ART 2210, ART 3210, ART 3230 (Fall, Spring, Summer.)
- ART 4270 Computer Animation (3)**
A course designed to offer training in the use of 3-D model building and animation, and their use in the field of graphic design. (Fall)
- ART 4280 Senior Portfolio Preparation For Graphic Design Majors (3)**
This course is designed to prepare students for the competitive job market. The focus will be on the selection and refinement of work leading to a professional portfolio reflecting the student's ability to take assignments from concept through the finished product. Prerequisite: This course is for seniors who have cleared requirements for Spring graduation, or who need to complete requirements for end-of-Summer graduation, or Fall graduation. Requires instructor's approval.
- ART 4290 Special Problems (3)**
Independent research and development of portfolio projects in graphic design. Prerequisites: ART 1120, 3210, 3250. Should be a junior or senior. (Fall, Spring)
- ART 4410 Painting II (3)**
Exploration of advanced painting problems. Various painting philosophies and techniques will be presented. Emphasis on pictorial structuring of ideas and development of paint quality. Prerequisite: ART 2410 or approval of instructor. (Spring)
- ART 4510 Illustration II (3)**
A course designed to further study techniques and approaches in visual problem solving and the interpretation of text information into visual images. Prerequisite: ART 3510. (Fall, Spring)
- ART 4610 Advanced Ceramics (3)**
Exploration of advanced work in wheel throwing, hand-building, firing and special topics with emphasis on individual artistic expression. Prerequisite: ART 1610 and 3610, and permission of instructor. (Fall, Spring)
- ART 4790 Senior Portfolio (3)**
The student will prepare an exhibition quality professional portfolio, a written statement of artistic philosophy, and a professional resume. On approval of the faculty, the portfolio is displayed on campus in professional exhibition form. A photographic color slide portfolio will be prepared and must be approved by the faculty and will be retained by the art department. Seminars are conducted preparatory to the portfolio and exhibit. Students should contact their faculty adviser by the end of their junior year to schedule the Braithwaite Fine Arts Gallery. Prior to registration, students will submit a proposal for their

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show to their faculty adviser. Faculty approval is required to take this course. (Spring)

ART 4890/5890 Internship (P/F) (3-12)

ART 4900 Art for Secondary Teachers (3)
Methods and theories in teaching art on the secondary level. Applied problems in motivation, evaluation, discipline, curriculum, and rapport. Professional education requirement for majors in secondary art education. (Fall).

ART 4980 Student Teaching (P/F) (2)

ART 4990 Senior Seminar (1-4)
Individual advanced work in one of the following studios as approved by the instructor: design studio, painting studio, graphics studio, sculpture studio, ceramics studio and experimental media studio. (Fall, Spring)

ARTS ADMINISTRATION (AA)

AA 6010 Principles of Arts Administration (3)
This course is an overview of nonprofit arts administration, including basic principles of nonprofit organizations; organizations hierarchy; basic human resources management; overview of the budgeting process (and role of board and staff in developing and approving budgets); and basic strategic planning. Students will also examine the arts as an industry, and gain an understanding of how organizational structures vary according to artistic discipline (opera, theatre, dance, and gallery) and the difference between presenting and producing organizations. A portion of the course will look at the for-profit arts world (film industry and Broadway, commercial galleries) as well as other competitors to nonprofit arts, and examine similarities and differences between them.

AA 6030 Professional Writing and Communications (3)
Unit One: Professional Writing (half-semester) This course is designed to make students proficient in writing professional correspondence (cover and transmittal letters) and knowledgeable about proper business letter formats; it will teach students professional narrative styles that are used in preparation of funding proposals, writing narrative histories, biographies, organizational descriptions, etc.

Unit Two: Professional Presentation (half-semester) Students learn to make effective presentations in public settings (speeches) and business settings (meetings) and should learn to use audio-visual media and computer presentation applications (e.g., PowerPoint) to augment basic public speaking skills. Students learn techniques of working with CD-ROM and HTML to develop marketing materials, signage, websites and other communication materials and resources for arts organizations.

AA 6040 The Arts and Society/Governmental Relations (3)
This course is designed to put the arts in a modern-day societal context, and will cover subjects including managing arts organizations in a multi-cultural society, community-based and rural arts organizations, and the study of arts and public policy dealing with the politics of public culture, including a comparison of America's institutionalization of the arts in the nonprofit and for-profit sector compared to systems in Europe, Asia, and other cultures. Students learn the policies and politics of local, state, and national governmental agencies, as well as working with boards and other volunteer groups to the best advantage of the organization. Emphasis is placed on community roles and ownership of the organization. Students will study the evolution of the arts in the U.S. and its impact on modern society as well as its future impact.

AA 6060 Fund Development for Arts Administrators (3)
Students will gain an understanding of the development component and process including fundraising principles of annual, major gift (including corporate and foundation giving), capital and planned giving campaigns in building an effective fund development program. Students will learn how to develop and use related fund development tools including direct mail, special events, face-to-face major gift fund raising, proposal writing, government grant writing, etc.). The role of the board of trustees/directors and other leadership/volunteer groups will be examined, as well as community development and rural issues. Regulations governing methods of recordkeeping and reporting will be covered.

AA 6080 Practices and Principles of Visual Arts (3)
This course is dedicated to the needs of Visual Arts. Students will discuss current issues facing Visual Arts Administrators including: how to develop and implement a gallery/museum season; curatorial duties; use of images for publicity and fund development.

AA 6230 Leadership Training and Development (3)
Students learn time management, communication, negotiation and conflict resolution, and constructive feedback techniques. Current thinking in team building, strategic planning principles and management will be studied and applied to the world of nonprofit arts administration, including models used in Total Quality Management (TQM) and Quality Leadership Management. The course will also cover matters of ethics and etiquette. Special attention will be given to mission identification and instilment.

AA 6990 Professional Rotations (1)
Students will be assigned to one of the professional affiliates within the College of Performing and Visual Arts to insure that academic studies are linked to practical experience. Students must enroll each of the first 5 semesters in the program.

AA 7100 Board Relations (3)
This course is designed to provide in depth study regarding the role of a Board of Directors. Specific instruction will include Board/Staff interaction, diversity, the three W's (Wisdom, Wealth, and Workers), fundraising, governance, legal responsibilities, Robert's Rules of Order and parliamentary procedure for meetings, committee structure, ad hoc and ex-officio participation, by-laws, and articles of incorporation.

AA 7240 Marketing the Arts II (3)
In addition to principles of research, audience development, education, and outreach, students learn the role of special events in fund development, public and media relations (press conferences), volunteer recruitment/ retention and special one-time performance planning (e.g., celebrity one-person shows), as well as advanced instruction in advertising, media relations, sales techniques, and customer service.

AA 7250 Practices and Principles of Arts Organizations (3)
This course is taught as a practicum to develop the team-oriented skill of brainstorming, as an outgrowth of skills learned in AA 6040, Arts and Society. The students will apply critical thinking techniques and analysis to various creative applications, in line with the not-for-profit philosophy stressed in their previous coursework.

AA 7950 Final Rotation Internship (6)
This course is taken in the final semester of study. Students participate in 12-week residencies at one of the professional arts organizations. The internship is an individually arranged, supervised, field-based experience designed collaboratively by the student, faculty sponsor and site supervisor to link theory with practice. In addition to an on-site placement component, internships have an intellectual aspect. The arrangement must be clearly stated in a design statement, agreed upon by the participating parties and approved by the MFA faculty. Internships must provide substantive

experiences which demonstrate the practical knowledge and skill acquired during prior academic coursework and assistantship content. Design statement fulfillment will be analyzed by the student's Graduate Committee in Cedar City at the end of the sixth semester.

AA 7990 Professional Capstone (4)

In conjunction with the Final Rotation Internship (AA7950) students must complete the Professional Capstone requirement. Students will select an area of arts administration which will bring evidence of their increasing skills in critical thinking and long range planning to practical application. Students will submit a portfolio of the accomplishments within the area of focus from the Final Rotation Internship. Students will present and defend the finished portfolio to faculty and members of the student's Graduate Committee in Cedar City at the end of the sixth semester. In addition, students are expected to present a 10-15 minute portion of a weekly artistic and administrative seminar. (AA 6990).

AUTOMOTIVE TECHNOLOGY (AUTO)

AUTO 1500 Suspension and Steering (5)

This course provides instruction on the construction, theory of operation and repair of automotive steering and suspension systems. State of the art wheel alignment techniques are taught using computerized four wheel alignment equipment. This course, in combination with the related lab course prepares students for the ASE exams on steering and suspension. Co-requisite: AUTO 1501 Suspension and Steering Lab. Taught alternate years. (Fall)

AUTO 1501 Suspension and Steering Lab (0)

This course provides in-depth practical lab experiences dealing with the diagnosis, repair, and overhaul of automotive suspension and steering systems. State of the art alignment techniques are taught with the use of computerized four wheel alignment equipment. This course, in combination with the related lecture course prepares students for the ASE exams on suspension and steering. Co-requisite: AUTO 1500. Taught alternate years. (Fall)

AUTO 1510 Engine Repair (6)

This course provides instruction on the construction, theory of operation, diagnosis, and complete rebuilding procedures for automotive engines. Units of study include cylinder boring, overhead camshaft service, three angle valve service, etc. This course, in combination with the related lab course prepares the students for the ASE exams on engine repair. Co-requisite: AUTO 1511. Taught alternate years. (Spring)

AUTO 1511 Engine Repair Lab (0)

This course provides in-depth practical lab experiences dealing with automotive engine diagnosis, repair, and overhaul. This course, in combination with the related lecture course prepares students for the ASE exams on engine repair. Co-requisite: AUTO 1510 Engine Repair. Taught alternate years. (Spring)

AUTO 1520 Manual Drive Trains (5)

This course provides instruction on the construction, theory of operation, diagnosis and complete rebuilding procedures for clutches, standard transmissions and transaxles, differentials, and four-wheel-drive systems. This course, in combination with the related lab course prepares the students for the ASE exams on manual drive trains. Co-requisite: AUTO 1521. Taught alternate years. (Fall)

AUTO 1521 Manual Drive Trains Lab (0)

This course provides in-depth practical lab experiences dealing with diagnosis, service, and rebuilding of clutches, standard transmissions, standard transaxles, differentials and four-wheel-drive systems. This course, in combination with the related lecture course prepares students for the ASE exams on manual drive trains and axles. Co-requisite: AUTO 1520. Taught alternate years. (Fall)

AUTO 1530 General Automotive (2)

This course provides basic car care instruction and vehicle system theory of operation. The names of vehicle parts and consumer maintenance procedures are emphasized. This course is ideal for the student that has little or no previous experience with automotive service procedures. Co-requisite: AUTO 1531. Taught alternate years. (Fall, Spring)

AUTO 1531 General Automotive Lab (0)

This course provides practical lab experiences dealing with everyday vehicle maintenance and service procedures. Co-requisite: AUTO 1530. Taught alternate years. (Fall, Spring)

AUTO 1540 Brake Systems (5)

This course provides instruction on the construction, theory of operation, diagnosis and complete rebuilding procedures for brake systems and components. Units of instruction include power brake systems, anti-lock brake systems, and computerized warning systems. This course, in combination with the related lab course prepares students for the ASE exams on brake systems. Co-requisite: AUTO 1541. Taught alternate years. (Fall)

AUTO 1541 Brake Systems Lab (0)

This course provides in-depth practical lab experiences dealing with diagnosis, service, and overhaul of automotive brake systems and components. This course in combination with the related lecture course prepares students for the ASE exams on brake systems. Co-requisite: AUTO 1540. Taught alternate years. (Fall)

AUTO 2510 Automotive Electrical I (5)

This course provides instruction on the construction, theory of operation, diagnosis, and complete rebuilding procedures for automotive batteries, starting systems, charging systems, and basic ignition systems. This course, in combination with AUTO 2520 Automotive Electrical II and the related lab courses, prepares students for the ASE exams on electrical systems. Co-requisite: AUTO 2511. Taught alternate years. (Fall)

AUTO 2511 Automotive Electrical I Lab (0)

This course provides in-depth practical lab experiences dealing with diagnosis, service and overhaul of batteries, starting, charging, and basic ignition systems. This course, in combination with the related lecture course prepares students for the ASE exams on electrical systems. Co-requisite: AUTO 2510. Taught alternate years. (Fall)

AUTO 2520 Automotive Electrical II (5)

This course provides instruction on the construction, theory of operation, diagnosis, and complete service procedures for vehicle lighting, power accessories, on-board computer systems, automotive diesel systems, and driver information systems, etc. This course, in combination with AUTO 2510 Automotive Electrical I and the related lab courses, prepares the students for the ASE exams on electrical systems. Recommended pre-requisite: AUTO 2510/2511. Co-requisite: AUTO 2521. Taught alternate years. (Spring)

AUTO 2521 Automotive Electrical II Lab (0)

This course provides in-depth practical lab experiences dealing with diagnosis, service, repair and/or replacement of vehicle lighting, power accessories, on-board computer systems, automotive diesel electrical systems, and driver information systems, etc. This course, in combination with the related lecture course prepares students for the ASE exams on electrical systems. Co-requisite: AUTO 2520. Taught alternate years. (Spring)

AUTO 2540 Engine Performance I (5)

This course provides instruction on the construction, theory of operation, diagnosis, and complete service procedures for vehicle fuel delivery systems, air delivery systems, carburetion systems, standard/electronic ignition systems, etc. This course, in combination with AUTO 2560 Engine Performance II and the related lab courses

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prepares the students for the ASE exams on engine performance. Co-requisite: AUTO 2541. Taught alternate years. (Fall)

AUTO 2541 Engine Performance I Lab (0)
This course provides in-depth practical lab experiences dealing with diagnosis, service, repair and/or replacement of fuel delivery systems, air delivery systems, carburetion systems and standard/electronic ignition systems. This course, in combination with the related lecture course prepares students for the ASE exams on engine performance. Co-requisite: AUTO 2540. Taught alternate years. (Fall)

AUTO 2560 Engine Performance II (5)
This course provides instruction on the construction, theory of operation, diagnosis, and complete service procedures for computerized engine performance systems, fuel injection, exhaust systems, and emission control systems, etc. This course, in combination with AUTO 2540 Engine Performance I and the related lab courses prepares the students for the ASE exams on engine performance. Recommended prerequisite: AUTO 2540 Engine Performance I. Co-requisite: AUTO 2561. Taught alternate years. (Spring)

AUTO 2561 Engine Performance II Lab (0)
This course provides in-depth practical lab experiences dealing with diagnosis, service, repair and/or replacement of computerized engine performance systems, fuel injection, exhaust systems, and emission control systems, etc. This course, in combination with the required lecture course prepares students for the ASE exams on engine performance. Co-requisite: AUTO 2560. Taught alternate years. (Spring)

AUTO 2570 Automotive Heating and Air Conditioning (5)
This course provides instruction on the construction, theory of operation, diagnosis, and complete service procedures for automotive heating and air conditioning systems and components. This course, in combination with the required lab course prepares the students for the ASE exams on heating and air conditioning. Co-requisite: AUTO 2571. Taught alternate years. (Spring)

AUTO 2571 Automotive Heating and Air Conditioning Lab (0)
This course provides in-depth practical lab experiences dealing with diagnosis, service, repair and/or replacement of automotive heating and air conditioning systems and components. This course, in combination with the required lecture course prepares students for the ASE exams on heating and air conditioning. Co-requisite: AUTO 2570. Taught alternate years. (Spring)

AUTO 2580 Automatic Transmissions and Transaxles (6)
This course provides instruction on the construction, theory of operation, diagnosis, and complete overhaul/service procedures for automatic transmissions and transaxles. This course, in combination with the required lab course prepares the students for the ASE exams on automatic transmissions and transaxles. Co-requisite: AUTO 2581. Taught alternate years. (Spring)

AUTO 2581 Automatic Transmissions and Transaxles Lab (0)
This course provides in-depth practical lab experiences dealing with diagnosis, service, and overhaul of automatic transmissions and transaxles, and transmission control systems. This course, in combination with the required lecture course prepares students for the ASE exams on automatic transmissions and transaxles. Co-requisite: AUTO 2580. Taught alternate years. (Spring)

BIOLOGY (BIOL)

BIOL 1010 Principles of Biology (L) (3)
Non-majors course in biology emphasizing mechanisms of living systems and impact of biological problems on human affairs. Course is designed to foster critical thinking, problem solving and the application of scientific thinking in biology. Not intended for science majors. Three hours of lecture per week. No prerequisites. (Fall, Spring, Summer)

BIOL 1020 Principles of Biology Laboratory (L) (1)
Lab to accompany BIOL 1010, Principles of Biology, one 2-hour meeting per week. Co-requisite: BIOL 1010. (Fall, Spring, Summer)

BIOL 1030 General Biology I (L) (3)
Introduction to biology for science majors. Organization and function of cells, expression and transmission of genetic information, processes of evolution, and evolution of major groups of organisms. Emphasis on critical analysis of experimental observations. Three hours of lecture per week. Prerequisites: High School biology and chemistry courses, or an ACT Science score of 23, or C or above in BIOL 1010 and CHEM 1010 and BIOL 1050. Co-requisite: BIOL 1040. Recommended after BIOL 1050. (Fall, Spring)

BIOL 1040 General Biology Laboratory I (L) (1)
Laboratory to accompany BIOL 1030. One three-hour meeting per week. Co-requisite: BIOL 1030. (Fall, Spring)

BIOL 1050 General Biology II (L) (3)
Introduction to biology for science majors. Pathways of energy transformation in living systems, biology of vascular plants, biology of animals, ecology and biogeography. Three hours of lecture per week. Recommended before BIOL 1030 Co-requisite: BIOL 1060. (Fall, Spring, Summer)

BIOL 1060 General Biology Laboratory II (L) (1)
Laboratory to accompany BIOL 1050. One three-hour meeting per week. Co-requisite: BIOL 1050. (Fall, Spring, Summer)

BIOL 2000 Natural History (L) (3)
Investigation of ecoregions, habitats and animals of southwestern Utah in laboratory and field. Emphasis on investigation skills, use of equipment, and analysis of information. Recommended for elementary teachers. No prerequisites. (Fall)

BIOL 2010 Human Physiology (L) (3)
Systematic study of the functions of the human body from the cellular to the systems with emphasis on broad, general biological principles. Three lectures per week. Co-requisite: BIOL 2020. (Fall, Spring, Summer)

BIOL 2020 Human Physiology Laboratory (L) (1)
Laboratory to accompany BIOL 2010. One two-hour meeting per week. Co-requisite: BIOL 2010. (Fall, Spring, Summer)

BIOL 2050 Southern Utah Flora (L) (3)
An introduction to the native plant populations of the intermountain region and the interaction of humans, animals and other environmental factors with the plant kingdom. Students travel to a different regional ecosystem each week and learn the major plant species, discuss the historical and modern uses of plant species by man, observe integrated effects of ecological environmental dilemmas. Students prepare personal plant resource books containing identification, historical ecological data on each plant observed. Recommended for non-majors, teaching and biology majors. One five-hour field excursion per week. May be repeated for credit if taken at different seasons. (Fall, Spring, Summer)

- BIOL 2110 Microbiology (L)** (3)
Biology of microorganism and their effect on human activities. Students will gain an understanding of: 1) the history and development of microbiology and the scientific methods utilized in medical sciences, 2) the basic principles of chemistry and cell anatomy, 3) the basic principles of photosynthesis and respiration, 4) industrial applications of microbiology, 5) role of microorganisms in the environment 6) the basic principles of microbial growth and factors affecting growth, 7) the bacterial diseases of mankind, 8) the viral parasitic diseases of mankind, 9) the basic principles of epidemiology, 10) the basic principles of immunology. Three hours of lecture and one lab per week. Recommended for non-majors, teaching and biology majors. Co-requisite: BIOL 2120. (Fall, Spring, Maymester)
- BIOL 2120 Microbiology Laboratory (L)** (1)
Laboratory to accompany BIOL 2110. Practical skills for working with microorganism and laboratory exercises to support lectures on biology of microorganism and their effect on human activities. Co-requisite: BIOL 2110 (Fall, Spring, Maymester)
- BIOL 2170 Introduction to Human Pathophysiology** (3)
Introduction to Pathophysiology for the health sciences student. Using a systematic approach to cellular and then organ system changes, students will gain an understanding of physical changes, methods of evaluating, diagnosing and treating health alterations. Prerequisites: BIOL 2210, BIOL 2220, BIOL 2010, and BIOL 2020. (Spring, Summer)
- BIOL 2210 Human Anatomy (L)** (3)
The study of the structure of the human body with emphasis on surface, regional and systemic anatomy of all body systems. Three hours of lecture per week. Co-requisite: BIOL 2220. (Fall, Spring, Summer)
- BIOL 2220 Human Anatomy Laboratory (L)** (1)
Laboratory to accompany BIOL 2210. One two-hour meeting per week. Co-requisite: BIOL 2210. (Fall, Spring, Summer)
- BIOL 2230 Human Sexuality (L)** (3)
Study of physiological, behavioral, legal and ethical aspects of human sexuality. Three hours of lecture per week. No prerequisites. (Spring)
- BIOL 3030 Ecology** (3)
Biological and physical mechanisms that influence the distribution and abundance of organisms. Topics include physiological ecology, population ecology, consortisms, energy and nutrient dynamics, community ecology and succession. Three hours of lecture per week. Prerequisites: BIOL 1030 and BIOL 1050. Co-requisite: BIOL 3040. (Fall, Spring)
- BIOL 3040 Ecology Laboratory** (1)
Laboratory to accompany BIOL 2130. One three-hour meeting per week. Longer field trips may be required. Prerequisites: BIOL 1030 and BIOL 1050. Co-requisite: BIOL 3030. (Fall, Spring)
- BIOL 3050 Biomedical Ethics** (2)
Exploration of current ethical problems in the medical and psychological disciplines and their impacts on society and the individual. Two hours of lecture per week. No prerequisites. (Spring)
- BIOL 3060 Genetics** (3)
Transmission and expression of genetic information, organisms, and populations. Topics include basic transmission and molecular genetics, regulation of gene expression, developmental genetics, genetics of cancer, the immune response and behavior, and population genetics and evolution. Three hours of lecture per week. Prerequisites: BIOL 1030, BIOL 1050, MATH 1050, and CHEM 1110-1130 or 1210-1230. Co-requisite: BIOL 3070. (Fall, Spring)
- BIOL 3070 Genetics Laboratory** (1)
Laboratory to accompany BIOL 3060. One three-hour meeting per week. Co-requisite: BIOL 3060. (Fall, Spring)
- BIOL 3110 Evolution** (3)
Study of patterns and processes shaping the unity and diversity of life. Emphasis on natural selection theory, paleontological evidence, and a neo-Darwinian view of the genetic basis for variation and adaptation, speciation, and phylogenetic patterns, including human evolution. Three hours of lecture per week. Prerequisites: BIOL 3030 and BIOL 3060. (Fall, Spring)
- BIOL 3230 Cadaver Practicum** (2)
Supervised maintenance, dissection and demonstration of the human cadaver. Six hours work required per week. Prerequisite: BIOL 2210. May be repeated once for credit with permission of the instructor. Limited enrollment. (Fall, Spring)
- BIOL 3250 Histology** (3)
Microscopic structure of tissues and organs of the human body. Three hours of lecture per week. Prerequisites: BIOL 1030 and BIOL 1050. Co-requisite: BIOL 3260. (Spring)
- BIOL 3260 Histology Laboratory** (1)
Laboratory to accompany BIOL 3250. One three-hour meeting per week. Co-requisite: BIOL 3250. (Spring)
- BIOL 3270 Vertebrate Physiology** (3)
Study of mechanisms of function of major organ systems in the vertebrate body, especially the human, with emphasis on the cellular and molecular level. Three hours of lecture per week. Prerequisites: BIOL 1030, BIOL 1050, MATH 1050. Co-requisite: BIOL 3280. (Spring)
- BIOL 3280 Vertebrate Physiology Laboratory** (1)
Laboratory to accompany BIOL 3270. One three-hour meeting per week. Co-requisite: BIOL 3270. (Spring)
- BIOL 3290 Embryology** (3)
Study of comparative development of vertebrates with emphasis on the frog, chick and pig. Three hours of lecture per week. Prerequisites: BIOL 1030 and BIOL 1050. Co-requisite: BIOL 3300. (Fall)
- BIOL 3300 Embryology Laboratory** (1)
Laboratory to accompany BIOL 3290. One three-hour meeting per week. Co-requisite: BIOL 3290. (Fall)
- BIOL 3310 Cell and Molecular Biology** (3)
Study of structure and function of cells and organelles from the molecular and experimental perspectives. Three hours of lecture per week. Prerequisite: BIOL 3060. Co-requisite: BIOL 3320. (Spring)
- BIOL 3320 Cell and Molecular Biology Laboratory** (1)
Laboratory to accompany BIOL 3310. One three-hour meeting per week. Co-requisite: BIOL 3310. (Spring)
- BIOL 3370 Ichthyology** (2)
Natural history and classification of fishes, including their diversity, distribution, ecology, reproduction, behavior, evolution and conservation. Three hours of lecture per week. Prerequisites: BIOL 3030 & BIOL 3060. Co-requisite: BIOL 3380. (Maymester, odd years)
- BIOL 3380 Ichthyology Laboratory** (2)
Laboratory to accompany BIOL 3370. One four-hour laboratory per week. Longer field trips may be scheduled. Prerequisites: BIOL 1050 and BIOL 3030. Co-requisite: BIOL 3370. (Maymester, odd years)

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- BIOL 3390 Mammalogy (3)**
Structure, classification, life histories and distribution of mammals; introduction to methods of field investigation. Three hours of lecture per week. Prerequisites: BIOL 3030, BIOL 3060, and MATH 1040. Co-requisite: BIOL 3400. (Fall, odd years)
- BIOL 3400 Mammalogy Laboratory (1)**
Laboratory to accompany BIOL 3390. One three-hour meeting per week. Longer field trips may be scheduled. Co-requisite: BIOL 3390. (Fall, odd years)
- BIOL 3410 Invertebrate Zoology (3)**
Behavior, ecology, physiology and morphology of the invertebrate animals from sponges to starfish. Three hours of lecture per week. Prerequisite: BIOL 2130. Co-requisite: BIOL 3420. (Fall, even years.)
- BIOL 3420 Invertebrate Zoology Laboratory (1)**
Laboratory to accompany BIOL 3410. Field trip to the Pacific Ocean. Co-requisite: BIOL 3410. (Fall, even years.)
- BIOL 3430 Entomology (3)**
Behavior, ecology, evolution and identification of major orders of insects and arachnids. Three hours of lecture per week. Prerequisite: BIOL 3030. Co-requisite: BIOL 3440. (Fall, odd years)
- BIOL 3440 Entomology Laboratory (1)**
Laboratory to accompany BIOL 3430. One three-hour meeting per week. Longer field trips may be scheduled. Co-requisite: BIOL 3430. (Fall, odd years)
- BIOL 3450 Comparative Vertebrate Studies (3)**
Evolutionary comparison of the development, structure, and behavior of vertebrates. Three hours lecture per week. Prerequisite: BIOL 3110. Co-requisite: BIOL 3460. (Spring)
- BIOL 3460 Comparative Vertebrate Studies Lab (1)**
Laboratory to accompany BIOL 3450. One three-hour meeting per week. Co-requisite: BIOL 3450 (Spring).
- BIOL 3470 Herpetology (2)**
Natural history and classification of amphibians and reptiles, including their diversity, distribution, ecology, reproduction, behavior, evolution and conservation. Three hours of lecture per week. Prerequisites: BIOL 3030 and BIOL 3060. Co-requisite: BIOL 3480. (Fall, even years)
- BIOL 3480 Herpetology Laboratory (2)**
Laboratory to accompany BIOL 3470. One four-hour laboratory per week. Longer field trips may be scheduled. Prerequisites: BIOL 3030 and BIOL 1050. Co-requisite: BIOL 3470. (Fall, even years)
- BIOL 3490 Ornithology (3)**
Structure, identification, ecology and life histories of birds; emphasis on the local fauna. Three hours of lecture per week. Prerequisites: BIOL 3030, BIOL 3060, and MATH 1040. Co-requisite: BIOL 3500. (Spring, odd years)
- BIOL 3500 Ornithology Laboratory (1)**
Laboratory to accompany BIOL 3490. One three-hour meeting per week. Longer field trips may be scheduled. Co-requisite: BIOL 3490. (Spring, odd years)
- BIOL 3510 Plant Anatomy and Diversity (3)**
Comparative anatomy and developmental biology of major members of the plant kingdom. Topics include structure and development of cell types, tissues, tissue systems, and comparative development and reproduction of major groups within the plant kingdom. Three hours of lecture per week. Prerequisite: BIOL 1050. Co-requisite: BIOL 3520. (Fall)
- BIOL 3520 Plant Anatomy and Diversity Laboratory (1)**
Laboratory to accompany BIOL 3510. One three-hour meeting per week. Co-requisite: BIOL 3510. (Fall)
- BIOL 3530 Plant Physiology (3)**
Study of functions of plants including water and mineral relations, biochemical processes, and growth. Three hours of lecture per week. Prerequisites: BIOL 1030 and BIOL 1050. Co-requisite: BIOL 3540. (Spring)
- BIOL 3540 Plant Physiology Laboratory (1)**
Laboratory to accompany BIOL 3530. One three-hour meeting per week. Co-requisite: BIOL 3530. (Spring)
- BIOL 3550 Plant Taxonomy (3)**
Identification, classification and relationship of the vascular plants of the southwestern Utah region. Meets nine hours per week for one session. Prerequisites: BIOL 1030 and BIOL 1050. (Spring)
- BIOL 3570 Agrostology (3)**
Identification and taxonomy of native and introduced grasses of the western United States with emphasis on species important in grazing and soil binding. Meets six hours per week for one session. Prerequisites: BIOL 1030 and BIOL 1050. (Spring)
- BIOL 3630 Freshwater Biology (3)**
Introduction to the biology of freshwater organisms and the physical, chemical, geological, and human factors which shape their communities. Three hours of lecture per week. Prerequisite: BIOL 3030. Co-requisite: BIOL 3640. (Fall, taught on demand)
- BIOL 3640 Freshwater Biology Laboratory (1)**
Laboratory to accompany BIOL 3630. One three-hour meeting per week. Longer field trips may be scheduled. Co-requisite: BIOL 3630. (Fall, taught on demand)
- BIOL 3650 Conservation Biology (3)**
Application of ecological assessment techniques to evaluate local environmental issues with social, economic and biological significance. Three hours of lecture per week. Prerequisite: A college course in general biology, chemical principles, or physical geology. (Spring)
- BIOL 3710 Greenhouse Practicum I (1)**
Greenhouse maintenance, plant care, pest control and plant propagation techniques. One hour of lecture per week. Prerequisite: Consent of instructor. Co-requisite: BIOL 3720. (Fall, Spring)
- BIOL 3720 Greenhouse Practicum Laboratory I (1)**
Laboratory to accompany BIOL 3710. One three-hour meeting per week. Co-requisite: BIOL 3710. (Fall, Spring)
- BIOL 3730 Greenhouse Practicum II (1)**
Greenhouse practices including techniques of cutting seeding, seedage, and plant care. One hour of lecture per week. Prerequisites: BIOL 3710 and consent of instructor. Co-requisite: BIOL 3740. (Fall, Spring)
- BIOL 3740 Greenhouse Practicum II Laboratory (1)**
Laboratory to accompany BIOL 3730 One three-hour meeting per week. Co-requisite: BIOL 3730. (Fall, Spring)
- BIOL 3750 Fruit Production (3)**
Principles and practices of fruit production including site selection, orchard planning, pruning, training, propagation, varieties, rootstock and tree nutrition. Three hours of lecture per week. Prerequisite: Consent of instructor. (Taught on demand)

BIOL 3770 Vegetable Production (3)
Principles and practices of vegetable crop production, storage, processing and marketing with emphasis on major vegetable crops, covering both traditional and organic methods. Three hours of lecture per week. Prerequisite: Consent of instructor. (Taught on demand)

BIOL 3990 Preprofessional Seminar (1)
Exploration of medical, dental and allied health fields with emphasis on the admissions process including preparation for qualifying exams, interviewing techniques and writing personal essays. One one-hour meeting per week. No prerequisites. (P/F) (Spring)

BIOL 4070 History and Literature of Biology (3)
Study of the historical development of biology relative to personal philosophies of scientists and to social, cultural and technological factors by reading of science literature. Three hours of lecture per week. Prerequisite: BIOL 3110. (Spring)

BIOL 4310 Biotechnology (3)
Review of current techniques and strategies in recombinant DNA technology. Three hours of lecture per week. Prerequisites: BIOL 1030, BIOL 1050, and BIOL 3060. Co-requisite: BIOL 4320. Instructor permission required. (Fall)

BIOL 4320 Biotechnology Laboratory (1)
Laboratory to accompany BIOL 4310. One three-hour meeting per week. Co-requisite: BIOL 4310. Instructor permission required. (Fall)

BIOL 4410 Animal Behavior (3)
Study of adaptive value of animal behavior and behavioral diversity, including foraging, territoriality, communication, mating systems, sexual selection and social behavior, with emphasis on evolutionary and ecological interpretations. Three hours of lecture per week. Prerequisites: BIOL 3110 and MATH 1040. Field trip to the Pacific Ocean may be scheduled. (Fall)

BIOL 4510 Plant Pathology and Mycology (3)
Field and laboratory study of current methodologies in assessing plant disease with emphasis on fungal kingdoms. One three-hour meeting per week. Prerequisites: BIOL 1030 and BIOL 1050. (Fall, taught on demand)

BIOL 4530 Plant Propagation (3)
Rudiments, skills, and methods of the known types of plant propagation. Three hours of lecture per week. Prerequisites: BIOL 1030 and BIOL 1050. Co-requisite: BIOL 4540. (Spring, Taught on demand)

BIOL 4540 Plant Propagation Laboratory (1)
Laboratory to accompany BIOL 4530. One three-hour meeting per week. Co-requisite: BIOL 4530. (Spring, Taught on demand)

BIOL 4620 Bioinformatics (4)
An introduction to sequence analysis including genomics/proteomics, database searches, pairwise, multiple sequence alignments, and a variety of phylogenetic tree models, with a supportive framework of mathematical, statistical, computer concepts and applications, including graphing and hidden Markov models, Unix systems, Java and Perl script. Four hours of lecture per week. Prerequisite or co-requisite: BIOL 2150/2160, MATH 1040, MATH 3210, CS 1100. (Fall)

BIOL 4710 Microtechnique and Scanning Electron Microscopy (1-4)
Guided study and individual projects on principles and methods of preparing and observing materials with the light and scanning electron microscopes. Variable times. Prerequisite: Consent of instructor. (Fall, Spring)

BIOL 4830 Individual Study (1-9)
Individual study of topics in biology arranged by contract with an appropriate faculty supervisor. Variable times. Prerequisite: Consent of instructor. (P/F) (Fall, Spring)

BIOL 4840 Cooperative Education (1-9)
Observation and activities in professional practice situations off campus arranged by contract with an appropriate faculty supervisor. Variable times. Prerequisite: Consent of instructor. (P/F) (Fall, Spring)

BIOL 4850 Undergraduate Research (1-9)
Original laboratory or field research in biology arranged by contract with an appropriate faculty supervisor. Variable times. Prerequisite: Consent of instructor. (Fall, Spring)

BIOL 4890 Internship (1-9)
An off-campus, full-time experience with an employer, agency, or organization that will provide hands-on experiences. Internships will be initiated by a contract between the student, the provider, and the faculty adviser. The student may be paid or work as a volunteer. (P/F). Prerequisite: Consent of instructor. (Fall, Spring, Summer)

BIOL 4900 Biology Teaching Methods (3)
Effective strategies for doing science in the classroom based on national standards for inquiry and the scope and benchmarks of biological literacy, with emphasis on science as a way of knowing. Three hours of lecture per week. Prerequisite: BIOL 3110. (Fall)

BIOL 4980 Student Teaching in Biology (2)
Supervised teaching in a secondary school. Hours arranged by contract. Co-requisite: EDUC 4980. (P/F) (Fall, Spring)

BIOL 4990 Seminar (1)
Investigation and discussion of advanced topics in biology with student presentations. One one-hour meeting per week. Prerequisite: BIOL 3030 and BIOL 3060. (P/F) (Fall, Spring)

BIOL 5890 Internship (1-9)
An off-campus, full-time experience with an employer, agency, or organization that will provide hands-on experiences. Internships will be initiated by a contract between the student, the provider, and the faculty adviser. The student may be paid or work as a volunteer. (P/F) Prerequisite: Consent of instructor. (Fall, Spring, Summer)

BIOL 6000 Ecology of Southern Utah (3)
An advanced biology course designed for Master of Education degree students who are teaching biology or other sciences in the secondary schools. The course provides both lecture and field experience, culminating in a 10 to 14 day field trip among the life zones of southern Utah and northern Arizona. Emphasis will be on the vegetation communities and associated animals, but geology and water resources will also be discussed.

BUSINESS (BU)

BU 2010 Convocation (1)

BU 2120 Service Learning (1)
This course is designed to take the student volunteer through the process of volunteerism and its application to themselves and their academic training through practical experience and critical reflection. May be taken two times for credit. Pass/Fail grade only. (Fall, Spring, Summer)

Course Descriptions

BUSINESS ADMINISTRATION (BA)

BA 1010 Business & Society (D) (3)
The course provides an introduction to business functions, with particular emphasis on the American system. Its purpose is to create a better understanding of today's business environment through an analysis of various economic and legal systems, business and employee management issues, marketing of products and services, accounting and financial operations including the stock market and insurance, and the relationships between business, government and international economic and market forces. (Fall, Spring)

BA 2350 Legal Issues in Society (S) (3)
A course designed for non-business majors and vocational students covering a survey of legal issues in society. This course will cover basic aspects of business transaction including law of contracts, agency, sales and negotiable instruments. (Fall, Spring)

BA 2900 Special Topics (1-4)
This course will provide opportunities for special topics to be taught at the lower division level. Topics will vary by semester. Repeatable for credit. (P/F) (As needed)

BA 6000 Foundations of Quantitative Analysis (3)
This course provides an accelerated overview of mathematical and statistical theories and methods in support of the common body of knowledge core required for all MBA students not having previous business core work. Prerequisites: Admission into a graduate business program and completion of relevant foundation courses, or sufficient undergraduate coursework. (Offered as needed)

BA 6010 Legal/Social Environment of Business (3)
This course provides an accelerated overview of both the theories and methods of Law in support of the common body of knowledge core required for all MBA students not having previous business coursework. Prerequisites: Admission into a graduate business program and completion of relevant foundation courses, or sufficient undergraduate coursework. (Offered as needed)

BA 6100 Advanced Issues in Business (1-3)
This course has variable credit (1-3) and is repeatable for credit. This course will be taught as a formal class once per year. It may also be taken any time under a directed readings approach on issues important to the individual graduate student. Approval of the mentoring faculty must be obtained prior to registration for the directed readings approach. Prerequisites: Admission into a graduate business program and completion of relevant foundation courses, or sufficient undergraduate coursework. (Fall, Spring, Summer)

BUSINESS EDUCATION (BE)

BE 4900 Teaching Business, Marketing, & Information Systems (3)
Designed to train prospective business teachers in instructional methods as applied to basic business and marketing subjects by developing course objectives, chapter/unit tests, lesson/unit plans, teaching skills, motivation techniques, evaluation procedures, and youth organizations. Prerequisite: Junior class rank, ACCT 2010, BA 2350, ECON 1010, FIN 3250, MKTG 3010, or instructor consent. (Spring)

BE 4950 Teaching Office & Computer Subjects (3)
Designed to train prospective business teachers in instructional methods as applied to the business skill courses: keyboarding, computer applications, and business procedures by developing

course objectives, lesson and unit plans, presentation and motivation techniques, evaluation procedures, and youth organizations. (Fall)

BE 4980 Student Teaching in Business Education (2)
Designed to place the prospective teacher in a secondary business department working with one or more cooperating teachers. Placement through the College of Education. The student will receive additional credits through the Education Department. Prerequisite: IS 3900, 4900, 4950 and secondary education requirements. (P/F) (Fall, Spring)

CAD/CAM ENGINEERING TECHNOLOGY (CCET)

CCET 1610 Engineering Technology Graphics (3)
An introductory course covering the basis of manual drafting and design. Course includes instruction in practices and procedures used in mechanical design, architectural design and civil design. Course will include instruction in orthographic projections, isometric drawings, section views, auxiliary views, elevations, floor plans, and plat maps. (Fall, Spring)

CCET 1630 Introduction to CAD/CAM 3D Design (3)
A course for engineering and non-engineering majors. An introductory course covering the basics of Computer Aided Design, Computer Aided Manufacturing, and 3D Solid Modeling. Course includes basic instruction in AutoCAD, AutoDesk Inventor, Mastercam and CATIA. Students gain an understanding of the principles of design and manufacturing. Course includes a survey of machining, inspection, 3D rendering, assembly, animation, and analysis. Course will also include a survey of basic principles used in architectural and civil design. Course format includes instructor lead tutorials with hands-on, practical laboratory activities. (Fall, Spring)

CCET 1640 Computer Aided Design (3)
A course designed to increase the students' self confidence in the use of CAD hardware and AutoCAD software. Students will learn the AutoCAD commands to generate 2-D drawings through the use of the digitizer or mouse keyboard input with real world coordinates with relative, polar and absolute input, use of Icons with modify, construct menus, base line and continuous dimensioning techniques, dimensions variables, edit dimension. Learn AutoCAD menu system, auxiliary and descriptive geometry applications. Lecture and lab training. (Fall, Spring)

CCET 2650 Mechanical Blueprint Reading (2)
A course designed to assist in the interpretation of machine, welding, and sheet metal type drawings. You will apply techniques understand symbols, abbreviations, nomenclature and blueprint protocol. Prerequisites: CCET 1610, industrial experience, and/or instructor's approval. (Fall)

CCET 3610 Architectural Design (3)
An introduction to architectural design and architectural working drawings with solar design applications. Study of architectural practices, procedures, symbology, dimensioning techniques, standards and terminology, traffic patter. Practical applications in energy efficiency, solar design, planning and functional utility in design and working drawings. Prerequisites: CCET 1610, CCET 1640. (Fall)

CCET 3620 3-D Design (3)
This course is designed to introduce the student into the world of 3-D Parametric Design and Modeling using Inventor and/or Solid Works software. The course starts with creating constrained sketches and extruding and/or revolving the sketch into a solid. The course will then go into creating a production drawing from the created solid. The production drawing would include all required orthographic views, detail views, section views and projected views as well as dimensioning and text. From there the course will go into creating

and parametrically constraining assembly 3-D models. The last section of the class will allow the student to apply this new modeling knowledge to a real world project. Prerequisites: CCET 1640. (Fall).

CCET 3630 Fundamentals of CATIA (3)

Develop skills in file management, coordinates, screen layout, space viewing, wire frame construction, modify techniques, part geometry, build surfaces and solids, drawing mode in 2-D and 3-D. Prerequisites: CCET 1640, and/or Instructor approval. (Fall)

CCET 3670 Civil Design (3)

The course is designed to apply civil design applications in land development, subdivision layout, water and sewer layout, with the use of Softdesk (DCA) software curve charts, road profile details, digital terrain modeling (DTM), highway-road design, earthworks, and civil design applications. Prerequisites: CCET 1610, 1640 and/or instructor's approval. (Spring)

CCET 3680 CNC Design (3)

The A&M programming language is taught and utilized in the manufacturing process utilizing the vertical CNC mill. The application of creative program flow in CNC design is used in both relative and absolute modes. Three dimensional programming is introduced utilizing random access memory, editing commands, subroutines and loops. Prerequisite: MATH 1060 preferred. (Fall)

CCET 4600 Engineering Design (3)

A course in design applications, solving technical design problems and using problem solving techniques and research techniques along with industrial reference materials in the final mechanical design analysis, will use advanced design and CAD applications. Design procedures in flat pattern development, calculate setback and bend allowance. Apply reverse engineering and production drawing applications. Prerequisites: CCET 1610, and 1640 and/or instructor's approval. (Spring)

CCET 4610 Advanced Application in CATIA (3)

In depth training in solid modeling, analysis, manipulation of standards, setup using IGES, FTP, PGP files, work with advanced finite element design tools. Interference of mating parts, and point analysis on final design, tooling requirements. Prerequisites: CCET 1640, CCET 3630 and/or instructor's approval. May be repeated for credit to incorporate projects from industry. (Spring)

CCET 4690 CNC Software and Applications (3)

Students will design parts and generate programming language utilizing Mastercam software and then produce the parts using vertical CNC mills, Prerequisite: CCET 3680. (Spring)

CCET 4960 Senior Project (3)

Consideration of selected CAD-CAM problems. Presentation of topics by students, department faculty, and CAD-CAM industry representatives. Prerequisite: Senior standing in CAD-CAM engineering technology. (Spring)

CHEMISTRY (CHEM)

CHEM 1010 Introduction to Chemistry (P) (3)

A one semester liberal arts course dealing with the fundamentals in chemistry that apply to everyday living. A course intended to fill the general education requirement in physical science. Co-requisite: CHEM 1020 (Fall, Spring, Summer)

CHEM 1020 Intro to Chemistry, Lab (P) (1)

Laboratory to accompany Chemistry 1010. Two hours of lab per week. Co-requisite: CHEM 1010. (Fall, Spring, Summer)

CHEM 1110 Elementary Chemistry (P) (3)

A general introduction to inorganic chemistry designed for family and consumer sciences, agriculture, nursing, and other students who need only one year of basic chemistry. No previous chemistry or physics required. Three lectures per week. Prerequisite: MATH 1010 or equivalent. Co-requisite: CHEM 1130. (Fall)

CHEM 1120 Elementary Bioorganic Chemistry (5)

An introduction to organic chemistry and biochemistry designed for family and consumer sciences, agriculture, nursing, and other students who need only one semester of this material. The first portion of the course will cover hydrocarbon chemistry and the chemistry of organic functional groups. The second portion of the course will be an overview of biochemical processes. Five hours of lecture per week. Prerequisite: CHEM 1110, Co-requisite: CHEM 1140 (Spring)

CHEM 1130 Elementary Chemistry Lab (P) (1)

Laboratory to accompany Chemistry 1110. Two hours of lab per week. Co-requisite: CHEM 1110. (Fall)

CHEM 1140 Elementary Bioorganic Chemistry Lab (1)

Laboratory to accompany Chemistry 1130. Two hours of lab per week. Co-requisite: CHEM 1120. (Spring)

CHEM 1210 Chemical Principles I (P) (4)

An introductory chemistry course designed for students in engineering, physical science, pre-medical, pre-dental, pre-pharmacy, or pre-veterinary medicine. For all students who need more than one year of chemistry. Prerequisite: Two years of high school algebra or Math 1050, or high school chemistry. Four lectures per week. Co-requisite: CHEM 1230 (Fall, Spring, Summer)

CHEM 1220 Chemical Principles II (4)

Continuation of CHEM 1210. Co-requisite: CHEM 1240. (Fall, Spring, Summer)

CHEM 1230 Chemical Principles I Lab (P) (1)

Lab to accompany CHEM 1210. Co-requisite: CHEM 1210. (Fall, Spring, Summer)

CHEM 1240 Chemical Principles II Lab (1)

The lab to accompany CHEM 1220. Co-requisite: CHEM 1220. (Fall, Spring, Summer)

CHEM 2010 Chemical Lab Safety (1)

An introductory course in laboratory safety introducing students to common hazards and exposure risks, proper disposal of waste, appropriate methods in handling hazardous materials, and the legal requirements for safety in chemical laboratories. A satisfactory level of enrollment must be achieved.

CHEM 2310 Organic Chemistry I (4)

A study of the carbon containing molecules of life through the theories that govern chemical change. Concepts discussed include the principles of structure and chemical reactivity, the physical properties, preparation, naming, and reaction mechanisms of biologically active compounds. Pre professional requirements (dental, medical, veterinary) for organic chemistry are met in this course. Prerequisite: A minimum grade of 'C' (2.0 or above) in CHEM 1220 (Fall, Summer)

CHEM 2320 Organic Chemistry I I (4)

A continuation of CHEM 2310 Organic Chemistry I. Four hours lectures per week. Prerequisite: A minimum grade of 'C' (2.0 or above) in CHEM 2310 (Spring, Summer)

CHEM 2330 Organic Chemistry Laboratory (2)

Laboratory focused on the investigation of organic reactions and

Course Descriptions

modern spectroscopic techniques used in the design and synthesis of interesting organic compounds. This course will acquaint the student with the basic techniques used in a wide variety of research laboratories. A total of six to eight hours a week are involved in this course. Prerequisite: A minimum grade of 'C' (2.0 or above) in CHEM 2310. (Spring, Summer)

CHEM 2990 Introduction to Undergraduate Research (1-3)

Laboratory and/or field course centers on helping the student gain insight into the research arena. Introduction to the scientific process and research techniques will be given. This course may be repeated but credit earned in this course can not be used to satisfy requirements for the major or minor. (TBA)

CHEM 3160 Intermediate Inorganic Chemistry (3)

A study of structure, reactivity patterns, and bonding theory as applied to inorganic chemistry. Topics covered will include periodic relationships, group theory, molecular orbital and valence bond approaches to bonding, solid state chemistry, and electrochemistry. Three hours of lecture per week. Prerequisite: CHEM 1220 and CHEM 2310. (Fall, even years)

CHEM 3220 Quantitative Analysis (3)

Basic theory of gravimetric and volumetric analysis. Three hours lecture per week. Prerequisite CHEM 1220, (Fall, odd years)

CHEM 3610 Physical Chemistry I (3)

A fundamental consideration of chemical thermodynamics, chemical kinetics, electro-chemistry, quantum theory, molecular structure and statistical thermodynamics. Prerequisite: CHEM 1220, MATH 1220; Co-requisite: CHEM 3630. (Fall)

CHEM 3620 Physical Chemistry II (3)

A continuation of CHEM 3610. Co-requisite: CHEM 3640 (Spring)

CHEM 3630 Physical Chemistry I Lab (1)

Lab to accompany CHEM 3610. Co-requisite: CHEM 3610. (Fall)

CHEM 3640 Physical Chemistry II Lab (1)

Lab to accompany CHEM 3620. Co-requisite: Chemistry 3620. (Spring)

CHEM 3700 Environmental Chemistry (3)

Application of stoichiometry, kinetics, equilibrium, and thermodynamics to aquatic and atmospheric systems. Three hours lecture per week. Prerequisite: CHEM 1220. (Fall)

CHEM 3990 Undergraduate Research (1-6)

Laboratory and/or field course centered around helping the student conduct meaningful and novel research. Directed research and techniques used will be discussed. This course may be repeated for variable credit but credit earned in this course can not be used to satisfy requirements for the major or minor. Prerequisite: Open to qualified students by permission from the instructor. (TBA)

CHEM 4110 Biochemistry I (4)

A course designed to help the student develop an understanding of biochemical processes through an exploration of the vast research potential, as well as common molecular, cellular, and biochemical themes. Structure, function, and reactivity of biomolecules, as well as enzyme kinetics and mechanisms will be discussed in this semester. Prerequisite: A minimum grade of 'C' (2.0 or above) in CHEM 2320, and BIOL 1030 or 1050 (Fall)

CHEM 4120 Biochemistry II (4)

A continuation of CHEM 4110. This semester deals with an introduction to the catabolic and anabolic processes of animal and plant metabolism. Prerequisite: A minimum grade of 'C' (2.0 or above) in CHEM 4110 (Spring)

CHEM 4160 Advanced Inorganic Chemistry (3)

A course covering descriptive chemistry. Both main group and organometallic chemistry will be discussed. Three hours of lecture per week. Prerequisite: CHEM 3160, Co-requisite: CHEM 4170 (Spring, odd years)

CHEM 4170 Advanced Inorganic Chemistry Lab (1)

Lab to accompany CHEM 4160. Co-requisite: CHEM 4160. (Spring, odd years)

CHEM 4230 Instrumental Analysis (3)

Theory and principles underlying the analytical applications of spectroscopy, spectrophotometry, colorimetry, magnetic resonance and chromatography. Three hours lecture per week. Prerequisite: CHEM 3220 or 3620. (Spring even years)

CHEM 4240 Analysis Laboratory (2)

Principles and practices of analytical laboratory work including quality assurance, gravimetric, volumetric, and instrumental techniques, raw data conversion, and proper reporting techniques. Six hours lab per week. Prerequisite: CHEM 4230 or permission of the instructor. (Spring)

CHEM 4250 Synthesis Laboratory (2)

A laboratory-intensive course centered on the examination and use of advanced synthetic techniques employed in a wide variety of research laboratories. Prerequisite: A minimum grade of 'C' (2.0 or above) in CHEM 2320 and CHEM 2330 (Fall, odd years)

CHEM 4540 Selected Topics in Chemistry (3)

Explores advanced, modern and current topics in chemistry. The specific topic will appear on the students' transcript. This course may be repeated with different topics, but a specific topic cannot be counted more than once for upper division credit. Prerequisite: Permission from instructor. (TBA)

CHEM 4990 Chemical Literature and Seminar (1)

A course for chemistry majors created to introduce prospective chemists to the chemical literature and literature searching techniques. Students will also learn how to prepare various technical manuscripts and gain experience in giving diverse types of oral presentations. Prerequisite: Limited to chemistry majors with a minimum grade of 'C' (2.0 or above) in CHEM 2320 or any upper division chemistry course. (Fall)

CHEM 4890 Internship (P/F) (1-8)

CHEM 6000 Chemistry in the Secondary Schools (3)

An advanced chemistry course designed for Master of Education degree students who are teaching chemistry and other sciences in the secondary schools. The course is intended to provide a theoretical physical chemistry approach for those students who have had only a freshmen level chemistry experience. Some experience with organic chemistry is useful, but is not required. Topics to be covered include chemical kinetics, quantum theory, molecular structure, and molecular spectroscopy as well as other possible appropriate topics. This course is not intended to be a prerequisite for more advanced chemistry courses. Prerequisite: College-level algebra course, and freshmen level course in chemistry. (Summer)

COMMUNICATION (COMM)

COMM 1010 Essentials of Communication Lecture (H) (1)

Introduces aspects of human communication including communication with oneself, interpersonal, small group, and public speaking. Lectures include topics such as self-concept, perception, intercultural communication, developing relationships, interviewing skills, critical thinking and listening, interpersonal, nonverbal

communication and language use that leads to improved communication through listening, writing, and speaking. COMM 1011 is required the same semester as COMM 1010. (Fall, Spring, Summer)

COMM 1011 Essentials of Communication Seminar (H) (2)

Students practice skills related to effective writing, speaking, and listening. Students research, write drafts and rehearse, present public speeches and small group projects and critique other's speaking and writing. Focus is on listening, writing, speaking with thoughtfulness, clarity, coherence, and persuasiveness. Co-requisite: COMM 1010 required. (Fall, Spring, Summer)

COMM 1140 Newswriting (3)

Gathering and reporting facts. Gaining accuracy of observation, the ability to find the essential and significant details, and to report them clearly and with economy of diction and with fluency are the aims of this course. (Fall, Spring)

COMM 1180 Introduction to Photography (F) (3)

The study of art, design, and communication principles as applied and practiced in photography, a dominant visual medium in society. Presents and practices the basic process of black and white photography and visual component elements and applications as applied to color photography and digital imaging. 35 mm camera required, adjustable shutter and aperture recommended. Attendance at a three hour lab is required. (Fall, Spring)

COMM 1310 Thinking and Listening Critically (H) (3)

A study of critical thinking and reasoning skills toward messages delivered and received through various communication formats. The course is designed to aid the student in the ability to define a problem, select pertinent information for the solution of the problem, recognize stated and unstated assumptions, formulate and select relevant hypotheses, and make valid conclusions and inferences. (Fall, Spring)

COMM 1560 Radio Production (3)

Focus on effective communication of a message through live and digitally recorded production. Hands-on introduction to programming, music scheduling, news, public affairs, entertainment, sports, promotions, and advertising sales. (Fall, Spring)

COMM 1660 Television Production (3)

This course offers a non-technical consideration of TV production basics, including camera operation, editing, lighting, performance, and general studio and field operations. Students will be taught both studio production and field production techniques. (Fall, Spring)

COMM 1950 Introduction to Public Relations (3)

This course surveys how public relations function in organizations and in society. Emphasis on the theoretical foundations and the circular process of research, planning, communication and evaluation gives a base to examine how public relations serves vital management functions in corporate, government and non profit sectors by maintaining relationships with important media, community, employee, consumer and investor "publics." (Fall, Spring)

COMM 2030 Ethics, Moral Choice and Society (H) (3)

Foundations of ethics as a philosophical discipline, including rhetoric and moral arguments of early philosophers (Plato, Aristotle), enlightenment philosophers (Hobbes, Kant, Mill) and modern philosophers (Ross, Rawls, Bok). Students will integrate moral reasoning into discussions of social and ethical issues. Emphasis on ethics in business, medicine and the mass media. (Spring)

COMM 2050 Mass Media and Society (S) (3)

A study of the power and responsibility of newspapers, magazines, radio, television, computer networks, motion pictures students strive

to improve media literacy and other mass media and their significance in contemporary society. (Fall, Spring)

COMM 2080 Introduction to Advertising (S) (3)

Helps students gain an understanding of the modern world of advertising by exploring its foundations, evolution and current environment. The course enables students to make important distinctions between advertising and several business functions that are often confused with advertising. In addition, students are introduced to the language of advertising; key players in the industry; the major media of advertising; government agencies that regulate advertising; ethical issues confronting advertising executives; and the creative and business processes that lead to creating successful ads. (Fall, Spring)

COMM 2150 Intercultural Communication (S) (3)

A study of the ways people communicate within and between cultures, including a consideration of cultural contexts and the relationship between culture and communication. (Spring)

COMM 2350 Small Group Communication (3)

A functional approach to effective performance with emphasis on the role and value of communication patterns within the group. (Fall, Spring)

COMM 2380 History and Appreciation of Film (F) (3)

Understanding and appreciating the cinema as a mass communication medium, as a social force and as an art form. (Fall, Spring)

COMM 2750 Interpersonal Communication (3)

A study of interpersonal communication variables and situations, designed to aid the student in improving social relationships, increasing self-awareness and aiding the student in using effective communication to achieve personal goals. (Fall, Spring)

COMM 2760 Broadcasting and the Public (3)

This course offers an overview of the radio-television-cable industry with emphasis to include history, technological innovations, programming practices, and the business structure of the industry. (Spring)

COMM 2950 Public Relation Case Studies (3)

This course is designed to help students develop and refine skills in strategic analysis and planning needed for a career in public relations. In addition to studying specific case studies of how professionals addressed situations, students analyze and write case studies based on projected problems or opportunities. Prerequisite: COMM 1950. (Spring)

COMM 3020 Media Research (3)

This course emphasizes empirical and critical research appropriate for understanding mediated communication. An emphasis is placed on conducting surveys, focus groups, content analysis, and social marketing methods. (Fall, Spring)

COMM 3040 News Editing (3)

Practical applications of editing procedures to make news stories readable, factually accurate and grammatically correct. Emphasizes AP style, discusses legal and ethical concerns in the newsroom, and utilizes on-line applications. Includes rigorous practice in editing copy, writing headlines, and composing picture captions as these relate to news stories. Prerequisite: COMM 1140. (Spring)

COMM 3070 Communication Graphics (3)

A study of current graphic media production techniques and software using the PC computer, including desk-top publishing, web design and photographic manipulation as applied to advertising, public relations and publication. (Fall, Spring, Summer)

COMM 3080 Advertising Copywriting & Layout (3)

Course Descriptions

This course develops advertising and layout skills. Visual design principles as well as copywriting techniques applicable to various advertising media will be studied. Practical experience will include laying out and preparing ads for publication. Prerequisites: COMM 1140, 2080, 3070. (Fall)

COMM 3140 Broadcast Writing (3)
Writing factual and fictional material for broadcast. Prerequisites: COMM 1140, COMM 1560, COMM 1660 (Spring)

COMM 3150 Nonverbal Communication (3)
A study of the sub-codes of nonverbal communication and how they affect human communication patterns and interpersonal relationships. (Spring)

COMM 3460 Broadcast Management (3)
A practical approach to the study of management in a broadcast/cable setting. Emphasis will include management techniques, programming practices, sales management techniques, and basic audience analysis. (Fall)

COMMUNICATION PRACTICUM

Practical development and/or refinement of communication skills within the co-curricular areas of forensics, journalism, television, radio and advertising. Courses may be repeated and are listed 3500 through 3504. Only 3 credit hours will count toward major.

COMM 3500 Practicum-Forensics (3)
Preparation and practice for participation in intercollegiate debate and individual speaking competition. (Fall, Spring)

COMM 3501 Practicum- PR-Ad Lab (3)
A course designed to provide real world experience in sales, creative strategy, advertising design, copywriting, production, and media buying. Instructor's signature required. Prerequisites: COMM 1140, 1950 or 2080 and 3080 or 3950. (Fall, Spring)

COMM 3502 Practicum-Newspaper Lab (3)
A laboratory course designed to give students experience in writing, editing and publishing. Students will work on the University newspaper. Prerequisite: 1140. (Fall, Spring)

COMM 3503 Practicum-Radio Lab (3)
Supervised work on the University's FM station, KSUU FM. Prerequisite: COMM 1560. (Fall, Spring)

COMM 3504 Practicum-TV Lab (3)
A television lab experience which results in public affairs, news, documentary, sports and educational programming for the University cable station. Prerequisite: COMM 1660 at SUU. (Fall, Spring)

COMM 3810 Advanced Public Speaking (3)
Advanced principles of public speaking and their practical implementation for effective communication presentations in academic and corporate settings. Prerequisite: COMM 1010 and 1011. (Fall, Spring)

COMM 3850 Organizational Communication (3)
A study of intra- and inter-organizational communication functions, message systems and subsystems; information flow and the factors that expedite or impede it. (Fall, Spring)

COMM 3950 Public Relations Writing (3)
This course focuses on planning and executing effective communication programs. The course emphasizes refining writing skills by planning and designing the various types of documents--proposals, press releases, news and feature stories, scripts, advertising and promotional copy, position papers, speeches, etc.--commonly used in public relations practice. (Fall)

COMM 4010 Persuasion (3)
Advanced study of theories and models of persuasion. Stress on the literature of attitude and behavior change. Prerequisite: COMM 3020. (Fall, Spring)

COMM 4050 Mass Media Theory and Effects (3)
An examination of theoretical underpinnings of mass media, with a focus on the effects of media on society, institutions, and individuals. Prerequisite: COMM 3020. (Spring)

COMM 4140 Advanced Reporting (3)
This course will give each student a chance to study advanced reporting, principles of newspaper and magazine layout and apply as many of the principles as possible through the course assignments. Prerequisite: COMM 1140. (Spring)

COMM 4240 Technical Writing (3)
This course focuses on practical types of writing used in business and industry. Using principles of analyzing and planning to meet the reader's informational needs, students produce proposals, instructions and the various types of informative and persuasive reports used in organizations. (Fall, Spring)

COMM 4260 Media Law (3)
An overview of legal and ethical considerations for practitioners of mass communication. Topic areas include (but are not limited to) libel law, privacy law, broadcast regulations, advertising regulation, and First Amendment law. (Fall)

COMM 4280 Advertising Strategies (3)
Practical preparation in audience analysis, advertising goals and budgets, creating an effective media plan and strategic media buying. Prerequisite: COMM 3080. (Spring)

COMM 4350 Communication Theory (3)
Theoretical approaches to the study of human communication. Prerequisite: COMM 3020. (Spring, Fall)

COMM 4440 Feature Writing (3)
Instruction and practical experience in feature writing for newspapers and other periodicals. Areas of concentration include writing styles; points of view; leads and endings; use of resources such as note taking, tape recorders, etc.; interviewing ideas and seeing and finding the feature story. (Spring)

COMMUNICATION TOPICS:

Discussion of contemporary skills/research in communication, including conflict management, human resource development, photography and political communication. Courses are listed 4500 and above.

COMM 4500 Intermediate Photography (3)
Continuation of COMM 1180. Further experience in black and white photography, including an in-depth study of the zone system and portraiture. Emphasis will be on quality black and white photography. An introduction to color will include slide development and color printing. Students will be introduced to digital photography. Prerequisite: COMM 1180 or instructor approved based on portfolio. (Taught alternate years.)

COMM 4501 Topics-Conflict Management (3)
Designed to familiarize students with the many factors that contribute to interpersonal conflicts and the communication skills for productive conflict management or resolution. (Spring)

COMM 4502 Topics-Political Communication (3)
A study of how symbols are used when communicating in a public context. Emphasis is placed on understanding the discourse of

contemporary prominent political speakers, how radio and television have shaped political discourse, the role of political debates and the communication strategies employed in mass advertising campaigns. Specific attention is placed on understanding the effects of the media on political persuasion. (Fall)

COMM 4503 Topics-Human Resource Development (3)
How to design, develop and implement training programs in organizations; principles of career coaching, counseling and retraining to aid employees. (Fall)

COMM 4750 Advanced Video Editing (3)
Advanced video editing including linear and nonlinear methods, digital production, and effective post-production skills. Prerequisite: COMM 1660, 3504.

COMM 4760 Television Field Production (3)
Concentrated work in the production of on-location television programs. Work will include news, sports, public affairs and documentary productions. Students will work individually and in groups learning proper preproduction, production and postproduction techniques. Prerequisite: COMM 1660 at SUU. COMM 3504 recommended. (Spring)

COMM 4800 Individual Projects (1-3)
In consultation with an instructor, the student selects an area for independent research and/or production in advertising, interpersonal communication, public relations, writing, publishing, still or motion picture photography or broadcasting. (Fall, Spring)

COMM 4830 Readings and Conferences (1-3)
Prerequisite: Approval of instructor. (P/F) (Fall, Spring)

COMM 4890 Internship In Communication (1-9)
Provides the student with hands-on experience in advertising, news writing, editing, photography, publication layout and design, public relations, broadcasting or human resource development under the direct supervision of a qualified professional communicator. (P/F) (Fall, Spring)

COMM 4900 Teaching Communication (2)
Materials and methods of teaching speech communication, broadcasting and journalism in secondary schools, including the preparation of typical unit plans and lesson plans and the supervision of co-curricular activities. Must be taken concurrently with COMM 4901. (Must be taken through SUU Independent Study.)

COMM 4901 Teaching Communication Lab (1)
Application in experiential settings of the principles discussed in COMM 4900. Must be taken concurrently with COMM 4900. (Must be taken through SUU Independent Study.)

COMM 4950 Public Relations Campaigns (3)
This course will mix discussion of issues and problems in public relations with hands-on program development as students research, plan, and execute a campaign for a client. Prerequisites: COMM 1950, 2950, 3950. (Spring)

COMM 4980 Student Teaching (P/F) (Fall, Spring) (2)

COMPUTER NUMERIC CONTROL (CNC)

CNC 1400 CNC Machinist Training (18)
This is the first semester of a one year training program for CNC machinists. TECH 1400 is only taught once a year but is not a prerequisite for the remaining two semesters. Upon completion the students will demonstrate basic machine shop skills in the following areas; machine shop safety, blue print reading, precision measuring,

precision layout, project planning, project quality, basic lathe operation, basic mill operation, basic grinder operation, and proper operation of hand tools. \$850 lab fee (includes tuition). (Fall)

CNC 1410 CNC Machinist Training (18)
This is the second semester of a one year training program for CNC machinists. TECH 1410 is only taught once a year but is not a prerequisite for the other two semesters. Upon completion the students will demonstrate basic machine shop skills in the following areas; machine shop safety, blue print reading, precision measuring, precision layout, project planning, project quality, advanced lathe set up and operation, advanced mill set up and operation, advanced grinder operation, CNC lathe operation, introductory CNC mill operation. \$850 lab fee (includes tuition). (Spring)

CNC 1420 CNC Machinist Training (18)
This is the third semester of a one year training program for CNC machinists. TECH 1420 is only taught once a year but is not a prerequisite for the other two semesters, it is recommended however that either TECH 1400 or TECH 1410 or both are taken prior to taking TECH 1420. Upon completion the students will demonstrate trade entry level machine shop skills in the following areas; machine shop safety, blue print reading, precision measuring, project quality, CNC lathe operation, CNC mill operation, CNC lathe and mill programming, and introductory CAM programming. \$850 lab fee (includes tuition). (Summer)

COMPUTER SCIENCE (CS)

CS 1000 Introduction to Computers and the Internet (C) (3)
This course introduces fundamental concepts for using personal computer software. Topics covered include computer hardware, operating systems, networks, the Internet and the World Wide Web, and application software including word processing, spreadsheets, database, presentation, and web page creation. Emphasis is placed upon applications in problem domains related to the student's discipline (business, education, humanities, or science). The impact of computers on our lives and society is explored. (Fall, Spring)

CS 1050 Introduction to Programming (3)
An introduction to computer programming using Visual Basic. Topics include: iterative and conditional behavior, subroutines, arrays, input/output and user interface mechanisms such as forms and controls. Emphasis is placed on developing simple interactive applications on the Windows platform. Prerequisite: MATH 1010 or math ACT of 23 or higher. (Fall, Spring)

CS 1100 Object Oriented Programming (3)
An introduction to object oriented programming: the use of modularity, encapsulation, and abstraction to construct programs that are collections of interacting objects. Topics include: abstract data types, inheritance, recursion, program verification and documentation. Prerequisite: CS 1050 or previous exposure to computer programming. (Fall, Spring)

CS 1110 Data Structures (3)
Concepts and theory of data structures and algorithm analysis. Understanding basic data structures such as lists, stacks, queues, trees, graphs, and hash tables. Further exploration of object oriented programming and the software development process. Prerequisite: A grade of C or better in CS 1100 (Fall, Spring)

CS 2400 Fundamentals of Computer Architecture (3)
Understanding what computers are and how they work. Emphasis on understanding concepts and basic principles at many different layers of abstraction including: semiconductors, transistors, combinational and sequential logic circuits, processor architecture, instruction set architecture, assembly language and its relation to higher level

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languages. Prerequisite: MATH 1010 or math ACT (within the past two years) of 23 or higher. (Fall)

CS 2800 Web Programming (3)

A detailed examination of browsers, servers, and the structure of Internet applications. Topics include: HTML, HTTP, SSL, CGI, cookies, and popular scripting languages such as JavaScript and Perl. Prerequisite: A grade of C or better in CS 1100, ISA 2000, or previous exposure to HTML. (Spring)

CS 2990/3990 Undergraduate Research (1 to 5)

Instructor permission required. (Fall, Spring)

CS 3000 Algorithms (3)

This course is a survey of the most effective algorithms currently in use for a wide variety of problems and their usage in program design. Characteristics and performance of algorithms are studied. Advanced object oriented programming techniques are emphasized. Prerequisite: CS 1110, MATH 1630. (Fall)

CS 3150 C and C++ Programming (3)

An introduction to C and C++ for students with previous programming experience in Java. Topics include C and C++ syntax and constructs, the Standard Template Library, and advanced problem solving techniques in both languages. Prerequisites: CS 1110. (every third semester)

CS 3430 Graphics Programming (3)

This course provides a solid introduction to modern computer graphics concepts and programming techniques. Topics include object modeling, 3D transformations and viewing, shading models, color theory, ray tracing, and advanced techniques for rendering terrains and organic forms. Students will gain substantial experience in hands-on graphics programming using the industry standard OpenGL library. Prerequisite: CS 1110. (Every third semester)

CS 3500 Advanced Computer Architecture (3)

A detailed look at the design and organization of modern computing systems. Emphasis on understanding contemporary RISC processors at the RTL level. Current issues in the industry are emphasized, for example: pipelined data paths advanced cache design, and instruction level parallelism. Prerequisite CS 2400 (Spring)

CS 3600 Operating System Concepts (3)

An introduction to fundamental concepts in the design, implementation, and usage of operating systems. Topics include: process management, main memory management, virtual memory, I/O and device drivers, file handling, and concurrency. Prerequisite: CS 1110. (Every third semester)

CS 3700 Computer Forensics (3)

This course involves intensive study of the prevention and detection of security violators and cybercriminals. Topics include an introduction to network security, intrusion detection, incident response, infrastructure protection, disaster recovery, continuity planning, software engineering, cyber-security, and computer crime investigation. Prerequisite: CS 1110.

CS 3800 Programming Language Concepts (3)

This course examines basic issues related to the design and implementation of programming languages: syntax, semantics, typing, and environments. It emphasizes these issues in the different paradigms of imperative, object-oriented, functional, and logic programming. Prerequisite: CS 1110 (Every third semester)

CS 4210 Software Engineering (3)

An examination of systematic, disciplined, and quantifiable approaches to the development, operation, and maintenance of software. This course features a major programming project that is

developed in accordance with sound software engineering principles. Prerequisite: CS 1110. (Every third semester)

CS 4400 Theory of Computation (3)

An introduction to the theory of computation. Topics include: automata and formal languages, Turing machines and recursive functions, uncomputability, computational complexity, and mathematical logic. Prerequisite: CS 2700 and Math 1630. (Spring)

CS 4700 Internet Forensics and Cyber Security (3)

The purpose of this course is to teach the concepts of computer system security models, networking security, and the layered protocol architectures, detection and prevention of intrusion and attack, digital evidence collection and evaluation, and the legal issues involved in computer forensic analysis. Prerequisites: CS 1110, CS 3700.

CS 4720 Artificial Intelligence (3)

Investigation of the theories and techniques of knowledge representation and automated reasoning as the foundations of artificial intelligence. Includes the comparative analysis of established theories and the synthesis of automated problem-solving behavior. Prerequisite: CS 1110 (Every third semester)

CS 4920 Special Topics Workshop (P/F)

Note: The Information Systems department within the School of Business offers several courses that are related to computer science, including applications oriented classes in database systems and networking.

CONSTRUCTION MANAGEMENT (CM)

CM 1290 Electrical Systems (2)

The study of electrical wiring in residential and small commercial buildings. Design of circuits and related electrical equipment using the National Electric Code will be covered. (Fall)

CM 2010 Framing Systems (3)

A study of construction framing materials and methods. Construction safety, codes, blueprint reading, new framing technology, and both residential and commercial construction will be emphasized. (Fall)

CM 2050 Concrete and Masonry (3)

This class covers the versatility, durability, and mix design of quality concrete. Also, included is the study of the use of masonry in modern construction. Classroom lab testing and practical on the job experience will assist the student in gaining insight into this remarkable building material. (Spring)

CM 2100 Finishing Systems (3)

A study of interior trims and finishes and their installation for walls, floors, doors, windows and cabinetry; exterior roof, cornice and siding materials will be covered. Craftsmanship and quality materials will be emphasized. (Fall)

CM 3240 Estimating and Bidding (3)

Estimating plans and specifications to determine material quantities, labor, overhead, and profit on residential structures will be covered. Computerized estimating systems will be examined and used. Prerequisite: BE 1400 or instructor's consent. (Spring)

CM 3270 Building Codes (3)

Uniform Building Codes will be the basis of the course, designed to introduce current building codes to carpenters, contractors, building inspectors, real estate inspectors, and fire prevention personnel. Application of administrative procedures is included. (Spring)

CM 3650 Residential Drafting (3)
Development of residential plans; floor, plot, elevations, sections, and details. The use of architectural CAD software to draft floor plans and 3-D renderings will be used. (Fall)

CM 3880 Scheduling and Cost Control (3)
Construction scheduling using traditional methods and computer aided Primavera scheduling software. Methods of planning, scheduling, and monitoring projects with emphasis on the critical path methods, gant bar charts, and other related scheduling techniques. Taught alternate years. (Spring)

CM 4400 HVAC & Plumbing Principles & Design (3)
This course covers heating, ventilation, air conditioning (HVAC), heat loss and gain calculations, payback analysis energy-efficient construction techniques and solar-assisted heating systems. Plumbing systems, fixture unit calculations, plumbing and HVAC designs in residential and commercial applications. Taught alternate years. (Fall)

CRIMINAL JUSTICE (CJ)

CJ 1010 Introduction to Criminal Justice (S) (3)
Introduces students to the purpose, function, and history of law enforcement, courts and corrections. Overview of crime and its impact on American society. Lectures include topics such as crime and the media, causes of crime, search and seizure, probable cause, police selection and training, law enforcement as a career, court structure and function, the death penalty, prison life, and punishment. (Fall, Spring)

CJ 1070 Law Enforcement Academy, Part I (3)
Core curriculum to provide the basic training required to certify as a reserve or special function officer. Police Officer Standards & Training (P.O.S.T.) certification only. This course is offered through Weber State University. Registration information is available from the Department of Technology and Criminal Justice.

CJ 1080 Law Enforcement Academy, Part II (3)
Police Officer curriculum to provide the opportunity for students to complete the basic training required to certify as peace officer with full police powers. (A student must have completed the core curriculum to register for this course.) P.O.S.T. certification only. This course is offered through Weber State University. Registration information is available from the Department of Technology and Criminal Justice.

CJ 1330 Criminal Law (3)
An examination of substantive criminal law which includes definition of law, definition of crime, general principles of criminal responsibility, elements of the principle crimes, punishments, and conditions or circumstances which may excuse the accused from criminal responsibility or mitigate punishment. Prerequisite: CJ 1010. (Fall, Spring)

CJ 1350 The Corrections Process (3)
An introductory level study of the corrections system including: history and evaluation, the law and the correctional process, offender rights, and correctional administration. (Fall, Spring)

CJ 1400 Criminal Investigation (3)
An analytical study of the investigative process. Duties and problems of investigating officers, crime detection, sources of information, evidence collection, crime scene investigation, use of records, and preparation for trial, introduction to criminalistics and forensic science. (Fall, Spring)

CJ 2100 Juvenile Justice (3)
An introductory level study of the juvenile justice system including: origin, theory and development, court and detentioning, and other alternatives. (Fall)

CJ 2110 Introduction to Private Security (3)
Examination of the diverse components which make up the security functions in private industry. Principles and concepts in physical and facilities security, loss prevention and crime control. A wide range of specialized security fields and career opportunities will be presented. (Fall)

CJ 2150 Principles of Forensic Science (3)
Introductory course includes scientific principles applied to crime scenes, collection and preservation of evidence, laboratory techniques, and services. The identification of unknown materials and substances, fingerprinting, comparison and matching of physical evidence. (Fall)

CJ 2200 History of Criminal Justice (3)
Surveys criminal justice in Western civilization and American life, chronologically from ancient times to the present. Historical problems of crime, law enforcement and penology, set against the background of major historical events. (Fall, Spring Internet Course)

CJ 2350 Laws of Evidence (3)
Origin, development and philosophy of rules of evidence, tests of admissibility, weight, value and types of evidence, laws of arrest, search, and seizure. Prerequisite: CJ 1010. (Fall, Spring)

CJ 3100 Advanced Criminalistics (3)
Application of the principles of forensic science to special topics to include advanced fingerprint techniques, (AFIS, chemical development, etc.), trace evidence analysis, drug identification, firearms identification principles, and crime lab services. Prerequisite: CJ 1010, CJ 1400, CJ 2150 or permission of instructor. (Spring)

CJ 3300 Victimology (3)
The problems and dilemmas faced by crime victims, relationships between victims and offenders, and the emerging victim's role in the criminal justice process. Prerequisite: CJ 1010 or permission of instructor. (Spring)

CJ 3320 Criminal Procedure (3)
Examines procedural requirements for judicial processing of criminal offenders including the rights of the accused, general court procedures, trial preparation, and principal constitutional law as applicable to criminal justice practitioners. Prerequisites: CJ 1010, CJ 1330. (Spring)

CJ 3400 Drugs and Crime (3)
The historic, economic, social, and political roles of legal and illegal drugs, their contribution to crime and impact on the criminal justice system; production distribution systems, efforts to combat, decriminalization; prevention, and treatment. Prerequisite: CJ 1010, or permission of instructor. (Fall)

CJ 3500 Criminology (3)
Study of the nature, extent, causes, and treatment of crime. Prerequisite: CJ 1010, or permission of instructor. (Fall, Spring)

CJ 3700 Criminal Justice Management (3)
A study of current trends in criminal justice organization and management including: social setting, organizational theory and design, productivity and evaluation, human resource management, decision making, and organizational change. Prerequisite: CJ 1010, or permission of instructor. (Fall, Spring)

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CJ 4200 Ethical Issues in Criminal Justice (3)
Ethical issues such as capital punishment, official corruption, deadly force, discretion and deception by practitioners are critically examined. Prerequisite: CJ 1010, CJ 1330 or permission of instructor. (Fall, Spring)

CJ 4500 Special Issues in Criminal Justice (3)
Critical issues within the criminal justice system with emphasis on various topics of current concern including criminal trends, civil liability, and street gangs. Prerequisite: CJ 1010, CJ 1330. (Fall, Spring)

CJ 4700 Police Systems and Practices (3)
Analysis of contemporary policing problems; issues oriented discussion focuses on critical concerns facing American police, including personnel systems, organization, operations, discretion, police culture, ethics, and community relations. Prerequisite: CJ 1010, CJ 1330. (Spring)

CJ 4710 Comparative Criminal Justice Systems (3)
This course compares the United States criminal justice system with other international systems from selected countries throughout the world. Prerequisite: CJ 1010, 1330. (Spring)

CJ 4832 Readings and Conferences (2)
See advisor. (P/F) Prerequisite: Senior standing.

CJ 4844 Cooperative Education (2-8)
Open to Criminal Justice majors and minors who have completed a minimum of 80 credit hours to meet cooperative service experience requirements of the department. Provides academic credit for experience. Amount of credit will be determined by the department. (P/F) (Fall, Spring)

CJ 4890 Internship (3-6)
Open to Criminal Justice majors and minors who have completed a minimum of 60 credit hours and meet advanced standing requirements of the department. Provides academic credit for supervised, professional level, on-the job service. Amount of credit will be determined by the department. (P/F) (Fall, Spring)

CJ 4990 Criminal Justice Seminar (3)
An in depth exploration of contemporary issues and problems in criminal justice with particular emphasis on police roles, the justice system, white collar crime, terrorism, and career opportunities. Prerequisites: CJ 1010, CJ 1330, and junior or senior standing. (Fall, Spring)

DANCE (DANC)

DANC 1010 Inside the Art of Dance (F) (3)
This course is designed to introduce the general student to 1) dance as an emblem of cultural identity and expression of cultural mores; 2) dance as an expression of social order; 3) dance as a classical art; 4) dance as a medium of aesthetic fusion; and 5) dance as a creation of individual artists. (Fall, Spring)

DANC 1020 Beginning Social Dance (1)
This course introduces the general student to the lifetime recreational activity of social dance. No previous dance experience is required. (Fall, Spring.)

DANC 1040 Arts Retrospective (D) (1)
An examination of how the arts, both influence and respond, to a societal epoch or theme. Through a selected specific topic the course investigates the interrelationship of three fine art disciplines and how they express the spirit of an age. (Three interlocking one-credit courses combine for this three-credit inquiry) Co-requisites 2 of the following: ART 1040, TA 1040, or MUSC 1040. (Fall, Spring)

DANC 1100 Classical Ballet I (1)
Students will be introduced to the fundamentals of classical ballet; basic alignment, barre and floor technique. Does not count toward a major in dance. (Fall)

DANC 1110 Modern Dance I (1)
This course will introduce students to the basic technique and fundamental principles of modern dance. Movement is presented by means of demonstration, description and exploration. May be repeated three times for credit. Does not count towards a major in dance. (Fall)

DANC 1120 Tap Dance I (1)
An introduction of the study of the technique of tap dancing with a variety of stylistic approaches. Does not count towards a major in dance. (Fall, Spring)

DANC 1130 Classical Ballet II (1)
A continuation of classical ballet training; extended vocabulary and technique. May be repeated three times for credit. Does not count towards a major in dance. (Fall, Spring)

DANC 1140 Modern Dance II (1)
A continuation of the beginning level of modern dance training. May be repeated three times for credit. Does not count towards a major in dance. (Spring)

DANC 1500 Jazz Dance I (2)
An introduction to the basic techniques of contemporary jazz dance. May be repeated three times for credit. Does not count towards a major in dance. (Spring)

DANC 1550 Folk and Cultural Dance (1)
This course is designed to introduce the general student to folk and cultural dances from various countries. This will be an experiential-based class that brings physicality to the historical context and significance of different folk and cultural dances. (Fall, Spring.)

DANC 2080 Improvisation (1)
Exploration and development of improvisational techniques used in the creation process. (Fall)

DANC 2090 Jazz Dance II (2)
Intermediate study of jazz dance technique. It is recommended that students taking this course have experience in both ballet and modern dance technique. May be repeated three times for credit. (Fall)

DANC 2120 Tap Dance II (1)
Continued study of the fundamental techniques of tap dance. May be repeated three times for credit. Does not count towards a major in dance. (Spring)

DANC 2130 Movement for Actors (2)
This course focuses on the basic elements of physical movement from a variety of disciplines as they pertain to the craft of acting, leading to a greater awareness of the actors' body as a tool towards theatrical communication. (Spring)

DANC 2150 Classical Ballet III (2)
Entry level course for dance majors in classical ballet. Focus on developing technical proficiency and expanding the student's vocabulary of classical ballet. Admission by placement. (Fall)

DANC 2160 Modern Dance III (2)
Introduction to and development of the fundamentals of contemporary dance technique. Admission by placement. (Fall)

- DANC 2170 Classical Ballet IV (2)**
Continued development of classical ballet technique. Focus on extending the vocabulary and technical proficiency from level III. Admission by placement. Prerequisite: DANC 2150. (Spring)
- DANC 2180 Modern Dance IV (2)**
Continuing exploration and development of the fundamentals of contemporary dance technique. Admission by placement. Prerequisite: DANC 2160.
- DANC 2540 Dance Practicum, Section 1 (1) Section 2 (2)**
This course provides students an opportunity to work under directors, designers, or choreographers to gain performance or production experience. May be repeated for credit. (Fall, Spring)
- DANC 2920 Dance Workshop (P/F) (Fall, Spring) (1)**
- DANC 3010 Rhythmic Form and Analysis (3)**
Analysis of rhythmic structure relative to movement through the study of elements of music and music structures: sight reading, note values, reading and writing metric patterns. Practical exploration of rhythmic properties of pulse, meter, tempo, beat, accent, mood, intensity, and phrases with application to movement/dance principles. (Spring)
- DANC 3090 Jazz Dance III (2)**
Prerequisite 2090 or consent of instructor. Advanced study of jazz technique. May be repeated three times for credit. (Fall)
- DANC 3120 Tap Dance III (1)**
Intermediate level of tap dance technique. May be repeated three times for credit. (Fall)
- DANC 3130 Pointe (1)**
Instruction in the proper fit and technique of point shoes in classical ballet. Practical exercises and combinations for the furthering of pointe technique of the intermediate-to-advanced student. (Fall, Spring)
- DANC 3150 Classical Ballet V (2)**
Continued development of classical ballet technique at the intermediate level, extending the vocabulary and technical proficiency from level IV. Additional emphasis will be placed on musicality and performance quality. Admission by placement. Prerequisites: DANC 2150, 2170, or placement audition. (Fall)
- DANC 3160 Modern Dance V (2)**
Continuing exploration of contemporary dance technique at an intermediate level with emphasis on more complex movement phrasing, rhythmic variation, and use of space. Admission by placement. Prerequisites: DANC 2160, 2180. (Fall)
- DANC 3170 Classical Ballet VI (2)**
Continued development of classical ballet technique at the high intermediate level extending the vocabulary, technical proficiency, musicality, and performance qualities of level V. Additional emphasis will be placed on examining fluidity of movement phrasing and ballet styles. Admission by placement. Prerequisites: DANC 2150, 2170, 3150. (Spring)
- DANC 3180 Modern Dance VI (2)**
Continuing exploration of contemporary dance technique at an upper intermediate level with emphasis on more complex movement phrasing, rhythmic variation, and use of space. Admission by placement. Prerequisites: DANC 2160, 2180, 3160. (Spring)
- DANC 3450 American Character Ballet (2)**
Prerequisite 2150 or consent of instructor. A unique character class which was developed by Burch Mann, the director and choreographer of the "American Folk Ballet." This course utilizes various disciplines and works toward professional standards in both technique and performance. May be repeated eight times for credit. (Fall, Spring)
- DANC 3500 Dance History (F) (3)**
A conceptual and historical examination of dance as part of the human experience from its historical roots to its present status in a variety of cultures. (Spring)
- DANC 3510 Dance Composition (2)**
Elements of space, time and qualities of movement are basis for improvisational and compositional study. (Fall)
- DANC 3530 Principles of Choreography (2)**
Dance composition with introduction to motif development and sources for choreography. (Spring)
- DANC 3860 Social Square Dance Fundamentals and Methods (3)**
A course designed to provide a broad overview of the fundamentals of social and square dance and provide a forum for the development of basic teaching methods involved in this content area. (Fall)
- DANC 3900 Creative Movement for Children (1.5)**
This course is designed to provide resources and strategies to introduce creative movement into an elementary education curriculum. It will provide material for movement, organization techniques, and suggestions for guiding children through creative exploration and discoveries through movement. (Fall)
- DANC 4120 Tap Dance IV (1)**
Intermediate/advanced level of tap dance technique. May be taken three times for credit. (Spring)
- DANC 4130 Tap Dance V (1)**
Advanced level of tap dance technique. May be taken four times for credit. (Fall, Spring)
- DANC 4150 Classical Ballet VII (3)**
Continued development of classical ballet technique at the advanced level, extending the growth in technical proficiency, musicality, fluidity, style, and examining the proper structure of a ballet technique class. Admission by placement. Prerequisites: DANC 2150, 2170, 3150, 3170.
- DANC 4160 Modern Dance VII (3)**
Continuing development of contemporary dance technique at an advanced level with emphasis on refining performance quality, depth of physicality, dramatic expression, and individual style. Admission by placement. Prerequisites: DANC 2160, 2180, 3160, 3180.
- DANC 4170 Classical Ballet VIII (3)**
Advanced Ballet Technique. Continued development in technical proficiency, musicality, stylistic variables and individual interpretation leading to professional work. Prerequisites: DANC 2150, 2170, 3150, 3170, 4150.
- DANC 4180 Modern Dance VIII (3)**
Continuing development of contemporary dance technique at an advanced level offering a transition from dance study to professional work. Admission by placement. Prerequisites: DANC 2160, 2180, 3160, 3180, 4160.
- DANC 4300 Dance Ensemble (2)**
Enrollment by audition. Advanced study in ensemble performance. May be repeated eight times for credit. (Fall, Spring)
- DANC 4640 Special Projects in Dance (1-3)**
- DANC 4890/5890 Internship (P/F) (2)**

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DANC 4900 Methods in Dance Education (2)
A course designed to provide methodology needed to teach dance in secondary schools. Organizational techniques, lesson plan development, accompaniment for dance will be focused upon. A unit on injury prevention with basic care of dance-related injuries is presented. (Fall)

DANC 4980 Student Teaching (P/F) (2)

EARLY CHILDHOOD DEVELOPMENT (ECD)

ECD 1500 Human Development Through the Lifespan (S) (3)
Emphasizes and examines aspects of human development across the lifespan. Includes holistic view of developmental changes that integrate theories, research and application. Overview of the development of the individual and the family in society. (Fall, Spring)

ECD 2610 Introduction to Child Care and Guidance (2)
Introduction to various child care programs. Emphasizes guidance techniques for infants, toddlers and preschool children. 2 Lectures per week. Pre-requisite: ECD 1500. Co-requisite: ECD 2620. (Fall, Spring)

ECD 2620 Child Care and Guidance Lab (1)
Laboratory practicum experience is a requirement of this course. Two lab hours per week are required. Co-requisite: ECD 2610. (Fall, Spring)

ECD 2650 Child Care Issues (1)
An overview of current topics and issues concerning infant, toddler, and preschool programs. Pre-requisite: ECD 1500, 2610, 2620. Co-requisite: ECD 2660. (Fall, Spring)

ECD 2660 Child Care Lab (2)
Practical laboratory experience in SUU Child Care Center to include a variety of duties and experiences. Pre-requisite: ECD 1500, 2610, 2620. Co-requisite: ECD 2650. (Fall, Spring)

ECD 3500 Child Development: Infancy and Early Childhood (3)
In depth study of the child from conception to three years of age. Will include parenting and teaching techniques as well as a 10 hour practicum with infants and toddlers. (Fall)

ECD 3600 Child Development: Age 6 - 12 (3)
An in-depth study of the physical, social, personality, and intellectual development of the school age child. Includes parenting skills as well as a 10 hour practicum with children from 6 to 12. (Spring)

ECD 3610 Play and Advanced Guidance (2)
Review of developmental principles and guidance philosophies. Will include the meaning of play and its value in meeting needs of the growing child. Two lectures per week. Pre-requisites: ECD 1500, 2610, 2620. Co-requisite: ECD 3620. (Fall, Spring)

ECD 3620 Advanced Preschool Lab (1)
Practical laboratory experience. 3 lab hours per week. Prerequisites: ECD 1500, 2610, 2620. Co-requisite: ECD 3610. (Fall, Spring)

ECD 3800 Child Care Administration and Management (3)
Comprehensive study of administrative and managerial aspects of child care. Emphasizes planning and developing quality child care programs. Prerequisites: ECD 1500, 2610, 2620, 3610, 3620. (Spring)

ECD 3900 Methods of Preschool Curriculum (3)
Study of the history of preschool programs and of the different types of preschool programs now in operation. The setting up of curricula and developing lesson plans for the preschool child. Will include

science, social studies, math, creative materials and health and safety. Prerequisite: ECD 1500, 2610, 2620. (Fall, Spring)

ECD 4650 Current Issues in Child Care (1)
Advanced overview of current topics and issues concerning infant, toddler, and preschool programs. Pre-requisite: ECD 1500, 2610, 2620, 2650, 2660. Co-requisite: ECD 4660. (Fall, Spring)

ECD 4660 Current Issues in Child Care (Advanced Lab) (2)
Laboratory experience in the SUU Child Care Center to include supervisory duties. Pre-requisites: ECD 1500, 2610, 2620, 2650, 2660. Co-requisite: ECD 4650. (Fall, Spring)

ECD 4880 Child Care Teaching Practicum (4)
Advanced child care practicum (10 hours per week for full semester) designed to provide experience in administration, curriculum development, and managerial facets of child care. Pre-requisite: ECD 3610, 3620. (Fall, Spring)

ECD 4830 Readings and Conferences (P/F) (1,2,3,4)

ECD 4840 Cooperative Education (P/F) (2,4,6)

ECD 4890/5890 Internship (P/F) (3)

EARLY CHILDHOOD EDUCATION (ECED)

Teacher Candidates must be admitted to the Elementary Education Department to take the following courses (See Admission Requirements in the College of Education section)

ECED 3910 Integrated Curriculum and Assessment (3)
Methods in planning and implementing an integrated curriculum using projects and thematic units, developmentally appropriate instruction for children's learning. Assessment strategies and data collection, both formal and informal, for use in evaluating the progress of children in kindergarten and primary grades, meeting individual needs and reporting progress to parents. Prerequisite: Admission to the Elementary Education Department. (Fall, Spring, Summer)

ECED 3920 Foundations in Early Childhood Education (1)
History and philosophy of early childhood education, recent trends, learning environments and programs for the education of children from birth to eight years. Develops collaborative teaming skills and ability to work with community leaders, agencies, businesses, and others in promoting children's learning. Focus on parent involvement and family/community relations. Prerequisite: Admission to the Elementary Education Department. (Fall, Spring)

ECED 3930 Teaching Creative Arts in Early Childhood (4)
Focuses on teaching strategies specific to the developmental needs of children from age four through eight that encourage children's aesthetic development, physical abilities, and self esteem through meaningful, integrated learning experiences in art, music, movement/dance, and drama. Lab fee \$10.00. Prerequisite: Admission to the Elementary Education Department. (Fall, Spring, Summer)

ECED 4980 Early Childhood Student Teaching (6)
An in-school experience designed to help teachers apply methods and materials found to be successful with and early childhood education pupils. This course is required for the Early Childhood Education License. Students are placed in a public school. Advance application required. Fee structure can be found in the Clinical Practice section. Prerequisite: Admission to the Elementary Education Department.(P/F)

ECONOMICS (ECON)**ECON 1010 Economics as a Social Science (S) (3)**

General Education course. Provides overview of principles of economics. The economy is analyzed in terms of historical origins and development and current performance and problems, including poverty, pollution, health care, international trade policy, unemployment and recession, inflation, Social Security System, taxation policy, and national debt. (Fall, Spring)

ECON 1740 U.S. Economic History (I) or (S) (3)

Satisfies American government requirement of general education. History from colonial times to present. Coverage of U.S. Constitution; national economy; pluralism; ethnicity, race, gender; distribution of wealth and power; social conflict and reform; entrepreneurs, workers, workplace; cultural encounters; popular culture; U.S. and global affairs. (Fall, Spring)

ECON 2010 Microeconomics (S) (3)

Introduction to basic microeconomic principles: price theory, theory of the firm, trade and comparative advantage, public goods, taxation, welfare economics, and industrial organization. Public policy with regard to the environment, consumer protection, and other problems is also examined. (Fall, Spring)

ECON 2020 Principles of Macroeconomics (S) (3)

Introduces measurements of national economic performance: GDP, and interest, inflation and unemployment rates. Develops a model to describe the economic situation, and to present the options available to policy makers. Discusses the institutions and constraints that frame policy. International economic issues and the relation of the U.S. economy to the global economy are then examined. (Fall, Spring)

ECON 2500 Quantitative Methods for Business & Economics (3)

An introduction to applied quantitative methods for business and economics covering three general areas: optimization, simulation, and regression. Electronic spreadsheets are used throughout as the primary tool for analysis and modeling. The optimization section includes an overview of differential calculus along with mathematical programming. Prerequisites: MATH 1050 and MATH 1040 or 2040. (Fall, Spring)

ECON 3010 Managerial Economics (3)

Managerial economics applies microeconomic analysis to the management of the firm. Using economic theory, statistical analysis and optimization methods, students solve management problems relating to pricing, production and distribution, innovation and technological change, and cost. Prerequisites: MATH 2040, MATH 1100 or ECON 2500. (Fall, Spring)

ECON 3020 Macroeconomics for Business Decisions (3)

Explores the macroeconomics environment within which business decisions are made. Source data is used to obtain measures of the economy. Macroeconomic theory underlying the conduct of monetary and fiscal policy is analyzed. Prerequisites: ECON 2010, 2020, MATH 2040, MATH 1100, ECON 2500 or approved Minor in department. (Spring)

ECON 3170 Decision Modeling (3)

An introduction to the fundamental methods of operations research/management science. Emphasis is on applied business decision modeling. Topics include linear, integer, and nonlinear programming; decision analysis; and simulation. Prerequisites: ECON 2010, 2020, MATH 2040, MATH 1100 or ECON 2500. (Fall, Spring)

ECON 3650 International Economics & Finance (3)

Economic analysis of international trade in goods and services, as well as in financial assets. Trade policies in the form of tariffs, quotas, VER's and subsidies are explored, along with exchange rate determination in the short and long run. This course includes analysis of international capital budgeting and the use of futures and options in the international trade context. Prerequisite: Econ 2010. (As needed)

ECON 3790 History of Economic Thought (3)

An introduction to the development of economic thought from the time of Adam Smith to the present. Analysis of both the orthodox and radical or socialist traditions in economics. Prerequisites: ECON 2010, 2020. (Fall, Taught alternate years)

ECON 3840 Public Finance (3)

Public sector economics examines the microeconomic functions of government and the way government affects the allocation of resources and the distribution of income. Topics include welfare theory, public goods, market failure and cost-benefit analysis. Prerequisite: ECON 2010. (Fall, alternate years)

ECON 4200 Human Resource Economics (3)

This course applies economic theory to the behavior of employers and employees. Topics include labor supply and demand, wage determination, schooling, human capital, unionization and migration. Prerequisites: MATH 1100 or ECON 2500, MATH 2040 (or equivalent courses), ECON 2010, 2020. (Taught alternate years) (Spring)

ECON 4260 Principles of Econometrics (3)

An introduction to the basic statistical methods used to estimate and analyze quantifiable economic relationships with an applied emphasis. The primary focus is on the classical linear regression model and violations of its assumptions. Prerequisites: MATH 2040, MATH 1100 or ECON 2500, ECON 2010, 2020. (Spring)

ECON 4500 Economics of Strategy (3)

Principles of industrial organization economics and the economics of the firm applied to business management and strategy. Includes an overview of standard industrial organization topics such as market structure, entry, and pricing rivalry along with issues in organizational economics such as the principal-agent problem and vertical integration. Prerequisite: ECON 2010, 2020, 3010, MATH 2040, MATH 1100 or ECON 2500. (As needed)

ECON 4890 Internship (P/F) (Fall, Spring) (1-3)**ECON 4900 Special Topics (1-3)**

This course will provide students with a theoretical framework as well as applied quantitative skills as students generate analysis of issues related to environmental, welfare, healthcare, education, and other economic policies. Topics will vary by semester. Repeatable for credit. Prerequisite: MATH 1100, 2040 (or equivalent courses), ECON 2010, 2020. (Fall, Spring)

ECON 4910 Economics for Teachers (1)

This course is designed for K-12 teachers wishing to enhance their economics teaching. Students review Utah State Office of Education and National Council for Economic Education standards. Activities and lessons appropriate for these standards are examined. (As needed)

ECON 6000 Foundations of Economics (3)

This course provides an accelerated overview of both the micro and macro theories and methods of economics in support of the common body of knowledge core required for all MBA students not having previous business course work. (Offered as needed)

Course Descriptions

ECON 6100 Quantitative Methods for Business (3)

Application of quantitative methods to business analysis and decision-making. Fundamental topics of management science are covered including optimization modeling, decision and risk analysis, simulation modeling, linear regression analysis, and forecasting methods. Prerequisite: Acceptance into graduate business program and completion of relevant foundation course or sufficient undergraduate coursework. (Fall)

ECON 6200 Managerial Economics (3)

Application of microeconomic principles to business management and strategy. Includes fundamental topics in microeconomic theory, industrial organization, and organizational economics. Uses business case analysis. Prerequisite: Acceptance into graduate business program. (Spring)

EDUCATION (EDUC)

EDUC 2000 Exploring Education in Society (D) (3)

An exciting journey into the dynamic world of learning. Explores historical, philosophical, political, and economic foundations of education. Delivery includes guest lectures providing interdisciplinary perspectives into current events, diversity, and education's impact on careers and society. (Fall, Spring, Summer)

EDUC 2010 Convocation (2)

EDUC 2120 Service Learning (1)

This course is designed to take the student volunteer through the process of volunteerism and its application to themselves and their academic training through practical experience and critical reflection. May be taken two times for credit. Pass/Fail grade only. (Fall, Spring, Summer)

EDUC 2840 Cooperative Education (P/F) (2-8)

EDUC 3170 Instructional Technology for Educators (3)

Students will learn how to use technology to support effective education. They will demonstrate, through an electronic portfolio, the knowledge, skills, and attitudes necessary to design successful learning experiences and to improve personal productivity. Students who enroll should already possess basic computer skills. Course Fee \$37.50. Prerequisites: EDUC 2000 and Admission to Secondary Education. (Fall, Spring, Summer)

EDUC 4831-4833 Readings and Conference (P/F) (1-3)

EDUC 4840 Cooperative Education (P/F) (2-8)

EDUC 5000-5999 Education course offerings numbered 5000 through 5999 are designed in a workshop or seminar formats and are intended for practicing teachers in area schools. These courses are generally not for degree seeking students in the MEd program. A complete listing of such courses is available from the School of Continuing and Professional Studies.

EDUC 5320 Advanced Content Literacy (2)

This course prepares educators to teach students literacy strategies that help them acquire knowledge from content area materials. Methods taught include integrating curriculum across content areas, using literature to complement learning, and teaching students to navigate reference, internet, and multimedia materials. (Spring)

GRADUATE STUDIES IN EDUCATION (EDUC)

EDUC 6000 Issues in Psychology and Measurement (3)

The study of current psychological principles of teaching and learning, and principles and techniques for developing, validating and interpreting educational measures. The use of educational measures

for evaluation and planning processes. (Online, Spring, Summer/1st Session, or arranged for face-to-face cohort groups.)

EDUC 6010 Classroom Management (3)

Theory and application for creating a favorable learning environment by gaining and maintaining the cooperation of students. (Online, Fall, Summer/2nd Session, or arranged for face-to-face cohort groups.)

EDUC 6020 Information & Technology in Education (3)

Introduction to information technology for teachers, administrators, and media specialists. Examines the role of technology in curriculum and instruction. (Online, Fall, Summer/2nd Session, or arranged for face-to-face cohort groups.)

EDUC 6030 Action Research in Educational Technology (3)

This graduate level course is designed to provide students with a conceptual framework and a working knowledge of action research methods with the context of technology education. Students will explore the vocabulary and processes involved in conducting, interpreting and evaluating educational research as they identify a research project, gather information and prepare a preliminary proposal, collect and analyze data, conduct electronic literature searches, and write a formal research report on a topic related to the effective use of technology in classroom instruction. (Online, Spring, Summer/2nd Session, or arranged for face-to-face cohort groups.)

EDUC 6031 Instructional Design and Technology (3)

This course serves to introduce and provide experience with the systems approach to the design of instruction and training. The major components of instructional design models, along with their respective functions will be presented. This is an applications course which provides both introductory information and application of skills and techniques necessary in the design, development, and evaluation of sound instructional products. These skills are particularly pertinent for efficient and cost effective development of effective solutions to novel instructional problems. (Online, Summer/1st Session - Odd years, or arranged face-to-face cohort groups.)

EDUC 6032 Educational Technology & the Constructivist Tradition (3)

How educators can use technologies to support constructivist learning. In the past, technology has largely been used in education to learn from. Technology programs were developed with the belief that they could convey information and understanding more effectively than teachers. But Constructivists believe that you cannot convey understanding. That can only be constructed by learners. This course argues that technologies are more effectively used as tools to construct knowledge with. The emphasis of EDUC 6032 will be upon using technology as a tool in learning. (Online, Fall - Odd years, or arranged for face-to-face cohort groups.)

EDUC 6033 Distance Education and On-Line Learning (3)

Designed to help teachers make effective use of distance education technologies in K-12 classrooms, adult settings, and in training. Learners will engage in both synchronous and asynchronous learning through the use of compressed video, WWW pages, email, desktop video conferencing, and hands-on live interaction. Instruction will be grounded in a thematic plan which positions participants as action researchers utilizing community resources. (Online, Spring - Even years, or arranged for face-to-face cohort groups.)

EDUC 6034 Computer Supported Collaborative Learning (3)

Examines the theoretical base, strategic issues, and research findings related to the application of technology supported tools for collaborative learning. Students will apply tools in specific collaborative environments. (Online, Fall - Even years, or arranged for face-to-face cohort groups.)

EDUC 6035 Technology Based Training & Staff Development (3)

This course serves to introduce and provide experience with professional development for adult learners in teaching and technology integration. The major components of adult learning and technology instruction models are studied. (Online, Spring - Odd years, or arranged for face-to-face cohort groups.)

EDUC 6036 Leadership with Technology (3)

Students that complete this course will effectively lead and oversee a technology integration team at the school level. Upon completion the student will demonstrate knowledge of process management functions, resource management functions in the classroom, and define and set appropriate goals for technology-mediated instructional project. Students will also make recommendations for activities, techniques, identify variables, establish communication systems, adapt current systems and compare various technology instructional models. The Supervisory/ Administrative Electronic Portfolio is also established during this course. Required for Supervisory/Administrative Endorsement. (Online, Fall, Summer/2nd Session, or arranged for face-to-face cohort groups.)

EDUC 6080 Leadership and the School Principal (3)

A study of leadership in educational organizations and understanding the role of the administrator in curriculum, instruction, and administration of human resources. School leadership functions of working with the public, groups, problem solving, and collaboration are emphasized. Directed field experience will be required. (Must be taken prior to Public School Administrative Internship) (Online, Spring, Summer/2nd Session, or arranged for face-to-face cohort groups.)

EDUC 6100 Practices of Instructional Supervision (3)

A study of the application of instructional supervisory theories and practices of supervisory behaviors as they relate to improvement of instruction. Directed field experience will be required. (Must be taken prior to Public School Administrative Internship) (Online, Spring, Summer/2nd Session, or arranged for face-to-face cohort groups.)

EDUC 6190 Theories and Practices of Teaching (3)

Methods and models of teaching are demonstrated, analyzed and evaluated. Students will acquire practical skills in at least four different models of teaching. (Online, Fall, Summer/2nd Session- Even years, or arranged for face-to-face cohort groups.)

EDUC 6380 Ethical Judgment & Values in Teaching (3)

A study of ethics and values in schools. Examines the developmental processes of socialization and moral development; several approaches to values education are evaluated. (Online, Fall, Summer/1st Session- Even years)

EDUC 6410 Curriculum & Philosophical Foundations (3)

This course provides a study of the philosophical foundations of curriculum and instruction in American schools, the social and cultural conditions that influence education, and new concepts in education curriculum materials, and methods of instruction. (Online, Spring, Summer/1st Session, or arranged for face-to-face cohort groups.)

EDUC 6420 Education of the Gifted and Talented (2)

Provides multiple cultural and historical perspectives on giftedness and talent, explores characteristics of gifted individuals with emphasis on identifying needs and a general overview of possible services for gifted learners. (Online, Summer/1st - Odd years, or arranged for face-to-face cohort groups.)

EDUC 6430 Practicum: Individual Case Study (1)

A practicum experience in association with EDUC 6420: Education of the Gifted and Talented. Requires an intensive supervised study of other gifted and talented of an individual child of student's choice.

Must be taken concurrently with EDUC 6420. (Online, Summer/1st Session - Odd years, or arranged for face-to-face cohort groups.)

EDUC 6440 Creativity in Education (2)

Exploration of theories, research, and strategies concerning creativity and their application to personal creativity and to improvement of classroom practice. (Online, Fall, or arranged for face-to-face cohort groups.)

EDUC 6460 Identification/Evaluation in Gifted Education (2)

Designed to provide educators with theory and models for identifying students as gifted, creative, and talented. Presents models for evaluation of programs for gifted learners. Explores instruments for use in identification and evaluation. Prerequisites: EDUC 6420 and 6430. (Online, Summer/1st Session, or arranged for face-to-face cohort groups.)

EDUC 6470 Practicum: Team Consultation (1)

A practicum experience in association with EDUC 6460. Requires participation, as part of a consultative team, to improve practice in an approved setting for a specific child, classroom, school, school district, or other educational entity. Must be taken concurrently with EDUC 6460. Prerequisites: EDUC 6420 and 6430. (Online, Summer/1st Session - Even years, or arranged for face-to-face cohort groups.)

EDUC 6480 Materials/Methods in Gifted Education (2)

Explores programming and curriculum models in gifted education with special attention to the development of instructional materials for use with students. Prerequisites: EDUC 6420, 6430, 6460, and 6470. (Online, Summer/1st Session - Even years, or arranged for face-to-face cohort groups.)

EDUC 6490 Practicum: Classroom Applications (1)

A practicum experience in association with EDUC 6480. Requires application of at least 3 curriculum cognitive, or affective models in the student's current teaching assignment. Must be taken concurrently with EDUC 6480. Prerequisites: 6420, 6430, 6460, and 6470. (Online, Summer/1st Session - Even years, or arranged for face-to-face cohort groups.)

EDUC 6500 School Finance (3)

Historical background of school finance; principles and practices involved in collecting and distributing school revenues with special reference to conditions to Utah. (Online, Fall, Summer, or arranged for face-to-face cohort groups.)

EDUC 6540 Organization of American Schools (3)

This course provides an in depth analysis of the function and organization of public schools in America, historical, philosophical, and reform issues are reviewed and how they impact the management, design and accreditation of K-12 education. (Online, Fall, Summer/1st Session, or arranged for face-to-face cohort groups.)

EDUC 6560: Leadership of Student Services and Programs (3)

This course focuses on collaborating with community agencies to meet student health and safety needs and providing advisement, guidance, and counseling services to students and families to facilitate growth and development in a learning environment. In addition the course is aimed at preparing administrators to work collaboratively with staff, students, families, and communities to plan and manage a full range of activity programs that meet the social, developmental, cultural, athletic, leadership, and academic needs of all students. (Online, Spring, Summer/2nd Session, or arranged for face-to-face cohort groups.)

EDUC 6650 Research & Writing in Education (4)

Deals with writing research-related papers, locating, interpreting and using research reports, and applying research information to

Course Descriptions

classroom problems. (Online, Fall, Spring, or arranged for face-to-face cohort groups.)

EDUC 6670 Environmental Education: An Integrated Approach (1-3)

This course provides students with the skills required to implement a classroom science-based environmental education component through an integrated interdisciplinary approach. A transferable thematic model is utilized in the presentation of this course, with emphasis placed on field investigations, balance and development of critical thinking skills. Presenters include numerous University professors, agency specialists, politicians, and representatives of local businesses. (Arranged for face-to-face cohort groups.)

EDUC 6700 Science & Mathematics Curriculum & Instruction (3)

An examination of current curriculum standards, trends, and effective methods of instruction for science and mathematics in elementary, middle, and secondary schools. (Online, Summer/1st Session - Even years, or arranged for face-to-face cohort groups.)

EDUC 6710 Multicultural Education (3)

Examines the social and cultural conditions that influence education. Places emphasis on programs development to meet the needs of culturally diverse school populations. (Online, Spring, Summer/2nd Session or arranged for face-to-face cohort groups.)

EDUC 6740 School Law (3)

Provides students with an understanding of legal issues relating to public education. Considers rights and responsibilities of students, teachers, and educational practitioners. Relates these issues to school programs and operations as determined by state and federal laws and court decisions. (Online, Spring, Summer, or arranged for face-to-face cohort groups.)

EDUC 6840 Language Arts & Social Science Curriculum & Instruction (3)

Examination of current curriculum standards, trends, and effective methods of instruction for language arts and social science in elementary, middle, and secondary schools. (Online, Summer/1st Session - Even years, or arranged for face-to-face cohort groups.)

EDUC 6850 Special Topics (1-6)

With approval and direction of committee members(s), students may do independent research, or a project, related to their program of study. (Online, Fall, Spring, Summer/1st Session, or arranged for face-to-face cohort groups.)

EDUC 6890 Elementary Public School Administrative Intern (4)

A minimum of 200 hours of supervised clinical experience is required in public elementary school. Involvement in extracurricular activities and elementary special education is expected. A minimum of three seminars will be held during the semester for the purpose of interacting with other interns and the instructor regarding internship experiences and issues. Collection of Elementary Internship Artifacts is required as part of the student's Professional Portfolio. \$100 fee. (P/F) (Fall, Spring, Summer)

EDUC 6891 Secondary Public School Administrative Intern (4)

A minimum of 200 hours of supervised clinical experience is required in public secondary school. Involvement in extracurricular activities and secondary special education is expected. A minimum of three seminars will be held during the semester for the purpose of interacting with other interns and the instructor regarding internship experiences and issues. Collection of Secondary Internship Artifacts is required as part of the student's Professional Portfolio. \$100 fee. (P/F) (Fall, Spring, Summer)

EDUC 6892 Capstone Public School Internship (4)

A minimum of 50 hours of supervised clinical experience is required at a school district office, state office of education, community

educational support agency or other approved agency with prior permission. A minimum of three seminars will be held during the semester for the purpose of interacting with other interns and the instructor regarding internship experiences and issues. Collection of Professional Leadership Internship Artifacts is required as part of the student's Professional Portfolio. Students will be required to take the PRAXIS Educational Leadership Administration and Supervision Exam in preparation for state licensure and be required to present and defend their Professional Work Sample, Leadership portfolio, and Internship Artifact log at a culminating interview. (P/F) (Fall, Spring, Summer)

EDUC 6910 Issues in Education (3)

A Study of various current issues in education. Title may change from semester to semester. Students may take the course twice for up to six (6) credit hours. (Online, Summer/2nd Session - Odd years, or arranged for face-to-face cohort groups.)

EDUC 6933 Masters Project (3-6)

The student designs and develops a professional project relevant to his or her professional teaching/administrative assignment. Prerequisite: 6650, advisement. (P/F) (Fall, Spring, Summer/2nd session)

ELEMENTARY READING (EDRG)

EDRG 3520 Foundations of Teaching Reading in Elementary Schools (3)

This foundation course utilizes a comprehensive approach to teaching elementary (1-8) literacy. Methods, materials, and assessments appropriate for diverse populations are taught. Teacher candidates learn phonics and comprehension instructional strategies stressing how to set up a reading program. Prerequisite: Admission to the Elementary Education Department. (Fall, Spring, Summer)

EDRG 4010 Language Acquisition, Early Literacy, & Phonics (3)

This course focuses on methods to enhance early literacy development. The acquisition of both first and second languages, concepts of emergent literacy, and the integration of phonics are stressed. Fee required \$5.00. Prerequisites: Admission to the Elementary Education Department and EDRG 3520 (may be taken concurrently.) (Fall, Spring, Summer)

EDRG 4020 Reading Comprehension (3)

Teacher candidates learn how to assist readers to construct meaning as they read both narrative and expository text. Comprehension theories are taught in relation to best practices for enhancing reading and writing. Prerequisites: EDRG 3520 and Admission to the Elementary Education Department. (Fall, Summer)

EDRG 4030 Introduction to Process Writing (3)

Methods of teaching and assessing writing such as holding conferences, managing writing workshops, utilizing literature, and employing writer's notebooks are stressed. Teacher candidates are expected to use the writing process to create and publish original works in this writing intensive course. Prerequisites: EDRG 3520 and Admission to the Elementary Education Department. (Fall, Summer)

EDRG 4040 Literacy Assessment & Instruction (3)

This course focuses on literacy assessment and instruction of general and special needs students. Teacher candidates learn a variety of assessments and instructional methods including phonological awareness, phonics, and orthographic knowledge, as well as comprehension. Field or clinical experiences are required. An Assessment Lab EDRG 4040L is required with this course. Prerequisites: EDRG 3520 and Admission to the Elementary Education Department. Co-requisite: EDRG 404L. (Fall, Spring, Summer)

EDRG 4055 Literacy Practicum (3)
This is a capstone course for reading minors emphasizing school-based small group literacy instruction. It includes application of comprehensive literacy practices. Management systems for supporting struggling readers are addressed. Prerequisites: EDRG 3520 and 4040. Preferred requisites: EDRG 4010, 4020, and 4030. (Fall, Spring)

EDRG 4060 Computer Technology and Literacy (3)
This course is designed to apply contemporary uses of computer technology to enhance comprehensive literacy programs. Appropriate instructional design, application software, internet exploration, and a variety of technological enhancements are explored and applied. Prerequisites: EDRG 3520, 3170 and admission to the Elementary Education Department. (Fall, Spring)

EDRG 4120 Multicultural Literature (3)
This course introduces teacher candidates to multicultural/Transcultural literature for global populations. Criteria for identifying authentic and appropriate multicultural material are addressed. Teacher candidates learn how to use multicultural literature to foster and value diversity. Prerequisites: Admission to the Elementary Education Department and EDRG 3520. (Summer)

EDRG 4251 EDRG 4253 Conferences and Workshops (5-1-3)
Students may register for this course as credit for attending workshops or conferences as approved through an appropriate professor and the department chair. A minimum of 15 hours in workshop or conference with assigned contract accountability is required for 1 credit. With difference focus, this class can be taken more than once. (Fall, Spring, Summer)

EDRG 4641 EDRG 4643 Special Topics in Literacy Studies (1-3)
This course will be subtitled for a special topic or issue that is innovative and/or specifically designed to meet the needs of a specialized topic or current issue in the literacy field. Students may register for this class more than once. (Fall, Spring, Summer)

GRADUATE STUDIES IN READING

EDRG 5251-5253 Conferences and Workshops (1-3)
(Summer/1st Session)

EDRG 6251-6253 Conferences and Workshops (1-3)
(Summer/1st Session)

EDRG 5320/6320 Advanced Content Area Literacy (2)
The major emphasis of this course is to prepare teachers to teach students literacy strategies that help them acquire knowledge from content area materials. Other methods taught in the course include integrating the curriculum across content areas, using children's and young adult literature to complement learning from information texts, and teaching students to navigate reference, Internet, and multimedia materials. (Online, Fall, Summer/1st Session, or arranged for face-to-face cohort groups.)

EDRG 5330/6330 Teaching with Children's and Adolescent Literature (3)
This course is designed to train teachers to effectively take advantage of the natural student motivation and opportunities for learning associated with children's and young adult literature from a variety of genres; including information books. Other topics covered include the wise use of time, allowing student choice of text, facilitating student response to text which will allow students to immerse themselves in literature titles and genres, and strategies for selecting and using literature as a learning tool. (Spring- Odd years, or arranged for face-to-face cohort groups.)

EDRG 5340/6340 Foundations of Literacy (3)
The purpose of this course is to provide an historical and theoretical perspective on reading and writing theory and instruction. This course is intended to provide teachers with that solid theoretical foundation of knowledge about where the field of literacy has been intellectually and pedagogically, where the field seems to be headed, and the literacy issues that will be and are faced by today's teachers. (Online, Fall, Summer/1st Session, or arranged for face-to-face cohort groups.)

EDRG 5345/6345 Advanced Early Literacy & Language Development (3)
The purpose of this course is to focus on the research on emergent and early literacy and first and second language acquisition development so that teachers may construct well-designed appropriate literacy learning environments and experiences for young language learners. In addition, recent research, which provides many instructional insights about young children as individuals with individual levels of preparation and support from widely varying home and cultural backgrounds, is examined. (Spring - Even years, or arranged for face-to-face cohort groups.)

EDRG 5350/6350 Reading Assessment & Instructional Interventions (3)
This course is designed to help practicing teachers become proficient with a variety of formal and informal assessment, the analysis of data obtained from the assessment, and instructional procedures designed as interventions to assist struggling readers based on assessments. Instructional procedures will be based on scientifically-based reading research. (Online, Spring, Summer/2nd Session, or arranged for face-to-face cohort groups.)

EDRG 5370/6370 Teaching Process Writing (3)
Participants will explore the foundations and instructional strategies for teaching writing processes to students. Methods and strategies including writer's workshop, mini-lessons, conferencing, editing, and publishing will be examined to help students build writing fluency in both narrative and expository writing forms. The course will also address the integration of writing with reading, listening, and speaking. (Fall - Odd years, or arranged for face-to-face cohort groups.)

EDRG 5380/6380 Advanced Reading Comprehension (3)
This course will explore how instructional strategies such as activating student's background knowledge, connecting vocabulary, teaching students to recognize text structures along with the common strategies of summarizing, clarifying, questioning, predicting, and evaluating can help students become independent navigators of text, and also how the use of these strategies helps build engagement and motivation for reading. This course is further designed to have teachers examine existing research and its pedagogical implications related to teaching vocabulary, reading comprehension, metacognition, and motivation. (Fall - Even years, or arranged for face-to-face cohort groups.)

EDRG 5385/6385 Research in Reading (3)
This course is designed to engage students in studying and understanding both classical and contemporary, primary research documents in reading. To facilitate student interpretation of and to aid their ability to conduct such research, basic research techniques will be reviewed. (Summer/1st Session - Even years, arranged for face-to-face cohort groups.)

EDRG 5390/6390 Supervision of Literacy Programs (3)
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. Prerequisites: EDRG

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6320, 6330, 6340, 6341, 6350, 6360, 6370, 6380. (Summer/1st Session - Odd years, arranged for face-to-face cohort groups.)

EDRG 5641-5643 Special Topics and Literacy Studies (1-3)
(Arranged)

EDRG 6641-6643 Special Topics and Literacy Studies (1-3)
(Arranged)

EDRG 5890/6890 Reading Specialist Internship (3)

The purpose of the reading specialist internship is to provide a culminating, hands-on opportunity to be involved in the same literacy instruction issues and programs as school and district reading specialists around the country. The internship should involve working with other educators to improve reading and writing instruction at the school or district level. The internship should be 60-90 hours in duration and be conducted under the direct supervision of someone knowledgeable about reading and writing pedagogy instruction at the school or district level. Prerequisites: All course work for the Utah Reading Basic Endorsement – EDRG 6320, 6330, 6340, 6341, 6450, 6360, 6370, 6380, and 6390. (P/F) (Fall/Spring or when appropriate placement can be arranged.)

ELECTRONIC ENGINEERING TECHNOLOGY (EET)

EET 1710 DC Circuits (3)

An in-depth study of direct current for the electronic engineering technology student. Subject matter includes: ohms law, watts law, network analysis, magnetism, inductance, capacitance, and electrical measurement. Lab experiences will give each student the opportunity to apply classroom instruction using state-of-the-art electronic test equipment. (Fall)

EET 1720 AC Circuits (3)

A more advanced course for the electronic engineering technology student dealing with alternating current and waveforms. Included will be the study of reactance, impedance, vector algebra, power in AC circuits, impedance networks, resonance, transformers, AC coupling circuits, three phase systems, and harmonic relationships. Lab Experiences will give each student the opportunity to apply classroom instruction using state-of-the-art electronic test equipment. Prerequisite: EET 1710. (Spring)

EET 1730 Active Devices (3)

A foundation course for students studying for Electronic Engineering Technology programs. Topics of study include: junction diodes, junction transistors, field-effect transistors, thyristors, and an introduction to linear operational amplifiers. In-depth study will include bias configurations, classes of amplifiers, coupling methods, frequency response, design and troubleshooting techniques. Prerequisites: EET 1710 and EET 1720 or concurrent enrollment in EET 1720. (Spring)

EET 2710 Linear Devices (3)

A study of power supply and audio systems. Included is a detailed study of rectifier, filter, and regulating circuits; audio amplifiers, biasing requirements, coupling methods, class and types of amplifiers, analysis of amplifier performance, wave shaping and audio oscillators. Prerequisite: EET 1730. (Fall)

EET 2720 Communications Circuits (3)

A study of radio frequency circuits used in the communications field. The course includes the study of oscillators, R.F. amplifiers, transmitters, receivers, amplitude modulation, frequency modulation, pulse modulation, two-way radio, broadcasting, and instrumentation. Prerequisites: EET 1720 and EET 2710. (Spring)

EET 2730 CISCO Academy I (3)

Introduction to TCP/IP Routing Protocols and Router Configuration. This course is designed to provide students with the knowledge required to pass the Cisco CCNA certification exams. (Fall)

EET 2740 CISCO Academy II (3)

Cisco advanced LAN and WAN Switching and Routing Theory and Design. This course is designed to provide students with the knowledge required to pass the Cisco CCNA certification exams. (Spring)

EET 2750 Computer Hardware (A+ Cert) (3)

A+ Certification is an internationally recognized level of non-vendor based computer technical competence. This course is designed to provide the student with the knowledge necessary to pass the A+ certification exams from CompTIA. It targets those students desiring to gain technical experience in computer repair, installation and maintenance area. Areas covered include: safety, configuration, diagnosis, repair, and upgrades. (Fall, Spring)

EET 2760 Industrial Control Systems (3)

This course introduces students to the use of Programmable Logic Controllers (PLC's) as they are used in industrial applications. Interfacing of input/output devices and application techniques are also covered. Although other PLC's are introduced, hands-on-training will be on Allen-Bradley PLC-5 and SLC-500 training units. Taught alternate years. (Spring)

EET 2780 Digital Circuits (3)

A foundation course designed to prepare the student with job entry skills needed in multiple fields of electronics. The most common digital chips used in industry will be used as building blocks to implement digital solutions to electronic design problems. Combinational and sequential circuits will be designed, minimized, constructed and wired into systems. The use of common test equipment and troubleshooting techniques will be taught and practiced in a practical lab setting. Computer simulation as a digital design tool will be stressed. (Fall)

EET 2790 Microprocessors (3)

A foundation course designed to prepare the student with the key concepts of microprocessor architecture, interfacing, programming and design. The basic skills required to use the microprocessor as a tool in the solution of electronic design problems will be taught and practiced. Students will also use single chip microcontrollers such as PIC's (Programmable Interface Controllers) Prerequisite: EET 2780 (Fall, Taught alternate years)

EET 3660 Electronic Drafting (3)

A course designed to add depth to the student's knowledge in electronics and drafting giving up-to-date training in the current trends of industry. A study of symbols, wiring and connections, schematics, block diagrams, pictorial drawings, transistors, chassis layouts, production drawings, printed circuit board drawings (PCB), graphs, and charts. The course uses PCAD 2000 schematic capture and PCB layout software. Taught alternate years. (Spring)

EET 3710 Advanced Solid State Circuits (3)

A study of specialized solid state circuits. Included is the study of operational amplifiers, active filters, servo mechanisms, phase-locked loops, frequency synthesizer, and photo sensitive devices. Content of this course is in a constant state of change to keep current with technological advancements. (Fall)

EET 3730 Programming for Electronics (3)

This course is designed to enhance the computer programming abilities of the electronics engineering technology student. Several computer languages such as: BASIC, C, and Visual BASIC as well as several levels of computer programming such as: machine, assembly, and high level languages will be implemented to accomplish tasks unique to the electronics industry. Program

planning and flow charting of program tasks will be emphasized. Taught alternate years. (Spring)

EET 3760 Electronic Fabrication (3)

A course designed to prepare students for the prototyping of electronics products. Each student will build a project that will incorporate the following prototyping steps: a project proposal, a schematic diagram, a parts list, a printed circuit board (PCB) design and fabrication, and a demonstration of the completed project. Documentation of each step will be emphasized. Instruction will include: schematic design, PCB design and fabrication, soldering, desoldering, and wire harness fabrication. Taught alternate years. (Spring)

EET 3790 Computer Interfacing (3)

A course designed to provide experience in interfacing microcomputers to outside peripheral devices. Areas of study will include peripheral sensors, digital to analog converters, analog to digital converters, voltage to frequency converters, serial and parallel I/O busses, controllers, RS-232C Interfaces, current loops and modems. Prerequisites: EET 2780 and 2790. Taught alternate years. (Spring)

EET 4720 Microwave and Optical Systems (3)

A study of microwave and optical fundamentals as applied to the telecommunication industries. The course will cover the special techniques used in microwave and light band communication. In-depth study will include transmission and light guide theory, signal generation, modulation, multiplexing techniques, satellite systems and state of the art passive and active devices. Prerequisite: EET 2720. Taught alternate years. (Spring)

EET 4960 Senior Project (3)

This course is designed to provide the student with the opportunity to apply their electronics training in a more industry like atmosphere. The course will utilize a major project selected by the student and approved by the instructor. Each project will be written as a contract and Completed on an individual basis. Periodic seminars with other students will be held to review individual progress. Elements of the course will include planning, research, development, testing, and documentation. Senior standing and instructor's permission is required. Prerequisite EET 2720. (Spring)

ELEMENTARY EDUCATION (ELED)

ELED 3200 Elementary Educational Psychology (3)

Educational Psychology is designed to give the elementary teacher candidate knowledge of the relationship which exists between psychology, students, and the world of teaching and learning. Participants will learn about the nature of learning, human growth and development, and how the brain processes information. Candidates will learn about historical theories, current trends, and innovations in educational psychology. (Fall, Spring, Summer)

ELED 3400 Introduction to Multicultural Education and English as a Second Language (2)

This course focuses on minority contributions to contemporary society, minority histories are examined along with the development of minority awareness in today's curriculum. The English as a Second Language portion will focus on an introduction to methodologies that will help ESL students function successfully in the elementary classroom. Must be officially admitted to the Elementary Education Department. (Fall, Spring, Summer)

ELED 3460 Methods of Language Arts (3)

This course is designed to teach prospective teachers to help elementary school pupils with oral and written language including reading, creative writing, spelling, punctuation, listening, and

penmanship (both manuscript and cursive). Integration of language arts across the curriculum is stressed. (Elementary Block). Must be officially admitted to the Elementary Education Department. (Fall, Spring, Summer)

ELED 3470 Methods of Mathematics (3)

Explores the significance and importance of mathematics in the elementary school. Course deals with the NCTM standards for elementary and provides methodologies to successfully teach the standards. (Elementary Block). Must be officially admitted to the Elementary Education Department. (Fall, Spring, Summer)

ELED 3480 Methods of Science and Health (3)

Explores the significance and importance of science in the elementary school. Course provides a philosophy and methodologies to help successfully teach a hands-on, dynamic science program. (Elementary Block). Must be officially admitted to Elementary Education Department. (Fall, Spring, Summer)

ELED 3490 Methods of Social Studies (3)

Designed to analyze social understandings and responsibilities inherent in group life and to plan and teach desirable experiences in social studies for elementary school children (Elementary Block). Must be officially admitted to the Elementary Education Department. (Fall, Spring, Summer)

ELED 3535 Curriculum Development and Improvement (3)

This course is designed to provide teacher candidates with a comprehensive overview of curriculum development and improvement. Participants will learn about the forces that affect curriculum, the techniques of good lesson delivery and the methods used to design and develop effective teaching units. (Suggested to take concurrently with ELED 3555) Prerequisite: Admission to the Elementary Education Department. (Fall, Spring, Summer)

ELED 3555 Instructional Planning, Delivery, and Assessment for Elementary Teachers (3)

This course is designed to provide teacher candidates with multiple models for assessing instruction. Participants will be taught skills in choosing assessment methods appropriate for instructional decisions, assessing learning, administering, scoring, and interpreting the results of assessments. Participants will complete Teacher Work Sample #2 during this course. (Suggested to take concurrently with ELED 3535.) Prerequisite: Admission to the Elementary Education Department and ELED 3535. (Fall, Spring, Summer)

ELED 3570 Motivation and the Management of Diverse Instructional Environments for Elementary Teachers (3)

This course examines multiple perspectives on student motivation and the management of learning environments as bases for reflecting on educational practice. Participants will learn contemporary perspectives on student motivation and proactive strategies for linking theories of motivation to instructional practice and classroom management. At the conclusion of this course, the successful student will have acquired insight into the important psychological principles underlying student motivation and classroom management and each student will be ready to begin to apply them to his or her own teaching. Emphasis will be placed on creating positive learning environments in which teachers respond to the personal and academic needs of individual students and the classroom group. (Elementary Block) Participants will complete Teacher Work Sample #3 during this course. Prerequisite: Admission to Elementary Education Department. (Fall, Spring, Summer)

ELED 4500 Public School Practicum (3)

This course gives the student an up-to-the-minute view of several different elementary classrooms, programs, and teachers. The real world of teaching will be explored in a controlled setting. SUU's elementary education department in providing urban and rural schools in which to work. The student is gradually given control of the

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classroom under the direction of a selected cooperating teacher. These five-day experiences culminate with the student having full control of the class on the fourth or fifth day. Three of these five-day experiences are planned during the semester. The student is responsible for food and lodging during the in-school experience. (Elementary Block) Must be admitted to the Elementary Education Department. (Fee required: \$60) (Fall, Spring, Summer)

ELED 4980/ 6980 Elementary School Clinical Practice (6)
Course is designed to give prospective teachers actual experience in working with elementary age children. Clinical practice is usually divided into two blocks to give students experience in working with pupils at two different grade levels. Advance application required. Fee structure can be found in the Clinical Practice Section. Must be admitted to the Elementary Education Department and have completed all prerequisite classes. (P/F) (Fall, Spring)

GRADUATE STUDIES IN ELEMENTARY EDUCATION

ELED 5900 Developments in Education (1-3)
Designed to keep teachers and administrators up-to-date on new theories and developments in educational thought and practice. Individual projects and research are emphasized. (Online, Fall, Spring, or arranged for face-to-face cohort groups.)

ELED 5920 Workshops in Education (1-3)
Designed to provide a hands-on experience in a variety of content areas. Features guest speakers, introduction and use of educational media and practices. (Summer/1st Session or arranged for face-to-face cohort groups.)

ELED 6980 Elementary School Clinical Practice (6)
Course is designed to give prospective teachers actual experience in working with elementary age children. Clinical Practice is usually divided into two blocks to give students experience in working with pupils at two different grade levels. Advance application required. Must be admitted to the Graduate Educator Licensure Program and have completed all prerequisite classes. Fee required. See Clinical Practice Fee Schedule. (Fall, Spring, Summer)

ENGINEERING (ENGR)

ENGR 1020 Engineering Fundamentals (D) (3)
An introduction to the engineering profession. Various engineering disciplines, ethics, professional registration, fundamental dimensions, basic statistics, economics, problem-solving, and design are discussed. Engineering tools for modeling, computing, presenting data, and preparing reports are introduced. Course includes a competitive design project. (Fall, Spring)

ENGR 1030 Computer-Assisted Drafting (3)
Introduction to using computer aided drafting (CAD) in engineering design. Topics covered include 2-D and 3-D drafting and the integration of drafting with engineering design software, use of layers, blocks and components, scaling, organization of engineering drawings, and drawing commands specific to AutoCAD. (Spring)

ENGR 2010 Statics (3)
Statics of particles and rigid bodies, free body diagrams, forces and moments of forces, equilibrium of rigid bodies, distributed forces, centroids, moments of inertia, friction, and work. Pre-requisite: MATH 1210. Co-requisite: PHSC 2210 or PHSC 2010. (Fall)

ENGR 2030 Dynamics (3)
Kinematics and kinetics of particles and rigid bodies in plane motion. Work-energy and impulse-momentum principles. Prerequisite: ENGR 2010 (Spring)

ENGR 2040 Mechanics of Materials (3)
Mechanical properties and behavior of materials under stress. Analysis of stresses in beams and shafts. Plane stress and strain, principal stresses. Axial, torsional, and flexural loading. Mohr's circle. Co-requisite: ENGR 2050. Pre-requisite: ENGR 2010 (Spring)

ENGR 2050 Mechanics of Materials Lab (1)
This is the lab course that accompanies ENGR 2040. Some of the lab work that is performed in this course include the experimental determination of the modulus of elasticity, Poisson's ratio, principal strains and stresses, relationship between vertical shear force and bending moment distribution in a beam, relationships among bending moment section modulus, and stress or strain in a beam. The lab also teaches students how to properly install and use strain gages. Co-requisite: ENGR 2040. (Spring)

ENGR 2810 Plane Surveying (2)
Introduction to the measurement of distance, direction and elevation using mechanical, optical and electronic equipment. Plane surveying applications in leveling and traversing, measurement corrections and adjustments, area and volume calculations, earthwork, horizontal circular curves, and vertical curves. Utilization of computers and software for data collection, reduction, analysis, and presentation. Prerequisite: MATH 1060. (Fall)

ENGR 2820 Plane Surveying, Lab (1)
Introduction to using chaining, stadia, leveling, transit, theodolite, electronic distance measurement, total station, and GPS equipment in plane surveying applications. Utilization of computers and software for data collection, reduction, analysis, and presentation. Co-requisite: ENGR 2810. (Fall)

ENGR 2850 Advanced Surveying (2)
Error analysis, triangulation and control, utilization of coordinate systems, solar and celestial observations, use of GPS and GIS in surveying. Prerequisites: ENGR 2810, ENGR 2820. Co-requisite ENGR 2860. (Spring)

ENGR 2860 Advanced Surveying Lab (1)
Practical exercises in error analysis, triangulation and control, utilization of coordinate systems, solar and celestial observations, use of GPS and GIS in surveying. Co-requisite: ENGR 2850. (Spring)

ENGR 3000 Thermodynamics (3)
Fundamental principles of thermodynamics. Thermodynamic properties of fluids. First law and second law of thermodynamics and their application to closed systems. Energy relationships involving heat, work, and various other forms of energy. Introduction to thermodynamic cycles. Prerequisite: PHSC 2210. (Fall)

ENGR 3010 Material Science Engineering (3)
Internal atomic, molecular, crystalline, organic, amorphous structures, and dependence of physical properties upon these structures. Properties, requirements, and uses of modern engineering materials. Prerequisite: CHEM 1210, Co-requisite: ENGR 3020. (Fall)

ENGR 3020 Material Science Engineering Lab (1)
This lab accompanies ENGR 3010. Co-requisite: ENGR 3010. (Fall)

ENGR 3030 Project Management Processes (3)
Steps required to complete a successful project management process, including how to use software and implement project management in day-to-day tasks. Prerequisite: See instructor. (Fall)

ENGR 3045 Engineering Design Lab I (2)
Coursework emphasizes creative and critical thinking, planning, design, execution and statistical evaluation of experiments, and machine design. Students will utilize measuring devices, graphical presentation of data, mathematical modeling, design economics, and

technical reporting techniques currently used in engineering practice. Prerequisite: ENGR 2040. (Fall)

ENGR 3050 Fluid Mechanics (3)
Fundamental principles of fluid mechanics. Properties of fluids. Fluid statics. Control volume and transport theorem. Continuity and motion equations. Inviscid and viscous flows. Laminar and turbulent flows. Incompressible and compressible flows. Internal and external flows. Bernoulli's equation. Prerequisite: ENGR 2030, MATH 2210, Co-requisite: ENGR 3060. (Fall)

ENGR 3060 Fluid Mechanics Lab (1)
This lab accompanies ENGR 3050. Emphasis is on analysis and reporting of results. Co-requisite: ENGR 3050. (Fall)

ENGR 3070 Electric Circuits (3)
Techniques of circuit analysis: node-voltage, mesh current, source transformation methods. Operational amplifiers. Inductance and capacitance. Natural and step responses of first-order RL and RC circuits. Natural and step responses of RLC circuits. Sinusoidal steady-state analysis and phasors. Prerequisite: PHSC 2240, Co-requisite: ENGR 3080. (Spring)

ENGR 3080 Electric Circuits Lab (1)
This is the lab that accompanies ENGR 3070. Co-requisite: ENGR 3070. (Spring)

ENGR 3095 Engineering Design Lab II (2)
Coursework emphasizes design optimization, reliability, functionality, safety, technical writing, and the use of computational tools such as spreadsheets and numerical models (including FEM and FDM methods) currently used in engineering practice. Prerequisite: ENGR 3045. (Spring)

ENGR 3990 Undergraduate Research (1-6)

ENGR 4000 Mechatronics (3)
An interdisciplinary systems approach to dynamics and control involving the integration of mechanical, electrical and electronics engineering using microprocessor control. Involves computer modeling and designing of mechanical, electrical, fluid, and thermal systems. Pre-requisites: ENGR 2030, MATH 3440, ENGR 4030/4040. (Fall)

ENGR 4010 Heat Transfer (3)
This course is an introduction to conduction, convection and radiation modes of heat transfer. Both steady state and unsteady state cases are covered. Other topics include analytical and numerical solution of practical problems in heat transfer. Prerequisite: ENGR 3000, 3050, MATH 3440. (Fall)

ENGR 4025 Integrated Engineering Design Lab I (2)
Coursework emphasizes creative and critical thinking, planning, design, execution and statistical evaluation of experiments, team work, and project management. Students will utilize integrated engineering principles and concepts learned to-date to propose, design, complete, and formally present a comprehensive project to a panel of professional reviewers. Prerequisite: ENGR 3095. (Fall)

ENGR 4030 Electronics (3)
This course emphasizes on the DC and AC operation of different types of diodes and transistors; number systems, Boolean Algebra, logic gates, combinational, memory, and sequential digital circuits; and introduction to microprocessors. Prerequisite: ENGR 3070, Co-requisite: ENGR 4040. (Spring)

ENGR 4040 Electronics Lab (1)
This lab accompanies ENGR 4030. Co-requisite: ENGR 4030. (Spring)

ENGR 4050 Structural Analysis (3)
The course gives basic knowledge for the analysis of elastic, statically indeterminate structures subjected to static loading. Fundamental concepts are flexibility method, stiffness method, internal work, virtual work and energy theorems. The methods of analysis are applied to frame structures. Prerequisite: ENGR 2040. (Spring)

ENGR 4060 Manufacturing (3)
The course emphasizes integration of design and manufacturing. Topics covered include manufacturing information systems, manufacturability considerations at the design and development phase, and DFM/DFA applications. Prerequisite: Permission of Instructor. (Spring)

ENGR 4070 Facilities and Infrastructure (3)
Course integrates and synthesizes engineering design, analysis and evaluation of components, processes and systems utilized in infrastructure, manufacturing and commercial facilities. Prerequisite: ENGR 3095. (Spring)

ENGR 4085 Integrated Engineering Design Lab II (2)
This is a continuation of ENGR 4020. Coursework emphasizes creative and critical thinking, planning, design, execution and statistical evaluation of experiments, team work, and project management. Students will utilize integrated engineering principles and concepts learned to-date to propose, design, complete, and formally present a comprehensive project to a panel of professional reviewers. Prerequisite: ENGR 3095, 4025. (Spring)

ENGLISH (ENGL)

ENGL 1000 Intro to Academic Writing Workshop (1)
Critical reading, writing and editing for academic purposes. To support students enrolled in ENGL 1010 with an English ACT below 17. These students must take this course concurrently with ENGL 1010. (P/F) (Fall, Spring, Summer)

ENGL 1010 Intro to Academic Writing (C) (3)
A disciplined approach to the rhetoric of English composition with emphasis on organization and development in the whole composition, on coherence and effectiveness in paragraphs, and on maturity and flexibility in sentence styles. While grammar and usage are not neglected, they are treated as means to achieving rhetorical objectives. Students with ACT English scores below 29 are required to take ENGL 1010 before enrolling in 2010. Students with English ACT scores lower than 17 must concurrently enroll in ENGL 1000 Intro to Academic Writing Workshop. (Fall, Spring, Summer)

ENGL 2010 Intermediate Writing: Selected Topics (C) (3)
This course emphasizes the development of an effective academic style in argumentative essays that make use of traditional rhetorical patterns. A major research paper is required. The class may count toward fulfilling the skills competencies requirement for secondary education or for General Education. Subtopics will vary and may include: writing in a persuasive mode, the Vietnam War, Shakespeare and the Renaissance, and writing from the environment. Prerequisite: ENGL 1010. (Students with ACT English scores below 29 are required to take ENGL 1010 before enrolling in English 2010). (Fall, Spring, Summer)

ENGL 2020 Introduction to Creative Writing (H) (3)
Principles and practice in the writing of fiction and verse. (Fall, Spring)

ENGL 2030 Advanced Grammar (3)
An advanced course that contrasts traditional, structural, and transformational approaches to grammar within the framework of

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language history and linguistic diversity. Prerequisite: ENGL 2010. (Fall)

ENGL 2210 Introduction to Literature and Culture (H) (3)

An introduction to literature as cultural production, providing basic training in literary analysis as well as encounters with the texts of other cultures. This course or ENGL 2220 functions as a prerequisite for upper division work in the major and minor. (Fall, Spring)

ENGL 2220 Introduction to Poetry (H) (3)

A beginning critical course in the forms and values of verse, ancient and modern; a study of the relationship between poetic structure and meaning. Practice in scansion, explication, and evaluation. This course or ENGL 2210 functions as the prerequisite for upper division work in the major and minor. (Fall, Spring)

ENGL 2230 Introduction to Mythology (H) (3)

An introduction to the nature and function of myth through the reading of Greek, Native American, Hebrew, Christian, and other world mythologies. Emphasis on comparative mythology and the structure of myth. (Fall)

ENGL 2410 Introduction to Critical Methods (3)

This course is the reading and application of literary theory. (It is required for English Literature and English Teaching majors and minors as a prerequisite to 3000 level survey courses.) It is a writing intensive course and will require critical analysis of prose, poetry, and dramatic texts. Provides (1) a workshop in the techniques used by critics examining and writing about literary texts, (2) a brief historical survey of literary theory, and (3) an introduction to the basic terminology of literary study. (Fall, Spring)

ENGL 2900 Methods of Teaching Writing (3)

An introductory workshop for English majors and minors, teaching emphasis. Students are expected to read and discuss scholarship related to major pedagogical theories and to make practical applications to those theories. Prerequisite: ENGL 2010. (Spring)

ENGL 3010 Intermediate Poetry Writing: Closed Form (3)

An intermediate course in poetry writing with emphasis on the closed form. Prerequisite: ENGL 2020. (Fall, Spring)

ENGL 3020 Intermediate Poetry Writing: Open Form (3)

An intermediate course in poetry writing with emphasis on the open form. Prerequisite: ENGL 2020. (Fall or Spring)

ENGL 3030 Intermediate Fiction Writing (3)

An intermediate course in fiction writing. Prerequisite: ENGL 2020. (Fall or Spring)

ENGL 3210 American Literature I (3)

A study of American Literature from its beginnings up to the American Civil War. Readings will include both canonical and non-canonical works. Prerequisites: ENGL 2210 or 2220; and ENGL 2410. (Fall)

ENGL 3220 American Literature: II (3)

A study of American Literature from the Civil War through the present. Readings will include both canonical and non-canonical works. Prerequisites: ENGL 2210 or 2220; and ENGL 2410. (Spring)

ENGL 3230 British Literature I (3)

A study of British literature from its beginnings through the late 17th century. Readings will include both canonical and non-canonical works. Prerequisites: ENGL 2210 or 2220; and ENGL 2410. (Fall)

ENGL 3240 British Literature II (3)

A study of British literature from the early 18th century through the present. Readings will include both canonical and non-canonical works. Prerequisites: ENGL 2210 or 2220; and ENGL 2410. (Spring)

ENGL 3250 Continental European Literature I (3)

A study of canonical works of continental European literature in translation from its beginnings through the Renaissance. Prerequisites: ENGL 2210 or 2220; and ENGL 2410. (Fall or Spring)

ENGL 3260 Continental European Literature II (3)

A study of canonical works of continental European literature in translation from the Renaissance through the present. Prerequisites: ENGL 2210 or 2220; and ENGL 2410. (Fall, Spring)

ENGL 3270 World Literature: Non-Western (3)

A study of non-Western literatures, which may include African, Chinese, Indian, Japanese, Middle Eastern, and other texts in translation, with significant emphasis on one of these literatures. Prerequisites: ENGL 2210 or 2220; and ENGL 2410. (Fall, Spring)

ENGL 3280 Young Adult Literature (3)

Introduction to a history, rationale for teaching, and overview of the modern genre of young adult (YA) literature for middle, junior high and senior high school pupils. Participants acquire knowledge of content, key concepts, and structure of modern YA literature with emphasis on diversity issues such as diverse cultures, race, class and gender. Stresses teaching strategies that support learning in critical and complex thinking and literacy, and which engage all types of learners. Prerequisites: ENGL 2210 or 2220; and ENGL 2410. (Spring)

ENGL 4010 Advanced Poetry Writing (3)

Advanced poetry writing. May be repeated once for credit. Prerequisites: ENGL 2210 or 2220; and ENGL 2410; and 3010. (Fall, Spring)

ENGL 4020 Advanced Fiction Writing (3)

Prerequisites: ENGL 2210 or 2220; and ENGL 2410; and ENGL 3010 and 3030. May be repeated once for credit. (Fall, Spring)

ENGL 4030 Creative Non-fiction Writing (3)

Advanced study in the theory and practice of the modern essay and extended nonfiction prose. Particular attention to prose style. Prerequisites: ENGL 2210 or 2220; and ENGL 2410. (Fall, Spring)

ENGL 4040 Play Writing (3)

Advanced course in play writing. May be repeated once for credit. Prerequisites: ENGL 2210 or 2220; and ENGL 2410. (Fall, Spring)

ENGL 4110 Literary Genres (3)

In-depth seminar in a specific literary genre. Possible subjects: the novel, modern poetry, film, drama, literary realism/naturalism, nature writing, non-fiction prose, visual narratives, or memoir. Prerequisites: ENGL 2210 or 2220; and ENGL 2410. (Fall, Spring)

ENGL 4210 Literary History (3)

A study of specific periods in American and British Literature, including Old and Middle English, Restoration England, the British 18th Century, American Transcendentalism, American Realism, American Naturalism, British Romanticism, British Victorian Period, Modern and Contemporary American Literature, Modern and Contemporary British Literature. May also include the History of the English Language. Prerequisites: ENGL 2210 or 2220; and ENGL 2410. (Fall, Spring)

ENGL 4310 Major Authors (3)

An in-depth senior seminar in individual authors or groups of authors. Possible courses: Chaucer, Milton, Dickens, Melville, Austen, the Brontes, Wharton, Fitzgerald, Hemingway, Faulkner, Morrison, Woolf, Walker, Silko, and others. (May be taken for credit more than once on different authors.) Prerequisites: ENGL 2210 or 2220; and ENGL 2410. (Fall, Spring)

ENGL 4320 Shakespeare (3)

An analysis of Shakespeare's contribution to Elizabethan and Jacobean drama. Prerequisites: ENGL 2210 or 2220 and ENGL 2410. (Fall, Spring)

ENGL 4410 Advanced Study of Critical Methods (3)

An in-depth class emphasizing one or several literary theories and their applications. Sub-topics will vary. Permission of the instructor. Prerequisites: ENGL 2210 or 2220; and ENGL 2410. (Fall, Spring)

ENGL 4510 Topics in Literature (3)

An in-depth seminar in a special topic in literature. Possible courses: Politics and Literature in the 17th Century, Literature of the Industrial Revolution, Western American Literature, J.R.R. Tolkien and Fantasy, 20th Century Indian Writing, Literature of the Colorado River Country, and others. May be taken for credit more than once on different topics. Prerequisites: ENGL 2210 or 2220; and ENGL 2410. (Fall, Spring)

ENGL 4900 Methods of Teaching English (2)

Designed for the prospective teacher of English in the secondary school system. During most of the class meetings students are acquainted with a variety of effective procedures for teaching English to adolescents. The remaining meetings, however, are opportunities for students to put into practice what they have learned in the lecture discussions. Prerequisites: ENGL 2030 and ENGL 2900. Permission of the instructor. (Fall)

ENGL 4980 Student Teaching (P/F) (2)**ENGLISH AS A SECOND LANGUAGE (EESL)****EESL 4300 Foundations of Bilingual/ESL Instruction (2)**

This course for ESL undergraduate endorsement establishes the rationale for bilingual education, preparing the teacher to address issues and concerns intelligently in the classroom. It provides a comprehensive survey of bilingual/ESL program for language minority students. (Fall, Spring, Summer)

EESL 4310 Understanding Language Acquisition & Cognition (2)

This second course for the ESL undergraduate endorsement program examines the complex interconnected set of variables that interact in second language learning and thought processes. The emphasis in this course is on examining each of these factors in turn and then attempting to understand how they work together to foster or inhibit successful language learning and thinking in the classroom and the community. (Fall, Spring, Summer)

EESL 4320 Assessment for a Diverse Linguistic Population (2)

This course is the third course for the ESL undergraduate endorsement program. The course further develops the teachers' understanding of traditional and current identification and assessment practices in bilingual and English as a Second Language in education. The course covers methods and techniques for language, academic assessment, and placement of linguistically diverse students in English and native language. (Fall, Spring, Summer)

EESL 4330 Methods and Materials for the Bilingual/ESL Classroom I (2)

This course is the fourth course for the ESL undergraduate endorsement program. This course is part one of two courses. It focuses on instructional strategies and methodologies for the bilingual-bicultural student. Part 1 covers teaching oral language and literacy skills (reading/writing) and the integration of culture in reading and writing in the content areas. This course will include teaching in multicultural context for oral language development, adapting and developing lesson designs and materials, facilitating and the reading process, coaching the developing secondary language writer, strategies for teaching literature. (Fall, Spring, Summer)

EESL 4335 Methods and Materials for the Bilingual/ESL Classroom II (2)

This is the fifth course for the ESL undergraduate endorsement program. This course is part two of two courses, focusing on instructional strategies and methodologies for the bilingual-bicultural student. Part II includes developing a large repertoire of active teaching/learning strategies for lesson plans and instruction in the content areas. The course includes teaching in a multicultural context and concept development in the content areas with strategies to integrate language for teaching second language learners in mathematics, science, and social studies. (Fall, Spring, Summer)

EESL 4340 Integrating Language Acquisition into Content Instruction I (2)

This is the sixth course for the ESL undergraduate endorsement program. This course is part one of two courses which integrate language and literacy methodologies into the classroom. This course will entail field experience with mentor teachers who have students who are linguistically different, or are ESL students. Teachers will attend practicum seminars to discuss proficiency and bilingual education and issues relevant to their particular assignments. Class format will include small and large group instruction, supervision, demonstration, lesson plan development, and observations of other classrooms and programs. (Fall, Spring, Summer)

EESL 4345 Integrating Language Acquisition into Content Instruction II (2)

This is the seventh course for the ESL undergraduate endorsement program. This course is part one of two courses which integrate language and literacy methodologies into the classroom. This course will entail field experience with mentor teachers who have students who are linguistically different, or are ESL students. Teachers will attend practicum seminars to discuss current issues relevant to language and literacy in language proficiency and bilingual education and issues relevant to their particular assignments. Class format will include small lesson plan development and observations of other classrooms and programs. (Fall, Spring, Summer)

EESL 4350 Family/Parent Involvement in Education (2)

This is the eighth course of the ESL undergraduate endorsement program. It is designed to provide teachers, administrators, and other educational service providers with relevant approaches to improving minority parent involvement in bilingual education, ESL, and migrant education, and Title I programs.

GRADUATE STUDIES IN ENGLISH AS A SECOND LANGUAGE**EESL 5300/6300 Foundations of Bilingual/ESL Instruction (2)**

This course for ESL graduate endorsement establishes the rationale for bilingual education, preparing the teacher to address issues and concerns intelligently in the classroom. It provides a comprehensive survey of bilingual/ESL program for language minority students. (Online, Fall, or arranged for face-to-face cohort groups.)

EESL 5310/6310 Understanding Language Acquisition and Cognition (2)

This second course for the ESL graduate endorsement program examines the complex interconnected set of variables that interact in second language learning and thought processes. The emphasis in this course is on examining each of these factors in turn and then attempting to understand how they work together to foster or inhibit successful language learning and thinking in the classroom and the community. (Online, Fall, or arranged for face-to-face cohort groups.)

EESL 5320/6320 Assessment for a Diverse Linguistic Population (2)

This course is the third course for the ESL graduate endorsement program. The course is designed to further develop teachers' understanding of traditional and current identification and assessment practices in bilingual and English as a Second Language in

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education. The course also discusses methods and techniques for language and academic assessment and placement of linguistically diverse students in English and native language. (Online, Fall, or arranged for face-to-face cohort groups.)

ESL 5330/6330 Methods and Materials for the Bilingual/ESL Classroom I (2)

This course is the fourth course for the ESL graduate endorsement program. This course is part one of two courses. It focuses on instructional strategies and methodologies for the bilingual-bicultural student. Part 1 covers teaching oral language and literacy skills (reading/writing) and the integration of culture in reading and writing in the content areas. This course will include teaching in multicultural context for oral language development, adapting and developing lesson designs and materials, facilitating and the reading process, coaching the developing secondary language writer, strategies for teaching literature. (Online, Spring, or arranged for face-to-face cohort groups.)

ESL 5335/6335 Methods and Materials for the Bilingual/ESL Classroom II (2)

This is the fifth course for the ESL graduate endorsement program. This course is part two of two courses, focusing on instructional strategies and methodologies for the bilingual-bicultural student. Part II includes developing a large repertoire of active teaching/learning strategies for lesson plans and instruction in the content areas. The course includes teaching in a multicultural context and concept development in the content areas with strategies to integrate language for teaching second language learners in mathematics, science, and social studies. (Online, Spring, or arranged for face-to-face cohort groups.)

ESL 5340/6340 Integrating Language Acquisition into Content Instruction I (2)

This is the sixth course for the ESL graduate endorsement program. This course is part one of two courses which integrate language and literacy methodologies into the classroom. This course will entail field experience with mentor teachers who have students who are linguistically different, or are ESL students. In addition, teachers will attend practicum seminars to discuss proficiency and bilingual education and issues relevant to their particular assignments. Class format will include small and large group instruction, supervision, demonstration, lesson plan development, and observations of other classrooms and programs. (Online, Spring, or arranged for face-to-face cohort groups.)

ESL 5345/6345 Integrating Language Acquisition into Content Instruction II (2)

This is the seventh course for the ESL graduate endorsement program. This course is part one of two courses which integrate language and literacy methodologies into the classroom. This course will entail field experience with mentor teachers who have students who are linguistically different, or are ESL students. In addition, teachers will attend practicum seminars to discuss current issues relevant to language and literacy in language proficiency and bilingual education and issues relevant to their particular assignments. Class format will include small lesson plan development and observations of other classrooms and programs. (Online, Summer/1st Session, or arranged for face-to-face cohort groups.)

ESL5350/6350 Family/Parent Involvement in Education (2)

This is the eighth course of the ESL graduate endorsement program. It is designed to provide teachers, administrators, and other educational service providers with relevant approaches to improving minority parent involvement in bilingual education, ESL, and migrant education, and Title I programs. (Online, Summer/1st Session, or arranged for face-to-face cohort groups.)

FAMILY & CONSUMER SCIENCES (FCS)

FCS 1000 Foundations of FCS (1)

Introduction to the profession of Family and Consumer Sciences. Explores historical and contemporary role of the Family and Consumer Scientist. Includes concepts and strategies for Family and Consumer Science Educators. (Fall, Spring)

FCS 2400 Marriage and Family Relations (S) (3)

This course is designed to examine concepts and skills which enhance human growth and development within the context of marriage and the family. This course is designed to help students understand how intimate relationships are formed, maintained and change over time. Through reading, class participation and assignments, students will come to understand various factors that affect marriages and families. Students are encouraged to apply what they learn by evaluating their family life experiences and their own readiness for, or responses to, marriage and family life. (Fall, Spring, Summer)

FCS 3400 Consumer in American Society (S) (3)

Teaches principles necessary for individuals to act as informed, educated and responsible citizens in the financial realm. Promotes critical thinking, problem solving, and action on the part of each student. Includes experiences designed to assist the student in applying the principles discussed. (Fall, Spring)

FCS 3500 Home, Family, and Resource Management (3)

Study and application of the management process and use of resources, including time, energy, money, and equipment; for home and family. Promotes critical thinking, problem solving, and skill development through application of principles studied. Prerequisites: NFS 1020, NFS 2200, NFS 2210. (Spring)

FCS 3700 Principles of Effective Parenting (3)

Emphasizes theoretical foundations for effective parenting strategies and skills. Examines historical and current parenting perspectives. Pre-requisite: ECD 1500 or instructor permission. (Fall, Spring)

FCS 3900 Technology for FCS (3)

Provides students with basic knowledge of computer operation, evaluation of FACS related programs currently available, and opportunity to explore the practical application of resources on the WWW to professional life. Requires instructor permission. (Fall, Spring)

FCS 3950 Vocational and Occupational Education (3)

Designed to explore career options as a vocational Family and Consumer Scientist. Prepares FACS professionals to implement and coordinate Family and Consumer Sciences wage earning programs. (Fall)

FCS 4830 Readings and Conferences (P/F) (1, 2, 3, 4)

FCS 4840 Cooperative Education (P/F) (2, 4, 6, 8)

FCS 4890/5890 Internship (P/F) (3)

FCS 4900 Curriculum Development (3)

Development of competency in curriculum planning and skills in the use of various teaching learning strategies and resources. Prerequisites: FCS 1000; admittance to teacher education department, secondary level. (Spring)

FCS 4980 Student Teaching (2)

An in-school experience designed to help teachers apply methods and materials in a secondary classroom. This course must be taken concurrently with SCED 4980 (6-7 hours). Prerequisite: FCS 4900

and admittance to the Teacher Education Department. (P/F) (Fall, Spring)

FINANCE (FIN)

FIN 2870 Personal Finance (S) (3)
A study to educate each individual in a role as consumer; to aid in making wise and informed spending decisions; and to discuss marketplace, governmental services, budgeting, personal money management, and other consumer related problems. (Fall, Spring)

FIN 3110 Risk & Insurance (3)
This course reviews the types of insurable risks, which are associated with various business enterprises, and the coverage forms, which address these risks. The course will provide valuable background for persons likely to purchase insurance for a business enterprise, or those who have an interest in a career in the insurance industry. Prerequisite: Acceptance into Advanced Standing or approved Minor in department. (Fall)

FIN 3250 Managerial Finance I (3)
This is the first course in a two-course series that is designed to thoroughly ground students in the theories, concepts and application of finance. The focus of this course is on financial ratios, time value of money, project analysis and cost of capital. Prerequisite: Acceptance into Advanced Standing. (Fall, Spring)

FIN 3260 Managerial Finance II (3)
This course is an extension of Finance 3250. The focus of this course is on capital structure, capital acquisition, working capital management, risk management, inventory control and cash management. Prerequisite: FIN 3250 and acceptance into Advanced Standing. (Fall, Spring)

FIN 3750 Investments (3)
Security markets, selection of stocks for portfolio, basic investment analysis, and introduction to various investment vehicles. Prerequisite: Advanced Standing status. (Fall)

FIN 3770 Financial Institutions & Markets (3)
The study of savings and loans, commercial banks, investment banking, mutual funds, industrial loan companies and credit unions. Prerequisite: Advanced Standing. (Fall, Spring)

FIN 4250 Advanced Managerial Finance (3)
Analytical and quantitative techniques using a conceptual approach for creative and contextual decision making in asset allocation and management. Topics include working capital and fixed asset management, capital budgeting, capital structure, and debt management. The class uses the case approach and assumes that the student has an understanding of basic accounting and managerial finance. Prerequisites: ACCT 2020 and FIN 3250 and Advanced Standing. (Spring)

FIN 4450 Options and Futures (3)
This course provides an introduction to futures and options, collectively known as derivative securities. Topics discussed include the markets where derivatives are traded and risk and valuation of derivative securities. (As needed)

FIN 4760 Investments II (3)
An extension of FIN 3750, this course teaches additional topics in Investments including futures, options, and other derivatives, as well as the creation and management of mutual funds and other portfolios. Prerequisite: FIN 3750 and acceptance into Advanced Standing. (Spring)

FIN 4890 Internship (P/F) (Fall, Spring) (1-3)

FIN 4900 Special Topics (Fall, Spring) (1-3)

FIN 6000 Foundations of Finance (3)
This course provides an accelerated overview of the theories and methods of finance in support of the common body of knowledge core required for all MBA students not having previous business coursework. (Offered as needed)

FIN 6100 Advanced Topics in Finance (3)
Selected topics that extend FIN 6000. These may include (but are not limited to: 1) issuing and debt, 2) uses of options, futures and other derivatives, 3) short-term capital management, 4) mergers, acquisitions and bankruptcy, and 5) international finance. Prerequisite: Acceptance into graduate business program and completion of relevant foundation course or sufficient undergraduate coursework. (Fall)

FRENCH (FREN)

FREN 1010 Beginning French I (H) (4)
Designed for students with little or no language experience. This course will emphasize conversation, vocabulary building, and basic grammar. (Fall, Spring)

FREN 1020 Beginning French II (H) (4)
This course is a continuation of FREN 1010 and is designed for students with one semester or its equivalent in French and serves as a continued introduction to the French language. The course stresses all four language skills: speaking, listening, reading, and writing. (Spring)

FREN 2010 Intermediate French I (H) (4)
This course is designed for students having completed French 1020 or its equivalent and serves as an intensive review of the French language. The course will stress the four language acquisition skills: speaking, listening, reading, and writing. (Fall)

FREN 2020 Intermediate Grammar & Conversation (H) (4)
This course is designed for students having completed French 2010 or its equivalent and serves as an intensive review of the French language. The course will stress the four language acquisition skills: speaking, listening, reading, and writing. (Spring)

FREN 3010 Advanced Conversation & Vocabulary (3)
This course serves as a practicum for conversation and vocabulary acquisition. (Taught alternate years)

FREN 3210 Advanced French Grammar (3)
Detailed presentation of French grammar, composition and translation. (Taught alternate years)

FREN 3220 Composition and Discussion (3)
The materials for this course come from literary and journalistic texts which treat a variety of aspects of French culture. These serve as a point of departure for the course's emphasis on writing and conversation. (Taught alternate years)

FREN 3310 Introduction to French Literature (3)
Emphasis is on the reading, reporting, and discussion of selected literary works. (Taught alternate years)

FREN 3510 Cultural History of France (3)
An overview of the historical and cultural development of France. The part that France has played in the European community and on the international level is emphasized. (Fall, Taught alternate years)

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FREN 4310 French Literature of Middle Ages & Renaissance (3)
The literature of France from the 12th through the 16th centuries.
(Taught alternate years)

FREN 4320 17th & 18th Century French Literature (3)
Major authors and movements in the 17th and 18th Century French novel, drama, and poetry. (Taught alternate years)

FREN 4330 19th & 20th Century French Literature (3)
Major authors and movements in the 19th and 20th Century French novel, drama and poetry. (Taught alternate years)

FREN 4510 Introduction to Translation (3)
Practicum, where translation skills are developed at an advanced level. (Taught alternate years)

FREN 4640 Major Authors & Topics (3)
The student is exposed to a thorough analysis and interpretation of French topics or authors. (*May be repeated once for credit on different topics/authors). (Taught alternate years)

FREN 4893 Internship (P/F) (1-5)

FREN 4980 Student Teaching (P/F) (TBA) (2)

GEOGRAPHY (GEOG)

GEOG 1100 Physical Geography (P) (3)
A geographic analysis of the processes and distributions of the elements of Earth's natural environment, i.e. atmosphere, lithosphere, biosphere, and hydrosphere. Co-requisite: GEOG 1110 (Fall, even years)

GEOG 1110 Physical Geography Lab (P) (1)
Laboratory to accompany GEOG 1100. Co-requisite: GEOG 1100 (Fall, even years)

GEOG 1950 Practicum (1-4)
Practicum credit is given for a supervised, structured work experience related to a given discipline. A SUU approved work site is required to provide the experience. The student must confer with an adviser and complete a minimum of 3 hours work per week for each credit of practicum. Deans/Chair and registrars approval for grade. Prerequisite: Consent of instructor. (Fall, Spring)

GEOG 1200 World Cultural Geography (S) (3)
A systematic study of the World's major cultural regions, emphasizing physical, biological, cultural, demographic, economic, and political considerations. Problems of adjustment, including natural hazards, environmental concerns, and human problems, are discussed. (Spring)

GEOG 1450 Human Geography (S) (3)
Focuses on contemporary geographic perspectives of people, their activities, and cultural characteristics, including language, religion, population, politics, settlements, economic development, and environmental concerns. (Fall, odd years)

GEOG 2840 Cooperative Education (2-6)
Observation and activities in professional practice situations off campus arranged by contract with an appropriate faculty supervisor. Variable times. Prerequisite: Consent of instructor. (Pass/fail) (Fall, Spring)

GEOG 2900 GPS Theory, Techniques and Methods (2)
Priority is given to fieldwork and hands on time with GPS units. Topic focus will vary according to the demographics of the students signed up for the class. Topics will range from GPS history theory, How GPS

works, differential GPS, navigation and field collection techniques and GIS integration. Prerequisite: GEOG 3560 or consent of instructor. (Spring)

GEOG 2920 Workshop (1-3)
Instructor approval is required. Dean /Chair and registrar approval is required if a letter grade is required. Various workshops from remote sensing to advance 3D modeling as well as guest lectures have been used in the past for workshops. This course can be taken up to three times. (Pass/fail) (Fall, Spring)

GEOG 3220 Weather and Climate (P) (3)
Elementary study of Earth's atmosphere. Designed for both science and non-science majors to help fulfill major requirements in physical sciences and minor in geography. Especially recommended for students majoring in agriculture, forestry, earth sciences, physical science composite and social science composite. Co-requisite: GEOG 3230. (Spring, even years)

GEOG 3230 Weather and Climate Lab (P) (1)
Laboratory class designed to accompany GEOG 3220. Co-requisite: GEOG 3220. (Spring, even years)

GEOG 3300 World Political Geography (3)
Factors affecting the internal and external affairs of state. Relationships between spatial patterns and political decisions as they affect local, national, and international events. (Fall, even years)

GEOG 3350 Geomorphology (2)
Study of the dominant processes which shape the landscape; the major types of features related to volcanism, tectonism, glaciation, water, wind, etc., are also considered. Prerequisite: GEOL 1110 or GEOG 1100. Co-requisite: GEOG 3360 (Spring, odd years)

GEOG 3360, Geomorphology Lab (1)
Laboratory class to accompany GEOG 3350. Co-requisite: GEOG 3350. (Spring, odd years)

GEOG 3400 Environmental Geography (3)
A study of human interactions with physical phenomena. Environmental principles, problems, and solutions. Water soil, air, mineral, biotic, energy, and scenic resources; Preservation and conservation of earth's resources; roles of modern technology and human populations. (Spring, even years)

GEOG 3500 Introduction to Cartography (3)
Principles and techniques of cartography, including perception, direction, scale, grids, projections, spatial data analysis, data manipulation, color theory and application, and principles of cartographic design. Introduction into computer-aided cartography. Co-requisite: GEOG 3510. (Fall, odd years)

GEOG 3510 Introduction to Cartography Lab (1)
Laboratory to accompany GEOG 3500. Concentrates on map design and production of maps by computer. Co-requisite: GEOG 3500. (Fall, odd years)

GEOG 3550 Principles of Geographic Information Systems (3)
Fundamental concepts and uses of GIS as a problem-solving tool for spatial phenomena. Co-requisite: GEOG 3560. (Fall)

GEOG 3560 Principles of GIS Lab (2)
Laboratory to accompany GEOG 3550. The Principles of GIS lab utilizes the current industry standard GIS software for lab assignments. Prerequisite: ISA 1050. Co-requisite: GEOG 3550. (Fall)

GEOG 3600 Geography of Utah (S) (3)
The role of interacting physical, biological, and cultural processes in shaping Utah's unique and varied human and physical environments.

Problems of adjustment, including natural hazards, environmental concerns, and human problems, are considered. Intended for social science composite majors, geography and geography teaching minors, and others considering upper division credit. (Spring)

GEOG 3620 Geography of North America (S) (3)

An intensive, systematic analysis of the United States and Canada, concentrating on physical, biological, and cultural factors. Problems of adjustment, including natural hazards, the environment, and human problems, are evaluated. Intended for social science composite majors, geography and geography teaching minors, and others desiring upper division credit. (Fall, odd-numbered years)

GEOG 3990 Undergraduate Research in Geography/GIS (2-8)

Laboratory and/or field course centered on helping the student conduct meaningful and novel research. Directed research and techniques used will be discussed. This course may be repeated for variable credit. Prerequisites: Open to qualified students by permission from the instructor. Deans /Chair and Registrars approval for grade is needed. (As needed)

GEOG 4150 Advanced GIS Analysis Methods Lab (3)

Advanced GIS course. Conceptual and technical problems associated with developing and working with relational databases, cartographic modeling techniques using vector and raster GIS software tools. Prerequisite: GEOG 3550 and MATH 1040 or consent of instructor. (Fall)

GEOG 4500 GIS Research Project (Capstone Project) (3)

Student capstone project is required for all students that complete the GIS certificate program. Projects are designed and submitted two (2) semesters before signing up for this course. Students will enroll the semester they are ready to present and defend their research project. Prerequisite: GEOG 4150, CS 1050, IS 3600 or substitute course by consent of instructor (Fall, Spring)

GEOG 4830 Individual Study (Reading and Conference) (1-4)

Individual study of topics arranged by contract with an appropriate faculty supervisor. Variable times. Prerequisite: Consent of instructor. (P/F)

GEOG 4840 Cooperative Education (2-6)

Observation and activities in professional practice situations off campus arranged by contract with an appropriate faculty supervisor. Variable times. Prerequisite: Consent of instructor. (P/F) (Fall, Spring)

GEOG 4890 GIS Internship (2-8)

Students applying for the GIS certificate are required to complete three credit hours of internship. The internship can be on campus or off campus. Students are required to submit a request in writing to participate in this course. The proposal should contain a job description and a letter from their immediate supervisor showing approval. (P/F) (Fall, Spring)

GEOG 4900 Teaching Methods in Geography (2)

Designed for the prospective teacher of geography in the elementary and secondary school systems. Students will be instructed in a variety of effective procedures for teaching geography to adolescents. There will be opportunities for students to put into practice what they have learned in other geography courses and the lecture discussions of teaching methods within this course. The new National Geography Standards are stressed. (Spring, odd years)

GEOG 4920 Workshop (1-3)

Instructor approval is required. Dean /Chair and registrar approval is required if a letter grade is required. Various workshops from remote sensing to advance 3D modeling as well as guest lectures have been used in the past for workshops. This course can be taken up to three times. (P/F) (Fall, Spring)

GEOLGY (GEOL)

GEOL 1010 Selected Topics (P) (3)

A course designed to introduce non-science majors to various aspects of geology. The curriculum is topical, and specific offerings include, but are not limited to; earth systems, geologic controversies, natural hazards, geologic concepts, earth resources, life in the past, geology of national parks, and geology of Southern Utah. Although the specific focus of each course varies, uniform concepts will be presented and include; geologic time, earth materials and resources, internal and external earth systems, and integration of earth systems. Co-requisite: GEOL 1020. (Fall, Spring)

GEOL 1020 Selected Topics Laboratory (P) (1)

Laboratory to compliment and reinforce concepts taught in GEOL 1010. Co-requisite: GEOL 1010 (Fall, Spring)

GEOL 1110 Physical Geology (P) (3)

An introduction to earth systems (external and internal) and materials and first course for geology majors. The interrelated nature of these systems is an integral part of the curriculum. Co-requisite: GEOL 1120 (Fall)

GEOL 1120 Physical Geology Laboratory (P) (1)

Laboratory to accompany GEOL 1110. Co-requisite: GEOL 1110. (Fall)

GEOL 1210 Historical Geology (P) (3)

A general survey of Earth, its history, systems and their processes, materials, and origins. The interrelated nature of these systems is an integral part of the curriculum. Prerequisites: GEOL 1110 with laboratory, Co-requisite: GEOL 1220. (Spring)

GEOL 1220 Historical Geology Laboratory (P) (1)

The laboratory to accompany GEOL 1210, which is general survey of Earth, its history, systems and their processes, materials, and origins. The interrelated nature of these systems is an integral part of the curriculum. Co-requisite: GEOL 1210. (Spring)

GEOL 1500 Hand Sample Rock Identification (2)

A laboratory course that centers on identification of common minerals and rocks in hand sample utilizing a hand lens and other simple equipment. This course would be particularly useful to educators. Prerequisite: GEOL 1010 with laboratory. (Fall)

GEOL 2000 Selected Field Trips (0.5-3)

Selected field trips of one to ten days to areas of geologic interest. Designed for non-geology majors, course credit may be earned by contracting with the instructor as to the amount and type of report to be submitted. Enrollment limited, instructor permission required. Transportation/food costs may be incurred. (Fall, Spring)

GEOL 2210 Geology of Southern Utah (P) (3)

A general education course of both non-science and science majors, geared to the needs of elementary and secondary teachers. Emphasis is placed on the geologic evolution and stratigraphy of the Colorado Plateau and the Great Basin. Co-requisite: GEOL 2220. (Fall, odd numbered years)

GEOL 2220 Geology of Southern Utah Lab (P) (1)

Two eight-hour field experiences conducted on Saturdays that compliment and reinforce concepts taught in GEOL 2210. Co-requisite: GEOL 2210 (Fall, odd numbered years)

GEOL 2230 Geology of National Parks (P) (3)

A general education course for both non-science and science majors, geared to the needs of elementary and secondary teachers. Course includes descriptions and explanations of the unique geology of America's western national parks with an emphasis on landscape

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interpretation and process understanding. Includes detailed information on Utah's parks. Co-requisite: GEOL 2240, (Fall, even numbered years)

GEOL 2240 Geology of National Parks Lab (P) (1)

Two eight-hour field experiences conducted on Saturdays that compliment and reinforce concepts taught in GEOL 2210. Co-requisite: GEOL 2230. (Fall, even numbered years)

GEOL 2990/3990 Undergraduate Research (1,2,3,4)

Instructor permission required. Variable credit. (Fall, Spring)

GEOL 3010 Environmental Geology (3)

An introduction to the role and scope of geological processes in light of contemporary environmental issues. Three lectures per week. Co-requisite: GEOL 3020. (Spring, odd-numbered years)

GEOL 3020 Environmental Geology Laboratory (1)

A laboratory to accompany environmental geology lecture and compliment and reinforce the ideas and concepts presented there. Co-requisite: GEOL 3010. (Spring, odd-numbered years)

GEOL 3110 Paleontology (3)

Principles of paleontology including the description/classification of fossils and the uses of paleontologic data. Introduction to the ten phyla of fossilized invertebrate animals and methods used to distinguish fossilized organisms based upon preserved hard parts. Fossilized organisms are related to their paleoecological setting and stratigraphic position. Three lectures per week. Prerequisite: GEOL 1210; zoology or botany desirable, but not required. Co-requisite: GEOL 3120. (Spring, even-numbered years)

GEOL 3120 Paleontology Laboratory (1)

A laboratory to accompany paleontology lecture and compliment and reinforce the ideas and concepts presented there. Co-requisite: GEOL 3110. (Spring, even-numbered years)

GEOL 3170 Oceanography (3)

A basic survey of the physical, chemical, and geologic character of the world's oceans. Topics include patterns of energy exchange, chemical cycles, geological environments within the sea, and evolution of the ocean basins. Three lectures per week. Prerequisite: GEOL 1110 and 1120. Co-requisite: GEOL 3180. (Spring, odd-numbered years)

GEOL 3180 Oceanography Laboratory (1)

A laboratory to accompany oceanography lecture and compliment and reinforce the ideas and concepts presented there. Co-requisite: GEOL 3170. (Spring, odd-numbered years)

GEOL 3210 Mineralogy (3)

An introductory course in mineralogy emphasizing morphological crystallography, physics, and chemistry of minerals. Three lectures per week. Prerequisite: GEOL 1110 and CHEM 1210. Co-requisite: GEOL 3220 (Fall)

GEOL 3220 Mineralogy Laboratory (1)

Laboratory designed to compliment mineralogy lecture and emphasizing hand specimen identification of rock forming and ore minerals. Co-requisite: GEOL 3210. (Fall)

GEOL 3330 Igneous-Metamorphic Petrology (3)

An introductory course in the petrology and petrography of igneous and metamorphic rocks emphasizing the observation and interpretation of rock texture, mineralogy, and chemical composition. Three lectures per week. Prerequisite: GEOL 3210 with lab. Co-requisite: GEOL 3340. (Spring, odd-numbered years)

GEOL 3340 Igneous-Metamorphic Petrology Laboratory (1)

Laboratory study of hand sample and thin sectioned igneous and metamorphic rocks. Includes extensive use of the polarizing microscope. Co-requisite: GEOL 3330 (Spring, odd-numbered years)

GEOL 3410 Sedimentology and Stratigraphy (3)

An introductory course in sedimentary processes, environments, and products; sources of sediment; depositional environments; and formal stratigraphic nomenclature. Three lectures per week. Prerequisite: GEOL 1210. Co-requisite: GEOL 3420 (Fall, odd-numbered years)

GEOL 3420 Sedimentology and Stratigraphy Laboratory (1)

Laboratory experiences designed to compliment and emphasize the principles learned in GEOL 3410. Emphasis is placed on the identification and correlation of sedimentary facies and gathering and interpreting field data. Co-requisite: GEOL 3410. (Fall, odd-numbered years)

GEOL 3510 Structural Geology (3)

Fundamentals of descriptive, kinematic and dynamic analysis of structures within the Earth's crust and a theoretical treatment of stress and strain. Three lectures per week. Prerequisite: MATH 1050, 1060, GEOL 1110, 1210. Co-requisite: GEOL 3520 (Fall, even-numbered years)

GEOL 3520 Structural Geology Laboratory (1)

Consists of structural problems solved by geometrical, graphical, and stereographic methods. Includes extensive work with maps and cross sections. Co-requisite: GEOL 3510. (Fall, even-numbered years)

GEOL 4000 Selected Field Trips (0.5-3.0)

Selected field trips of one to ten days to areas of geologic interest. Designed for geology majors and minors, course credit is earned by contracting with the instructor as to the amount and type of report to be submitted. Enrollment limited, instructor permission required. Transportation/food costs may be incurred. (Fall, Spring)

GEOL 4070 Applied Geochemistry (3)

This course will acquaint the student with geochemical principles such as origin and abundance of the elements; distribution and migration of those elements; geochemical cycles and prospecting; sampling techniques and evaluation; thermodynamics; crystal chemistry; and isotope geology. Three lectures per week. Prerequisite: GEOL 1110, 3210. (Spring, odd-numbered years)

GEOL 4120 Geological Field Methods (3)

Practice in methods of geological fieldwork and use of field instruments. Prerequisite: GEOL 3410, 3510. (Summer)

GEOL 4800 Senior Project (3)

Directed research. Instructor permission required. (Fall, Spring)

GEOL 4960 Field Geology (6)

A five-week intensive course in geologic mapping and field investigation. Prerequisite: GEOL 3410, 3510, 4120. (Summer)

GEOL 4990 Seminar in Geology (1)

Review of current literature and developments in the field of geology. Instructor permission required. (Fall, Spring)

GERMAN (GERM)

GERM 1010 Beginning German I (H) (4)

Intended as an introduction to the German language for those who have had no previous exposure to German. The course will stress all four language acquisition skills: reading, writing, aural comprehension and speaking. (Fall, Spring)

GERM 1020 Beginning German II (H)	(4)
A continuation of Germ 1010. (Fall, Spring)	
GERM 2010 Intermediate German (H)	(4)
Designed for students who have had first year German or its equivalent in high school, this course reviews first year materials and emphasizes speaking, reading and writing skills. (Fall)	
GERM 2020 Intermediate Grammar & Conversation (H)	(4)
A continuation of Germ 2010. (Spring)	
GERM 3010 Advanced Conversation & Vocabulary	(3)
This course is designed to build vocabulary while developing conversational skills. (Fall or Spring; taught alternate years)	
GERM 3020 Phonetics and Pronunciation	(3)
The science and rules of German phonetics will help to perfect German pronunciation. (Spring; taught alternate years)	
GERM 3210 Advanced Grammar	(3)
This course reviews German grammar on an advanced level. (Fall; taught alternate years)	
GERM 3220 Advanced Conversation & Composition	(3)
This course develops a higher level of fluency and includes a writing component. (Fall; taught alternate years)	
GERM 3310 Survey of German Literature	(3)
This course introduces German literature by acquainting the students with literature from each of the various literary movements. (Spring; taught alternate years)	
GERM 3320 Survey of German Poetry	(3)
This course introduces German poetry by acquainting the students with poetry from each of the various literary movements. (Spring; taught alternate years)	
GERM 3510 Cultural History of Germany	(3)
This course presents an overview of the cultural and political developments in Germany from the earliest times to the present. It emphasizes Germany's intellectual, philosophical, artistic, musical, and literary history. (Fall; taught alternate years)	
GERM 3520 History of Languages (H)	(3)
This course traces the development of languages from their origins to their modern forms, placing emphasis on the western European languages. (Fall or Spring; taught alternate years)	
GERM 4310 German Literature since 1850	(3)
A summary of the literature and literary movements during the twentieth and last half of the nineteenth centuries. (Fall; alternate years)	
GERM 4320 German Literature 1750-1850	(3)
(Spring; taught alternate years)	
GERM 4330 Earliest German Literature to 1750	(3)
(Fall or Spring; taught alternate years)	
GERM 4640 Major Authors & Topics (TBA)	(3)
GERM 4893 Internship (P/F)	(1-5)
GERM 4980 Student Teaching (P/F) (TBA)	(2)

HISTORY (HIST)

HIST 1010 Introduction to Western Civilization (H)	(3)
An introductory lecture course in the fundamentals of Western Civilization. The second purpose of the course is to acquaint students with some of the general interpretations of European and world history (including gender perspectives) from the birth of civilization to 1715. (Fall)	
HIST 1020 Introduction to Western Civilization II (H)	(3)
An introductory lecture course in the fundamentals of Western Civilization. The second purpose of the course is to acquaint students with some of the general interpretations of European and world history (including gender perspectives) from 1715 to the present. (Spring)	
HIST 1700 American Civilization (S) (I)	(3)
The fundamentals of American history including political, economic, and social development of American institutions and ideas. *Successful completion of this course meets the American Institutions requirement established by the state legislature. (Fall, Spring)	
HIST 2700 United States 1607-1877	(3)
A political, social and economic survey of the period, emphasizing the forces for American Independence, the development of the Constitution, the emergence of Jacksonian democracy, the causes and aftermath of the Civil War. (Fall)	
HIST 2710 United States 1877-Present	(3)
A continuation of History 2700 with emphasis on the emergence of modern corporate enterprise and the growth of the U.S. as a world power and the growing impulse to domestic reform in the 20th century. (Spring)	
HIST 3000 U.S. Indians Through 1868	(3)
American setting before the discovery of the New World; the attitudes of various European governments toward native Americans; United States policies governing Indian issues; and removal of Indian and reservation policies. (Alternate Fall)	
HIST 3010 U.S. Indians Since 1868	(3)
The continuing development of the reservation system, the end of the treaty period, the Bureau of Indian Affairs, the effects of the Allotment Act, and the Indian Reorganization Act. Other major topics include the Indian Claims Commission, termination policy and self-determination. (Alternate Spring)	
HIST 3090 History Seminar	(3)
An examination of history through literature and an interdisciplinary humanities approach. The literature examined will concentrate on historiography and biography. Biographies will include major and minor historical and political figures. (Fall)	
HIST 3200 Sports in American Cultural History	(3)
The development of sports in America from folk games during the colonial period to the age of television. Topics will include the rise of organized sports in the 19th century, the popularization of professional and college sports in the first half of the twentieth century, and the television age. The modern period will focus on sports as business, political, race, gender and social issues. (Offered in Alternate Years)	
HIST 3620 Afro-American History From Colonialism to 1877 (3)	(3)
A survey of the changing roles, experiences and contributions of Afro-Americans to American history from the 17th century to Reconstruction. Designed to introduce the student to some of the major issues in Afro-American history and to understand how changes in Afro-American lives are related to other changes in American history. (Alternate years)	

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HIST 3630 Afro-American History From 1877 to the Present (3)

A survey of the changing roles, experiences and contributions of Afro-Americans to American history from 1877 to the present. Designed to introduce the student to some of the major issues in Afro-American history and to understand how changes in Afro-American lives are related to other changes in American history. (Alternate years)

HIST 3810 Westward Movement (3)

A history of the American frontier from European exploration to the American trans-Mississippian frontier to the present. Topics include exploration, geography, exploitation, folk migrations, and the political, social, and economic history of the American West. (Fall)

HIST 3870 History of Utah (3)

Geography and native peoples; early explorations; political, social and economic developments to the present. (Fall, Summer, and on-line)

HIST 3880 History of the Southwest (3)

This course covers the American Southwest from prehistoric times to the present and reviews Native American, Spanish, Mexican, and American history. Major themes include the multi-cultural interaction in the area and economic development since the 17th century including land and water use. (Alternate Spring)

HIST 4410 Ancient Greece (3)

A history of the Greeks from earliest times through the Classical period to Roman conquest of Greece. (Fall)

HIST 4420 Ancient Rome (3)

A history of the Romans from the founding of Rome to the disintegration of the Western Empire. (Spring)

HIST 4430 The Middle Ages 300-1300 A.D. (3)

In this course the emergence and development of medieval European civilization from the collapse of the Western Roman Empire to the opening of the Renaissance Era are examined.

HIST 4440 The Renaissance and Reformation Eras (3)

Beginning with the crises of the fourteenth century and ending with Europe ca. 1555, this course probes the cultural conditions and evolutions that led to a multitude of Renaissance and Reformation movements, including humanism, Protestantism, Roman Catholicism, confessionalism, and the witchhunts. (Fall)

HIST 4460 Nineteenth Century Europe (3)

The end of the old regime and the French Revolution. The Napoleonic Wars, the reorganization of Europe, and continuing revolutionary currents (including the Industrial Revolution) through 1870. The growth of national states and the emergence of imperialism. (Spring)

HIST 4470 European History Seminar (3)

In this course, recent and formative scholarship, as well as primary sources, on selected topics relevant to medieval and early modern Europe are examined. A different major theme such as 'popular' and 'official' cultures, the growth of law and legal systems, medicine and science, and peasants' urban work and lifestyles. The topics examined will be changed every two years.

HIST 4475 Topics in Modern European History (3)

In this lecture and reading course, we will examine recent scholarship on significant topics in modern European history only touched upon in survey courses. Topics will be changed every two years. Current topic: The first World War.

HIST 4480 Europe in the 20th Century (3)

Europe since World War I and the rise and character of international organizations and World War II, including postwar international problems and domestic development since 1945. (Spring)

HIST 4490 Hitler and Nazi Germany (3)

The Nazi dictatorship amounted to the collapse of civilization. Why Hitler? Why the Holocaust? This course is designed to help students come to terms with such questions as we examine the origins, course, and fate of the Third Reich. (Fall)

HIST 4510 World Military History (3)

This is a one-semester lecture course in European and American military history. The course begins with the classical warfare of the 18th century and traces social and technical developments that have influenced the conduct of war. Begins with Frederick the Great and works forward to the Arab-Israeli conflict of 1973. (Fall)

HIST 4540 Medieval England (3)

English history from the Roman conquest to the dawn of the early modern era, including discussion of key events in Scotland and Ireland. This course gives special attention to institutions and ideas that created a national society and formed England's constitutional development (first to sixteenth centuries). (Fall)

HIST 4550 Early Modern England (3)

A study of England, Scotland, and Ireland in the era in which the Reformation unfolded, a civil war was fought, and a monarchical and parliamentary revolution was achieved, in the midst of England's cultural flowering (sixteenth to late seventeenth centuries).

HIST 4600 Women in Ancient, Medieval, Early Modern Europe (3)

Examines the roles, status, treatment and experiences of women, as well as cultural attitudes about gender, from antiquity through early modern Europe. (Spring)

HIST 4610 Topics in African History (3)

Topical history of issues on the African continent including slave trade, its abolition, pre-colonial era, colonialism, independence movements and the emergence of the modern African state. (Alternate years)

HIST 4710 United States 1607-1789 (3)

A detailed social, economic and political examination of the colonial period of United States history from the earliest settlement to a study of Independence and the Constitutional convention. (Fall)

HIST 4720 United States 1789-1845 (3)

A study of the New Nation, the War of 1812, the Jacksonian Era, placing special emphasis on the increasing political, social and economic democratization of the United States together with the difficulties created by change. (Spring)

HIST 4730 United States 1845-1898 (3)

A study of American expansion and its contributions to sectional rivalry leading to the Civil War. The Civil War and Reconstruction and the rise of corporate industry to a position of dominance in American life, and the emergence of the United States as a world power through industrial growth and imperial war are studied. (Fall)

HIST 4740 United States 1898-1945 (3)

American participation in world conflict set against a domestic background of agrarian protest and urban progressivism and a political, economic and social analysis of the dislocations of the 1920s, the Great Depression, the New Deal, and American participation in World War II. (Spring)

HIST 4750 United States Since 1945 (3)
A political, economic and social analysis of the post World War II years. The continuing issues of the post-war decades are examined in the light of growing American responsibilities. (Spring)

HIST 4830 Readings and Conference (P/F) (1-3)

HIST 4990 Seminar in Historical Research (3)
An examination of the theory and practice of research and writing history including formulation of hypotheses, research proposal development, resources, bibliography, and completing a project of original, scholarly research that is subjected to the evaluation of other members of the class. Prerequisite: Senior status and a minimum of 12 upper division credit hours in history. (Spring)

HONORS (HONR)

HONR 1010 Critical Creative Thinking Across Disciplines (D)(3)
An interdisciplinary and team taught course designed to improve critical and creative thinking, problem solving and information management skills. Emphasis is placed on improving a student's ability to analyze and advocate arguments and to understand the relationship of language to logic. Specific attention will be spent on applying the principles of informal logic to a variety of disciplines. Students will learn tools for managing large amounts of information especially data from the Internet. (Spring)

HONR 3010/4010 Contemporary Issues/Convocation (3)
Students study a specific topic or theme. Communication and general analytical skills are stressed. Students will attend selected Convocation presentations. An interdisciplinary faculty team will teach the course. The course may be repeated for credit. (Fall)

HONR 3500 Honors Tutorial (1)
Students will study a specific topic or theme in-depth to improve their analytical or presentational skills. May be repeated for credit. (Spring)

HONR 3800 Service Learning Practicum (1-3)
Service learning offers students an opportunity to connect classroom content with real-life experiences. It provides an opportunity to teach students about responsible citizenship through collaborating with members of the community. Students will sign a contract with the Honors Director prior to starting the project. Students may repeat the class for credit. (P/F) (Fall, Spring)

HONR 4020 Honors Seminar (3)
An in-depth study of an issue or topic associated with a field of study within the University. Class may be repeated. (Fall, Spring)

HONR 4970 Honors Thesis Preparation (1)
In consultation with the Honors Director and an adviser in the student's major department, students will prepare their research or creative project proposal. (Fall, Spring)

HONR 4971 Honors Thesis or Creative Component (3)
The Honors thesis/creative component provides advanced work for students and challenges them to explore an issue intensively or develop a creative talent. Under the supervision of a faculty mentor, students will prepare a thesis or project appropriate to the research methods of the student's discipline. Students are required to give a presentation on their thesis/creative project to an appropriate audience. In all instances, students will provide a written document of their thesis/creative project. (Fall, Spring)

HONR 4990 Independent Study (1-3)
Students desiring to pursue a topic in more detail, conduct undergraduate research, or study a topic on a subject the University does not offer may contract with a faculty member for one-on-one

guidance. A contract must be recorded in the Honors Office prior to initiating the course. (P/F) (Fall, Spring)

HOTEL, RESORT, & HOSPITALITY MANAGEMENT (HRHM)

HRHM 3000 Introduction to Hospitality Management (3)
This course introduces students to a management career in the hospitality industry, which includes hotels, food and beverage, meetings and conventions, recreation and leisure, and information technology. The importance of leadership and the establishment of a service culture are also treated. (Fall, Spring)

HRHM 3200 Food Service Management (3)
This course provides the basis for understanding the various challenges and responsibilities involved in managing a food and beverage operation. Prerequisite: HRHM 3000. (Fall, Spring)

HRHM 3300 Facilities Management (3)
This course takes students through an eight-stage model of the development process, which includes the idea conception, feasibility, planning, financial, market analysis, contract negotiations, construction, and asset management. Prerequisite: HRHM 3000. (Spring)

HRHM 3400 Hotel Operations (3)
This course presents a systematic approach to managing hotel room operations by combining front office and house keeping functions. Special attention is given to the flow of business from making reservations to checking out. Prerequisite: HRHM 3000. (Fall, Spring)

HRHM 3500 Hospitality Management Systems (3)
This course builds upon business concepts in managerial accounting, management, marketing, and information technology with the hospitality industry specific applications. Topics include operational ratios, forecasting and budgeting, room sales distribution channels, employee selection, retention and training, and hospitality information technology systems. Prerequisites: ACCT 2020, completion of IS, MGMT, MKTG electives or instructor permission. (Fall)

HRHM 3600 Guest Service (3)
A study of the components of outstanding guest service. The course includes the concepts of organizational behavior, leadership, and consumer behavior in developing a service culture to deliver outstanding guest service. Prerequisites: HRHM 3000, MKTG 3010, or instructor's permission. (Fall)

HRHM 4200 Entertainment Management (3)
This course reviews the logistics of maintaining, operating, and managing a permanent entertainment production or attraction which includes marketing, operations management, administration management, and stage management. Prerequisites: HRHM 3000. (Spring)

HRHM 4300 Resort Recreation Management (3)
This course offers a complete approach to the operation of resort properties. Planning, development, financial investment, and marketing that deal with the unique nature of resort business are covered. Prerequisite: HRHM 3000. (Spring, every other year)

HRHM 4500 Hospitality Work Requirement (1)
Students are required to work 750 paid hours in a hospitality industry position. Students present pay stubs and a written report relating work experiences to hospitality curriculum major courses. Prerequisites: HRHM 3000, Hospitality major or minor. (Fall, Spring)

HRHM 4600 Case Problems in HRHM (3)
This course is the capstone course for HRHM majors to be taken in the senior year. The case study approach is used to present

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practical problems that draw upon all previous course concepts to solve industry problems. Prerequisite: HRHM 3000. (Annually)

HRHM 4700 Special Topics in Hospitality Management (3)
Specialized topics in Hospitality Management for students to extend beyond core curriculum. Prerequisites: Hospitality Major; HRHM 3000. (Fall, Spring, Summer)

HUMANITIES (HU)

HU 1010 Introduction to Humanities (H) (3)
A survey of some of the most important literary, philosophical, artistic and musical monuments of Western culture from the Greeks to the present. (Fall, Spring, Summer)

HUMANITIES AND SOCIAL SCIENCES (HSS)

HSS 1120 Introduction to Diversity (D) (3)
This course is an interdisciplinary, turn taught, general education offering. The course will introduce the theoretical and practical paradigm of cultural differences. In this course, cultural difference will refer to race, gender, nationality, class, religion, and age. Students will be encouraged to examine the ways in which these paradigms influence their daily lives and the structure of our culture. (Fall, Spring)

HSS 1200 Intro to Environmental Studies (D) (3)
This course will introduce the practical and theoretical paradigms involving human-environmental relationships. The course is designed as a gateway course into the interdisciplinary area of environmental science. The course will consist of four different units, each taught by a professor from a different scholarly discipline with an underlying theme of environmental studies. Each professor will illustrate how scholars in their discipline study human interactions with specific environments, built and natural. (Fall, Spring)

HSS 2010 Convocation (1)
An enrichment exchange with guest lecturers, exhibits, and concerts through the Convocation Series, the Braithwaite Fine Arts Gallery, and the Cedar City Music Arts. The pass/fail course may be taken four times for credit. (Fall, Spring)

HSS 2120 Service Learning (1)
This course is designed to take the student volunteer through the process of volunteerism and its application to themselves and their academic training through practical experience and critical reflection. May be taken two times for credit. Pass/Fail grade only. (Fall, Spring, Summer)

INFORMATION SYSTEMS (IS)

IS 3000 Fundamentals for Information Systems (3)
Designed to introduce the student to system development concepts, information technology and application software. Demonstrates how information is used in organizations and how IT enables improvement in quality, timeliness, and competitive advantage. (Fall, Spring)

IS 3600 Advance Database/Systems Implementation w/DBMS (3)
Designed to teach the effective use of database management systems, including modeling databases, programming of operations, and constructing SQL and object-oriented queries. Prerequisites: ISA 1050, ISA 2100. (Fall, Spring)

IS 4200 Systems Analysis & Design (3)
Designed to introduce students to the field of systems development covering the fundamental principles of successful system development and major phases, activities, tools, and techniques.

Major topics include the SDLC framework, CASE tools, feasibility analysis, fact-finding techniques, structure charts, DFDs, ERDs, user interface design, and project management. Prerequisites: ISA 2000 or CS 1050. (Fall)

IS 4600 Physical Design & Implementation in Emerging Environments (3)
Students who have completed systems analysis and design and physical implementation with DBMS will extend their knowledge by implementing an information system using a contemporary development environment capable of interacting with a local or a remote DBMS. Teams will use project management principles to implement an information system. Prerequisite: IS 4200 (Spring)

IS 4700 e-Business & Web Infrastructure (3)
Designed to provide a general survey of the key technological elements of e-commerce and provide insight into e-commerce infrastructures. Course briefly covers important business strategies essential to maintaining e-commerce infrastructures. Prerequisites: ISA 2000 or CS 1050.(Spring)

IS 4800 Capstone: IS Project Management (3)
Designed to cover factors necessary for successful management of system development or enhancement projects. Both technical and behavioral aspects of project management are discussed. The focus is on management of development for enterprise-level systems. Must be taken senior year. (Fall, Spring)

IS 4850 Special Topics (1-3)
This course will provide students with an opportunity to acquire applied information systems experience/skills. This experience will include the multi-disciplinary aspects of information systems. Instruction may be traditional or by Readings and Conference. Topics may vary by semester. Repeatable for credit. Prerequisites: Acceptance into the IS major. Instructor permission. (Fall, Spring)

IS 4890 Internship (P/F) (Fall and Spring) (3-6-9)

INFORMATION SYSTEMS APPLICATIONS (ISA)

ISA 0900 Basic Keyboarding (1)
Designed for students without previous training in keyboarding who need basic keyboarding skills to efficiently operate a computer terminal. Emphasis on developing correct touch keyboarding techniques with a high degree of accuracy at a rate of at least 25 wpm. (Course meets first half of semester) (Fall, Spring)

ISA 0950 Skill building Keyboarding (2)
Designed for students who wish to increase their keyboarding speed and improve their accuracy. A self-support lab fee will be charged. (Prerequisite: Basic computer keyboarding skill) (Fall, Spring)

ISA 1050 Overview of Computer Applications (C) (3)
Designed to explore concepts of microcomputer systems. Concepts include: windows, introductory word processing, spreadsheets, database management, and presentation programs. Students will gain proficiency with the basic command structures of each application in an integrated office suite. Recommended computer keyboarding speed of at least 25 wpm. Fulfills general education - skills requirement for Information Literacy. (Fall, Spring, Summer)

ISA 1300 Business English (3)
Designed as a review of grammar, spelling, word usage, punctuation, capitalization, and number usage as a basis for effective business writing. The course includes letter and memorandum writing assignments. Prerequisite: Basic computer keyboarding skill. (Fall, Spring)

ISA 1800 Word Processing (3)
 Designed to present word processing applications and formatting principles. Students will learn word processing applications such as merging documents, sorting data, creating columns and tables, using graphics, and other business-oriented documents. Students will also learn basic formatting techniques. Prerequisite: Basic word processing skills. (Fall, Spring)

ISA 1950 Professional Leadership Development (1)
 Designed to provide students with opportunities to develop leadership, character, human relations, self-confidence, and to explore career opportunities through a national business student organization. Students may take this course three times for a total of three credit hours. (Fall, Spring)

ISA 2000 Web Development (3)
 Designed to develop web pages using HTML and other web page authoring software programs. Students will create several web pages and publish them to a web server. Some advanced features will be introduced. Prerequisite: ISA 1050 or instructor consent. (Fall)

ISA 2050 Web Server Management (3)
 Designed to develop skills necessary to effectively administer an Internet web server. Issues include: hardware and software configuration, user management, and security. Students will gain experience with different web server platforms including Apache, IIS, and Netscape Enterprise server. Recommended: ISA 2000. (Spring)

ISA 2100 Database (3)
 Designed to introduce database management concepts and applications. Emphasis will be on command operations and their use in database structure, storage, retrieval, reports, and manipulation. Prerequisite: Basic computer keyboarding skills. (Fall, Spring)

ISA 2200 Resume/Interview Preparation (2)
 Designed to prepare students for the job search process and to assist students in writing resumes and application letters, participating in constructive employment interviews with knowledge about both interviewee and interviewer roles, and writing thank-you letters and other employment-related letters. (Fall, Spring)

ISA 2300 Written Business Communication (3)
 Designed to develop writing skills as applied to letters, memorandums, abstracts, and reports. Report writing will be centered around problem-solving approaches that lead to conclusions and recommendations. Grammar will be reviewed and discussed including capitalization, word usage, and punctuation. Prerequisite: Basic computer keyboarding skills. (Fall, Spring)

ISA 2400 Desktop Publishing (3)
 Learn and apply desktop-publishing and design principles and numerous commands, features, and techniques to effectively use Adobe PageMaker software for creating a variety of printed materials that support business-related activities. Prerequisite: Basic computer keyboarding skills. (Fall, Spring)

ISA 2450 Multi-Media Presentations (3)
 Learn and apply design principles, commands, features, and techniques to effectively use Adobe Photoshop, Microsoft PowerPoint, and Macromedia Director in the process of creating and delivering multimedia presentations and interactive media that support business-related activities. Prerequisite: ISA 1050. (Fall, Spring)

ISA 2500 Advanced Spreadsheets (3)
 Designed to cover the use of spreadsheets in business decision making, accounting applications, and numerical data analysis. Students will gain knowledge of basic and advanced spreadsheet applications including formulas, functions, charts, data analysis,

macros, web integration, and VBA programming. Prerequisite: ISA 1050 or instructor consent. (Fall, Spring)

ISA 2600 Telecommunication & Networking (3)
 Designed as a telecommunications and networking foundation in network connectivity, data communication concepts and communication protocols. Students learn to analyze cost-benefits and to evaluate, select, and implement different communication options. (Fall, Spring)

ISA 2620 Network Administration I (3)
 Designed to develop practical skills necessary to effectively administer a multi-platform network in a working environment. Issues include: user, security, and printer management; implementation of directory structures; network documentation; file system management; and software distribution methods. Prerequisite: ISA 1050 or equivalent. Recommended prerequisite: ISA 2600 (Fall)

ISA 2640 Network Administration II (3)
 Designed to teach higher-level systems management features, including performance optimization, advanced printing, remote management, protocol support, and data maintenance. Students will install and configure network servers and services including DNS, DHCP, Web services, and security methods. Prerequisite: ISA 1050 or equivalent. Recommended prerequisite: ISA 2600 (Spring)

ISA 2660 Network Service and Support (3)
 Designed to prepare the student in technical support for network systems. Topics covered include hardware and storage configuration, network cabling, problem troubleshooting and resolution, and common network problems. Must be major or minor in department. Recommended prerequisite: ISA 2600 (Fall)

ISA 2680 Network Design (3)
 Designed to develop the skills necessary to design and implement a fully functional network. Students will work through the design and implementation process, develop standards documents, provide detailed network diagrams, develop methods for user support, and document the network. Prerequisite: ISA 2600 and ISA 2620. (Spring)

ISA 2800 Advanced Computer Applications (3)
 Designed to provide students with problem-solving project related activities that include word processing and spreadsheets applications, desktop publishing through correspondence, statistical reports, manuscripts/reports, and financial statements. Prerequisite: ISA 1050, 1800, 2100, 2400 or by instructor consent. (Spring)

ISA 2850 Special Topics (1-3)
 Acceptance into advanced standing or approved minor in department. (Fall, Spring)

ISA 2890 Internship (P/F) (Fall, Spring) (1-3)

ISA 2900 Computer Tutorial Internship (1)
 Designed to give students problem-solving experience by assisting other students with their computer problems in an instructed lab situation. Interns will be required to complete approximately 45-47 hours during the semester. Instructor permission. (Fall, Spring)

INTERIOR DESIGN (ID)

ID 1950 Design I (3)
 This class provides students with the basic elements and principles of design, which is the foundation of the Interior Design program. The study of home furnishings in the interior setting is part of this curriculum. (Fall, Spring)

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ID 2950 Design II (Housing and Equipment) (3)
A basic course designed to provide practical information on planning and designing a house, with emphasis on evaluating floor plans, analyzing various functions of a house and learning the structural elements of a house. Large equipment (air conditioning and heating systems, large appliances) will be covered. Introduction to CAD technology is an integral part of the course. Prerequisite: ID 1950. (Spring)

ID 3950 Design III (3)
A study of rooms and the various choices one has for materials to fill the needs of a client. Includes learning how to plan for space using architectural details. Woods, flooring, fabrics, art, and accessories will be discussed in depth. Hands-on experience will include home tours. Styles of homes, corresponding furniture and landscaping fundamentals included. (Fall) Pre-requisite: ID 1950

ID 4830 Readings and Conferences (P/F) (1, 2, 3,4)

ID 4840 Cooperative Education (P/F) (2,4, 6, 8)

ID 4890/5890 Internship (P/F) (3)

ID 4960 Design Seminar (1)
This class will cover a reference file of interiors including sketching, measurements and various styles of interior settings. Prerequisite: ID 1950. (Spring)

LANGUAGE (LANG)

LANG 4900 Required for Teaching Licensure Methods Of Teaching Foreign Language in the Public Schools (2)
This course examines contemporary foreign language acquisition theory, background studies in linguistics and psychology, and the foreign language classroom environment. Students are introduced to typical methodologies built on these theories, given opportunity to practice them with student peers, and to project these ideas and experiences into the public school classroom. Students majoring or minoring in French, German, or Spanish and planning to certify as teachers of French, German, or Spanish must take Language 4900 as well as satisfy all licensure requirements. (Fall)

LIBRARY MEDIA (LM)

UNDERGRADUATE

LM 1010 Information Literacy (C) (1)
An on-line orientation course in library research resources focusing on specific areas such as books, serials, reference, computer searching and information from the Internet. (Fall, Spring, Summer)

LM 4160 Library Computer & Reference Skills (3)
Designed to help students develop the skills and techniques to foster creative uses of media resources. Emphasis on searching on-line databases, using printed reference sources and creating a Web page for Internet access to reference materials. (Fall) Available as a Web course.

LM 4180 Utilization of Literature in the Classroom (3)
Introduces students to the value of literature as a lifetime activity and its use in the classroom. Techniques such as booktalks, storytelling, readers' theatre, creative dramatics, choral reading, book discussions, writing, art projects, are explored. (Spring) Available as a Web course.

LM 4190 Managing a Media Center (2)
Provides an in-depth focus on the administration and organization of library media centers including budgets, facilities, personnel and collections. (Spring) Available as a Web course.

LM 4200 Library Technical Services (3)
Introduces students to the basic operation in library technical services. (Fall) Available as a Web course.

LM 4890 Practicum (1-3)
Practical work experience in the various areas of the Sherratt Library and/or instructional Media Services. Two credit hours available for the library portion and one credit available for instructional media portion. (P/F) (As needed)

LM 4980 Library Media Student Teaching (2)
An in-school experience designed to provide prospective library media teachers with practical application of coursework. Advance application is required. (P/F) Special fee: \$62.50 (five weeks) or \$100 out-of-state.

GRADUATE STUDIES IN LIBRARY MEDIA

LM 6160 Library Computer & Reference Skills (3)
Designed to help students develop the skills and techniques to foster creative uses of media resources. Emphasis on searching on-line databases, using printed reference sources and creating a Web page for Internet access to reference materials. (Fall) Available as a Web course. (Online, Fall, or arranged for face-to-face cohort groups.)

LM 6180 Utilization of Literature in the Classroom (3)
Introduces students to the value of literature as a lifetime activity and its use in the classroom. Techniques such as booktalks, storytelling, readers' theatre, creative dramatics, choral reading, book discussions, writing, art projects, etc. are explored. (Spring) Available as a Web course. (Online, Fall, or arranged for face-to-face cohort groups.)

LM 6190 Managing a Media Center (2)
Provides an in-depth focus on the administration and organization of library media centers including budgets, facilities, personnel and collections. (Spring) Available as a Web course. (Online, Spring, or arranged for face-to-face cohort groups.)

LM 6200 Library Technical Services (3)
Introduces students to the basic operation in library technical services. (Fall) Available as a Web course. (Online, Spring, or arranged for face-to-face cohort groups.)

LM 6890 Practicum (1-3)
Practical work experience in the various areas of the Sherratt Library and/or instructional Media Services. Two credit hours available for the library portion and one credit available for instructional media portion. Pass/Fail. (Fall, Spring)

LM 6980 Library Media Clinical Practice (6)
An in-school experience designed to provide prospective library media teachers with practical application of coursework. Advance application is required. Must be admitted to the Graduate Educator Licensure Program and have completed all prerequisite classes. Fee required. See Clinical Practice Fee Schedule. (P/F) (Fall, Spring)

MANAGEMENT (MGMT)

MGMT 2220 Small Business Management (3)
Designed to teach basic fundamentals necessary to run a small business in its day-to-day operation. Course topics include financing, franchises, forecasting, ethics, management teams, leadership,

insurance, pricing, personnel, planning along with E-Business opportunities, family businesses and exit strategies. (Fall, Spring)

MGMT 3000 Leadership Development (2)

Basic theories of management and organizational development are considered in the light of practical experience. The course is designed to enhance the skills of students involved in leadership activities. May be repeated twice for credit. (Fall, Spring)

MGMT 3050 International Business (3)

An introductory course describing the nature and environments that an international businessperson works in, including organizations, monetary systems, and the various forces that impact the international manager such as financial, economic, cultural, political, and legal. Prerequisites: Accepted into Advanced Standing or special approval of the department. (Fall)

MGMT 3100 Production/Operations Mgmt. (3)

Covers the strategic aspects of converting inputs into products and services. Topics include manufacturing policy, manufacturing process selection and design, capacity planning, production planning and scheduling, inventory management, and logistic planning. Prerequisite: Math 1090, 1100, and 2040. Accepted to Advanced Standing or special approval of the department. (Fall & Spring)

MGMT 3180 Management & Organizations (3)

Introduction to the world of a manager, the concepts needed by a manager, the process of managing, and the adjustments that must be made to meet changes that are occurring in the modern business world. Prerequisite: Accepted to Advanced Standing or approved in department. (Fall, Spring)

MGMT 3210 Entrepreneurship (3)

In many ways this is a research course. Students will first complete various library and field assignments and activities to gain a sense of the opportunities, risk-taking, innovation, and creativity demanded in starting a new business. Early in the course, each student will develop an idea for a new business. During the course each student will write a business plan based on that idea. In the meantime, we will study the specific elements of a business plan to help student write their own. (Spring)

MGMT 3240 Human Resource Management (3)

Human resources management, both philosophical and practical, is examined through the study of its evolution, meeting the human resource requirements, developing human resources, motivating, communicating, group behavior and supervision. Various aspects of labor relations, compensation programs, employee benefits, safety and health, auditing human resources, and career opportunities are covered. Prerequisite: MGMT 3180, accepted to Advanced Standing or approved minor in department. (Fall, Spring)

MGMT 3340 Employment Law (3)

Legal principles and legislation, which control employment decision in union and non-union settings. Topics include fair employment practices, anti-discrimination law, wage and hour regulations, occupational safety and health, benefit regulations, representation elections, unfair labor practices and dispute settlement processes. Prerequisite: MGMT 3240 and acceptance into Advanced Standing or approved minor in department. (Spring)

MGMT 4100 Organizational Behavior & Leadership (3)

Practical approaches to helping students develop the skills necessary to manage people in organizations. The critical role of leadership will be emphasized throughout the course. Topics include motivation, empowerment, power and influence, conflict management, team building, and creative problem solving. Prerequisite: MGMT 3180, accepted into advanced standing or approved minor in the department. (Fall, Spring)

MGMT 4200 Business, Government & Ethics (3)

A study of the interactions of business, government and society with a focus on business ethics and the social responsibilities of business firms. Topics include the sociopolitical environment of business, government regulation, personal and organizational ethics, and national and international issues facing businesses today. Prerequisite: accepted into Advanced Standing, or approved Minor in department. (Fall, Spring)

MGMT 4250 Advanced Seminar in Human Resources Mgmt (3)

This course is designed to provide students with knowledge of advanced topics in HR including strategic human resource planning, job analysis, human resource information systems, training, career development, and international HR managements. Prerequisite: MGMT 3240 and acceptance into Advanced Standing or approved minor in department. (Offered as needed)

MGMT 4750 Advanced Topics in Management (3)

Emphasis on case discussions, small group work and role playing for the acquisition skills for effectively managing organizations. Topics include advanced intervention strategies for motivation, communication, rewards, leadership, conflict, decision-making, organizational structure, performance evaluation, and organizational change. (Offered as needed)

MGMT 4890 Internship (P/F) (Fall, Spring) (1-3)

MGMT 4900 Special Topics (Fall, Spring) (1-3)

MGMT 4950 Strategic Management (3)

A capstone course for seniors covering the concepts of strategic management and developing perspective, judgment, and skills in problem solving in interrelated areas of accounting, management, marketing, economics and finance. Prerequisite: All 3000 level Core classes (Fall, Spring)

MGMT 5990 Managing Professional Org. (3)

This course teaches students how to successfully make the transition from being staff in a professional organization to a management position within that structure. Further, the course expands on general management concepts in a case approach. (As needed)

MGMT 6000 Foundations of Management and Operations (3)

This course provides an accelerated overview of both the theories and methods of management in support of the common body of knowledge core required for all MBA students not having previous business course work. Prerequisite: Acceptance into graduate business program. (Offered as needed)

MGMT 6100 Organizational Behavior and Issues (3)

This course synthesizes material covered in the Social Sciences with basic business principles in an effort to understand why individuals think and behave as they do in a corporate setting. It analyzes individual and group variables, which inhibit or facilitate effective attainment of organizational goals. The roles of values and ethics are considered. Topics include motivation, leadership, conflict, decision-making, the changing business environment, group dynamics, organizational structure, and current issues in management. Prerequisite: Acceptance into a graduate business program and completion of relevant foundation course or sufficient undergraduate coursework. (Spring)

MGMT 6300 HR Management and Law (3)

An examination of the current critical legal issues and strategic questions associated with managing employees. Utilizing text and case material, readings, primary and secondary research, the students will be required to research, discuss, and design responses to some of the most important and strategic questions organizations are responding to now and in the future with respect to the management of their human resources. Prerequisite: Acceptance into

Course Descriptions

a graduate business program and completion of relevant foundation course or sufficient undergraduate coursework. (Summer)

MGMT 6400 Strategic Analysis (3)
This course is the capstone course for the MBA, and as such, it will integrate the methods and tools developed in the curriculum to solve the strategic positioning and management issues of the organization. Prerequisite: Acceptance into a graduate business program and completion of relevant foundation course or sufficient undergraduate coursework. Must be taken in student's final semester. (Spring)

MGMT 6900 Project/Thesis (3)
Students have the option of completing a project for a business that utilizes the knowledge, skills, and abilities developed in the MBA, or they may engage in an academic research project with a professor. Prerequisite: Acceptance into Master of Business Administration program. (Fall, Spring, & Summer)

MARKETING (MKTG)

MKTG 3010 Marketing Principles (3)
An analysis of problems and concepts concerned with the distribution of goods from producer to consumer. The course includes survey of marketing research, product planning, pricing, channels of distribution and promotion. Prerequisite: accepted to Advanced Standing in department. (Fall, Spring)

MKTG 3030 Consumer Behavior & Ethics (3)
This course provides a strong understanding of the basic principles of consumer behavior, insights into the scientific investigation on which our knowledge is based on an awareness of how these consumer findings can be practically applied to the professional discipline of marketing. The course begins with individual and psychological factors, which affect consumer behavior. Prerequisite: MKTG 3010 and accepted to Advanced Standing in department. (Fall, Spring)

MKTG 3400 International Marketing (3)
An examination and study of the changing marketing environment from a seller's market to a buyer's market. The course analyzes the global environment concerning product planning, pricing, channels of distribution and promotion, in addition to concepts involving strategy, quality, ethics and global competition. Prerequisite: MKTG 3010 and accepted into Advanced Standing. Recommend: GEOG 1200. (Fall)

MKTG 3900 Retail Management (3)
A broad view of retailing from a management point of view. The course stresses areas in which retailers can minimize threats and maximize profit opportunities by proper adjustment to the marketing variables in the firm's-changing environment. Some field trip assignments are given. Prerequisite: MKTG 3010 and accepted to Advanced Standing in department. (Spring)

MKTG 3930 Advertising (3)
This course studies the marketing, management and development of successful advertising campaigns. Advertisements, which have been successful and unsuccessful, are analyzed for strengths and weaknesses. Designed both for those who may some day make advertising decisions and for those who are consumers of advertising. Prerequisite: MKTG 3010 and accepted to Advanced Standing in department. (Fall, Spring)

MKTG 4030 Marketing Management (3)
This marketing capstone course provides the student with an understanding of the marketing function from a managerial viewpoint, including strategies involving the marketing mix, applications of concepts to marketing decision, and the integration of marketing theories to a corporate environment. Prerequisites: MGMT 3180,

MKTG 3010, FIN 3250 and accepted to Advanced Standing. Recommended to take in student's final semester. (Spring)

MKTG 4100 Market Research & Strategy (3)
This course develops skills in survey research methods as well as research using secondary data. In addition to research of current market conditions, the student will learn to use data to create a strategic plan of action for market penetration, augmentation of market share, product development, or whatever the need may be. The strategic analysis portion will draw heavily on game theory as applied to economic and business analysis. Prerequisites: MKTG 3010 and MATH 2040. (Fall, Spring)

MKTG 4890 Internship (P/F) (Fall, Spring) (1-3)

MKTG 4900 Special Topics (Fall, Spring) (1-3)

MKTG 4930 Sales Management (3)
A comprehensive analysis of marketing management from the standpoint of the sales executive. Deals with decision-making on the product life, on pricing, on physical distribution, on market channels, on promotion, and on branch management. Prerequisites: MGMT: 3180, MKTG 3010 and accepted to Advanced Standing. (Fall)

MKTG 6000 Foundations of Marketing and Market Research (3)
Covers the analysis of competitors, consumer and business markets, and other aspects of the environment, and the development and implementation of appropriate product, pricing, distribution and promotional strategies. The material covers profit and nonprofit organizations, and services as well as products. Buyer and competitive behavior, market segmentation, targeting, positioning, and market research, particularly as related to strategic decision making, is emphasized. Prerequisite: Acceptance into MBA program. (As needed)

MKTG 6200 Marketing Management (3)
This course focuses on reinforcing, extending, and applying marketing concepts, principles, and techniques through readings, case studies, and secondary research. Prerequisite: Acceptance into Master of Business Administration Program and a foundations course, or equivalent, in marketing. (Fall)

MATH (MATH)

MATH 0900 Pre-Algebra (2)
Mathematical concepts necessary to study algebra: prime and composite numbers, least common multiple, greatest common factor, fractions, order of operations, decimals, ratios, and proportions, percents, basic geometry. Pass/Fail course; 80% grade required to pass. Credit not counted toward graduation. Student Support Center Permission required. (Fall, Spring)

MATH 0920 Math Anxiety Reduction (1)
A course designed to alleviate the effects of math anxiety and math avoidance. Methods of gaining control over the individual's psychosomatic response to anxiety through knowledge of the factors involved are emphasized. A growing understanding of the student's affective characteristics is coupled with the acquisition of methods to enhance success in mathematics courses. Student Support Center permission required. (Fall, Spring)

MATH 0990 Beginning Algebra (4)
Exploration of signed numbers, linear equations and inequalities, integer exponents, polynomials and factoring. An introduction to the concepts of sequences, sets, graphing, radicals and quadratic equations is included. This class prepares students for Intermediate Algebra Pass/Fail course; 80% grade required to pass. Student Support Center permission required. (Fall, Spring, Summer)

MATH 1010 Intermediate Algebra (5)
The traditional topics of intermediate algebra are covered: graphing linear equations and inequalities, absolute value equations and inequalities, factoring, rational expressions, exponents, radicals, quadratic equations, exponential and logarithmic functions, and an introduction to sets, functions and complex numbers. Prerequisite: A Math ACT of at least 18 or Math 0990 or Math 1020 or equivalent. (This course does not fill the requirement for general education.) (Fall, Spring, Summer)

Math 1020 College Mathematics (5)
A course to enable students to build their math skills in order to complete the quantitative literacy requirement for general education. The course will include an introduction to problem solving, sets, number systems including the real numbers, linear equations and inequalities, quadratic equations and functions. (This course does not fill the requirement for general education.) (Fall, Spring, Summer)

MATH 1030 Quantitative Reasoning (C) (4)
Exploration of contemporary mathematical thinking, motivated by its application to problems in modern society; emphasizes development of skill in analytical reasoning. This course is designed not only to meet the University general education requirements but also to generate a positive attitude toward and an interest in mathematics. Prerequisite: A Math ACT of 23, a grade of C or better in Math 1010 or 1020 or equivalent. (Fall, Spring, Summer)

MATH 1040 Introduction to Statistics (C) (4)
An introduction to the basic concepts and methods of statistical data analysis. Descriptive statistics, statistical graphs, statistical estimation techniques and hypothesis testing, regression and correlation; chi-square application, one-way ANOVA. Prerequisite: A Math ACT of 23, a grade of C or better in Math 1010 or equivalent, fundamental computer skills recommended. Can not receive credit for both Math 1040 and 2040. (Fall, Spring, Summer)

MATH 1050 College Algebra (C) (4)
This course explores the concept of functions: polynomial, rational, inverse, logarithmic and exponential; with an emphasis on graphing. Solving systems of equations using matrix methods is covered along with conic sections. Other topics may include sequences, mathematical induction and the binomial theorem. The course involves the extensive use of graphing calculators. Prerequisite: A Math ACT of 23, a grade of C or better in MATH 1010 or equivalent. (Fall, Spring, Summer)

MATH 1060 Trigonometry (3)
Trigonometric functions, definitions, radian measure, graphs, solving trigonometric equations, vectors, Law of Sines, Law of Cosines, complex numbers, polar coordinates. A graphing calculator is required. Prerequisite: A Math ACT of 23, a grade of C or better in MATH 1010 or equivalent. (Fall, Spring, Summer)

MATH 1100 Business Calculus (C) (3)
An introduction to Calculus with application to business. Topics include limits derivatives and special functions such as exponential and logarithmic function, function of several variables, partial derivatives, constrained optimization and Lagrange multipliers. Brief introduction to the methods of least squares. Prerequisites: Math 1050. (Fall, Spring, Summer)

MATH 1210 Calculus I (C) (4)
Functions, limits and continuity; the derivative, differentiation techniques, and applications; graphing applications including extrema and concavity; elementary antiderivative/integration skills; the definite integral and its applications. Coverage includes applying the ideas and techniques of calculus to algebraic, trigonometric, exponential, and logarithmic functions. A graphing calculator is required. Prerequisites: a grade of C or better in Trigonometry and College Algebra. This should include Math 1050 and 1060 or a pre-college

background of at least two and one-half years of algebra, one year of geometry and one-half year of trigonometry. (Fall, Spring, Summer)

MATH 1220 Calculus II (4)
A continuation of Math 1210. Inverse trigonometric functions; techniques of integration; further applications of the definite integral; improper integrals and indeterminate forms; infinite series; conic sections and topics in analytic geometry; polar coordinates and parametric equations. A graphing calculator is required. Prerequisite: A grade of C or better in Math 1210 or high school A.P. Calculus. (Fall, Spring)

MATH 1630 Discrete Mathematics (3)
Set theory, relations, functions, logic, propositional calculus, graph theory, trees, combinatorial analysis, languages, algebraic systems. This course lays the foundation for problem solving in mathematics and computer science. Prerequisite: Math 1050 or equivalent. (Fall, Spring)

MATH 2010 Math for Elementary Teachers I (3)
A two-semester sequence in mathematics appropriate to the needs of the elementary/middle schoolteachers. Topics include: problem solving, sets, numeration systems, whole numbers, algorithms of arithmetic, number theory, rational numbers, decimal numbers. Required for prospective elementary school teachers. Prerequisite: Either Math 1050 or high school Pre-Calculus. (Spring, Summer)

MATH 2020 Math for Elementary/Middle School Teachers II (3)
A continuation of Math 2010. Topics include: real numbers, statistics, probability, geometry and measurement. Required for prospective elementary school teachers. Prerequisite: a grade of C or better in Math 2010. (Fall, Spring, Summer)

MATH 2040 Applied Statistics - Business Emphasis (C) (4)
An introduction to the basic concepts and methods of statistical data analysis. Descriptive statistics, statistical graphs, statistical estimation techniques and hypothesis testing, regression and correlation; chi-square application, one-way ANOVA nonparametric testing. Prerequisite: A math ACT of at least 23, a grade of C or better in Math 1010 or equivalent, and fundamental computer skills recommended. Can not receive credit for both Math 1040 and 2040. (Fall, Spring, Summer)

MATH 2210 Calculus III (4)
Vectors in two and three-dimensional space, quadric surfaces, cylindrical and spherical coordinates, calculus of vector-valued functions, partial derivatives and the gradient, limits and continuity of functions of several variables, vector fields and line integrals, multiple integrals and evaluation theorems. Prerequisites: Math 1220 with a C or better. (Fall, Spring)

MATH 2990/3990 Undergraduate Research (Fall, Spring) (3-5)

MATH 3120 Foundations of Algebra and Analysis (3)
A careful and thorough presentation of the fundamental mathematical concepts required to enter advanced mathematical course work: sets, logic, methods of mathematical proof, relations, functions and cardinality. Prerequisites: Math 1220 and 1630. (Fall, Summer)

MATH 3130 Foundations of Geometry (3)
Informal and formal study of geometry, investigation of the elements of an axiomatic system, introduction to appropriate geometry software. This course is required for prospective secondary mathematics teachers. Prerequisite: Math 3120. (Spring, Summer)

MATH 3140 History of Mathematics (3)
A study of the development of mathematics and the people making significant contributions to mathematics. Prerequisite: Math 1220. (Fall, Alternate Years, offered 2003-2004)

Course Descriptions

MATH 3210 Linear Algebra with Applications (3)
Systems of linear equations, matrices; Euclidean vector spaces, linear transformations between Euclidean vector spaces, eigenvalues and eigenvectors, abstract vector spaces, and linear transformations, least-squares solution of systems of linear equations, and applications to conic sections and determinants. Concepts will be applied to economics, engineering, biology, sociology, etc. Prerequisites: Math 1210, 1220 or 1100 or equivalent and fundamental computer skills. (Fall, Spring)

MATH 3440 Differential Equations (3)
Linear and nonlinear differential equations and linear systems of equations with applications; emphasizes understanding of the solution as well as the techniques used. This course is designed for majors in Math, Math Ed., Science, and Engineering. Prerequisites: Math 1220 and 3210. (Spring)

MATH 3500 Actuarial Mathematics (3)
Mathematical analysis of interest, general annuities, and other securities. Theoretical basis of actuarial models and the application of those models to insurance and other financial risks. This course covers topics from the second and third actuarial exam. Prerequisite: MATH 1100 or MATH 1210. (Spring, even years)

MATH 3600 Numerical Analysis (3)
Application of numerical methods to the interpolation and analysis of data, solution of equations, general iterative methods, approximation of functions, and error analysis. Prerequisite: Math 3210 and a working knowledge of a computer language. (Spring, even years)

MATH 3700 Probability and Statistics (5)
A formal, calculus-based introduction to the concepts of probability theory and mathematical statistics. Set theory based probability and probability distributions are studied with the goal of presenting and understanding the underpinnings of statistical methodology. Prerequisite: 1220. (Fall)

MATH 3770 Mathematical Modeling (3)
Development of mathematical and statistical models and the application of those models to various areas of applied mathematics. Possible applications include, but are not limited to: insurance, investments, bioinformatics, and chemistry. Prerequisite: Math 3700. (Spring, odd years)

MATH 3800 Partial Differential Equations & Fourier Analysis (4)
Series Solutions, Numerical Methods, Nonlinear Differential Equations and Stability, Partial Differential Equations, Fourier Series, Boundary Value Problems. Prerequisites: Math 3210 and Math 3440. (Fall, odd years)

MATH 4220 Abstract Algebra (4)
Elementary number theory and an introduction to the study of the fundamental algebraic systems: groups, rings, and fields. Prerequisite: Math 3120. (Spring)

MATH 4340 Topology (3)
An introduction to point-set topology. Topics to be covered include sets, metric spaces, topologies, bases, subspaces, products, quotients, separation axioms, continuous functions, compactness, connectedness, and metrization. Prerequisite: Math 3120. (Fall, Even years)

MATH 4400 Advanced Calculus I (4)
The first of a two-semester sequence. The general emphasis will be a careful study of functions of one real variable. Particular topics explored will include sequences and convergence, limits, theorems of Heine-Borel and Bolzano-Weierstrass, continuity, differentiation, integration, power series and uniform convergence. Prerequisite: Math 2210, 3120, and 3210, or instructor's permission. (Fall)

MATH 4410 Advanced Calculus II (3)
A continuation of Math 4400. Differential calculus of functions of several variables, differentiability of functions of several variables, vector differential calculus, integral calculus, line integrals, Green's theorem, simply connected domains, surface integrals, and Stokes' theorem. Prerequisite: Math 4400. (Spring)

MATH 4580 Complex Analysis (3)
Complex numbers, analytic functions, complex differentiation and integration, Cauchy's theorem, power series, Laurent series and residue theorem. Prerequisite: Math 2210. (Spring, Odd years)

MATH 4900 Methods of Teaching Secondary School Math (3)
A methods course relating mathematics and the NCTM Standards to teaching techniques, topic development, problem solving, and ingredients of effective mathematics instruction. Required for prospective secondary mathematics teachers. Prerequisite: Math 1210 or consent of instructor. (Fall, Summer)

MATH 6000 Descriptive Set Theory (3)
Topology of Euclidean spaces, different descriptions of open and closed subsets, connectedness, the notion of component, domains, the structure of open sets on the real line, closed connected sets on the real line, perfect sets, Cantor dis-continuum, the structure of perfect sets, S-core of a set, the cardinality of a perfect set, the structure of closed sets on the real line, the cardinality of closed sets, sets of measure zero, Borel sets, sufficient and necessary conditions of Reimann integral existence, development of real numbers sets topological structure. Prerequisites: Math 2210 and 3120. (offered on demand)

MATH 6010 Systems of Numbers (3)
An introduction to the number systems of mathematics. Using an axiomatic approach and constructing models and examples, the number systems—natural, integer, rational, real, and complex are developed and studied. The course is designed to give a comprehensive understanding of number systems. Prerequisite: a grade of C or better in Math 1050, 1060. (offered on demand)

MATH 6590 Problem Solving for Math Teachers* (3)
* Under Development

MATH AND COMPUTER SCIENCE (MACS)

MACS 2840 Cooperative Education (3-9)
(P/F) (Fall, Spring, Summer)

MACS 3030 Writing/Science Majors (Spring) (3)

MACS 4830 Reading and Conferences (3-6)
(P/F) (Fall, Spring, Summer)

MACS 4840 Cooperative Education (3-6)
(P/F) (Fall, Spring, Summer)

MACS 4890/5890 Internship (P/F) (Fall, Spring, Summer) (3-9)

MACS 4920 Workshop (P/F) (offered on demand) (2-3)

MACS 4980 Student Teaching (P/F) (Fall, Spring, Summer) (2)

MACS 4990 Seminar (Spring) (1)

MILITARY SCIENCE (MILS)

MILS 1200 Introduction to Leadership Excellence (3)
Historical overview and evolution of value systems and philosophies. Individual leadership styles; organization and time

management; writing skills; ethics; basic first aid; introduction to map reading and land navigation; implementing a personal fitness program; role of the officer in the military; drill and ceremonies; rappelling; and weapons training. (Fall)

MILS 1201 Introduction to Leadership Lab (0)
Laboratory to accompany MILS 1200. One two and one-half hour meeting per week. Concurrent enrollment in MILS 1200. (Fall)

MILS 1210 Individual Leadership Skills (3)
Comparison and analysis of leadership styles in U.S. Army. Army organization, active and reserve forces; sexual harassment and equal opportunities training; winter operations, and survival; squad tactics; weapons training; and tactical communications. (Spring)

MILS 1211 Individual Leadership Lab (0)
Laboratory to accompany MILS 1210. One two and one-half hour meeting per week. Concurrent enrollment in MILS 1210. (Spring)

MILS 2150 Spring Lab-Sophomore (1)
Military basic skills oriented toward in-depth preparation for junior year of military science and special Army schools such as Airborne, Air Assault, and Northern Warfare Training; includes physical fitness, drill, marksmanship, and patrolling. (Spring)

MILS 2200 Advanced Individual Leadership (3)
Building on skills and fundamentals learned in MILS 1200, 1210; personal leadership and military skills relative to land navigation, military first aid, and preventive medical care and exercises involving tactical training, and other adventure training. (Fall)

MILS 2201 Advanced Leadership Lab (1)
Laboratory to accompany MILS 2200. One two and one-half hour meeting per week. Concurrent enrollment in MILS 2200. (Fall)

MILS 2210 Small-Unit Leadership (3)
Organization and leadership of military fire teams and rifle squads, land navigation, squad and platoon tactics, radio/wire communications, and basic first aid. (Spring)

MILS 2211 Small-Unit Leadership Lab (0)
Laboratory to accompany MILS 2210. One two and one-half hour meeting per week. Concurrent enrollment in MILS 2210. (Spring)

MILS 3150 Spring Lab-Juniors (1)
Prerequisite to attendance and successful completion of summer advanced camp at Ft. Lewis, Washington; emphasis on small-unit leadership, physical fitness, land navigation, squad and platoon tactics. (Spring)

MILS 3200 Organizational Leadership (4)
Theory, practical experience, and diagnostic evaluation in organizational leadership, emphasizing communication, human relations, organizational structures, managements, and applied leadership. (Fall)

MILS 3201 Organizational Leadership Lab (0)
Laboratory to accompany MILS 3200. One two and one-half hour meeting per week. Concurrent enrollment in MILS 3200. (Fall)

MILS 3210 Battlefield Leadership (4)
Prerequisite to attendance at summer advanced camp, preparing for its successful completion: land navigation, squad and platoon tactics, combat operations, physical fitness, and battlefield leadership. (Spring)

MILS 3211 Battlefield Leadership Lab (0)
Laboratory to accompany MILS 3210. One two and one-half hour meeting per week. Concurrent enrollment in MILS 3210. (Spring)

MILS 3250 Staff Organization and Operations (1)
Special project staff work for joint Army/Air Force campus ceremonies leadership labs, field training exercises, and training camps. Prerequisite: enrollment in military science. (Fall, Spring).

MILS 4150 Spring Lab-Seniors (1)
Instruction, counseling, and communications in preparation for commissioning into the U.S. Army. Students will be assigned as assistant instructors and evaluated on ability to plan, organize, and teach. (Spring).

MILS 4200 The Military Profession and Ethics (4)
Preparing the prospective officer for successful completion of first and subsequent assignments in the Army. U.S. Army training management, military writing, administration, logistics, professionalism, and ethics. Performs in Army Staff functions. (Fall)

MILS 4201 Military Profession and Ethics Lab (0)
Laboratory to accompany MILS 4200. One two and one-half hour meeting per week. Concurrent enrollment in MILS 4200. (Fall)

MILS 4210 The Profession of Arms (4)
Preparing the prospective officer for successful completion of Army assignments. U.S. advanced Army training management, military justice and law, precommissioning orientation, military briefing skills, and junior officer leadership. Performs in Army Staff functions. (Spring)

MILS 4211 Profession of Arms Lab (0)
Laboratory to accompany MILS 4211. One two and one-half hour meeting per week. Concurrent enrollment in MILS 4211. (Spring)

MILS 4250 Ranger Preparation (0)
Participation in Army ROTC Ranger Challenge and Mountain Ranger programs. Advanced military training with practical application of skills taught in MILS 1200-4210.

MILS 4350 Special Project (2)
Special project staff work for Army campus ceremonies, Leadership labs, field training exercises, and training camps. Limited to ROTC cadets with the rank of Company or Battalion positions. Prerequisite: MILS 3250. (Fall, Spring)

MUSIC (MUSC)

MUSC 0990 Recital Attendance (0)
This course requires attendance at musical events and concerts to broaden the student's intellectual and musical horizons. For music majors and minors. (P/F) (Fall, Spring)

MUSC 1010 Introduction to Music (F) (3)
This course is designed to expose the general student to the principal forms of traditional Western art music as well as multicultural music genres through the study of music history and literature. (Fall, Spring)

MUSC 1040 Arts Retrospective (D) (1)
An examination of how the arts both influence and respond to a societal epoch or theme. Through a selected specific topic the course investigates the interrelationship of three fine art disciplines and how they express the spirit of an age. (Three interlocking one-credit courses combine for this three-credit inquiry) Co-requisites 2 of the following: ART 1040, TA 1040, or DANC 1040. (Fall, Spring)

MUSC 1100 Class Piano I (1)
A course to familiarize students with the fundamentals of piano playing, keyboard theory and interpretation. Prepares music majors for the piano proficiency examination. (Fall, Spring)

Course Descriptions

MUSC 1110 Class Piano II (1)
A continuation of MUSC 1100. Prerequisite: A grade of "C" or higher in MUSC 1100 or permission of the instructor. (Spring)

MUSC 1130 Class Voice (2)
A course to familiarize students with the fundamentals of singing and experience in the public performance of art songs. May be repeated for credit. (Spring)

MUSC 1140 Class Guitar (1)
Basic techniques of playing the guitar. The student must supply his/her own instrument. (Fall)

MUSC 1400 Individual Applied Music Instruction (1)
May be repeated for credit. Prerequisite: Permission of the instructor. (Fall, Spring)

MUSC 1410 Individual Applied Music Instruction (2)
May be repeated for credit. Prerequisite: Permission of the instructor. (Fall, Spring)

MUSC 1510 Elementary Music Theory I (3)
The first course in the music theory sequence for music majors and minors, the course content is comprised of scales and triads, functional harmony, keyboard harmony, and other components. Students desiring to take this course should have some previous music training. Prerequisite: Permission of the instructor. (Fall)

MUSC 1520 Elementary Music Theory II (3)
A continuation of MUSC 1510. Prerequisite: A grade of "C" or higher in MUSC 1510. (Spring)

MUSC 1540 Elementary Aural Skills/Sight Singing I (1)
The first course in the aural skills theory sequence for music majors and minors, the course content is comprised of practical singing and aural skills in the areas of scale, intervals, solfege, triads, and other components. Prerequisite: Permission of the instructor. (Fall)

MUSC 1550 Elementary Aural Skills/Sight Singing II (1)
A continuation of MUSC 1540. Prerequisite: A grade of "C" or higher in MUSC 1540. (Spring)

MUSC 2350 Basic Conducting (2)
An introductory course covering the fundamentals of conducting. Prerequisite: A grade of "C" or higher in MUSC 1520 or permission of the instructor. (Fall, Spring)

MUSC 2400 Individual Applied Music Instruction (1)
May be repeated for credit. Prerequisite: Average grade of "B" or higher in two hours of MUSC 1400 and permission of the instructor. (Fall, Spring)

MUSC 2410 Individual Applied Music Instruction (2)
May be repeated for credit. Prerequisite: Average grade of "B" or higher in four hours of MUSC 1410 and permission of the instructor. (Fall, Spring)

MUSC 2510 Intermediate Music Theory I (3)
A continuation of MUSC 1520. Prerequisite: A grade of "C" or higher in MUSC 1520 or permission of the instructor. (Fall)

MUSC 2520 Intermediate Music Theory II (3)
A continuation of MUSC 2510. Prerequisite: A grade of "C" or higher in MUSC 2510 or permission of the instructor. (Spring)

MUSC 2540 Intermediate Aural Skills/Sight Singing I (1)
A continuation of MUSC 1550. Prerequisite: A grade of "C" or higher in MUSC 1550 or permission of the instructor. (Fall)

MUSC 2550 Intermediate Aural Skills/Sight Singing II (1)
A continuation of MUSC 2540. Prerequisite: A grade of "C" or higher in MUSC 2540 or permission of the instructor. (Spring)

MUSC 3070 Form and Analysis (3)
A course surveying musical forms with analysis by sight and ear. Prerequisite: A grade of "C" or higher in MUSC 2520 or permission of the instructor. (Fall, every other year)

MUSC 3210 Brass Ensemble (1)
May be repeated for credit. Prerequisite: Permission of the instructor. (Fall, Spring)

MUSC 3220 Woodwind Ensemble (1)
May be repeated for credit. Prerequisite: Permission of the instructor. (Fall, Spring)

MUSC 3230 String Ensemble (1)
May be repeated for credit. Prerequisite: Permission of the instructor. (Fall, Spring)

MUSC 3240 Percussion Ensemble (1)
May be repeated for credit. Prerequisite: Permission of the instructor. (Fall, Spring)

MUSC 3320 Band (1)
This course involves the study and preparation of symphonic band literature as well as participation in marching and pep band units. May be repeated for credit. Prerequisite: Permission of the instructor. (Fall, Spring)

MUSC 3330 Jazz Ensemble (1)
An instrumental ensemble which specializes in performing jazz literature. May be repeated for credit. Prerequisite: Permission of the instructor. (Fall, Spring)

MUSC 3350 Opus (2)
This is a select vocal chamber ensemble which performs popular choral works from all periods and styles. May be repeated for credit. Prerequisite: Permission of the instructor. (Fall, Spring)

MUSC 3360 Concert Choir (1)
This course requires intensive study and performance of choral music from all periods and styles. May be repeated for credit. Prerequisite: Permission of the instructor. (Fall, Spring)

MUSC 3370 Opera/Musical Theatre (2)
This course involves the preparation and performance of compositions from the realm of opera and/or musical theatre. May be repeated for credit. Prerequisite: Instructor permission. (Fall, Spring)

MUSC 3380 Symphony Orchestra (1)
A course emphasizing the study and performance of the major symphonic literature. May be repeated for credit. Prerequisite: Permission of the instructor. (Fall, Spring)

MUSC 3400 Individual Applied Music Instruction (1)
May be repeated for credit. Prerequisite: Average grade of "B" or higher in two hours of MUSC 2400 and permission of instructor. (Fall, Spring)

MUSC 3410 Individual Applied Music Instruction (2)
May be repeated for credit. Prerequisite: Average grade of "B" or higher in four hours of MUSC 2410 and permission of instructor. (Fall, Spring)

MUSC 3500 Music History I (3)
A survey course for majors and minors that covers musical styles, trends, and examples of the various periods of music history from

ancient times to the modern day. Prerequisite: A grade of "C" or higher in MUSC 1520. (Fall)

MUSC 3510 Music History II (3)
A continuation of MUSC 3500. Prerequisite: A grade of "C" or higher in MUSC 1520. (Spring)

MUSC 3700 Brass Methods (1)
A course designed to prepare music education students in the pedagogy and methods of brass instruments. (Spring, every other year)

MUSC 3720 Woodwind Methods (1)
A course designed to prepare music education students in the pedagogy and methods of woodwind instruments. (Fall, every other year)

MUSC 3740 Percussion Methods (1)
A course designed for preparing music education students in the pedagogy and methods of percussion instruments. (Spring, every other year)

MUSC 3750 String Methods (1)
A course designed to prepare music education students in the pedagogy and methods of the orchestral string instruments. (Spring, every other year)

MUSC 3800 Junior Recital (0)
A course designed to fulfill the performance requirements for certain music degrees. Prerequisite: Permission of the instructor. (P/F) (Fall, Spring)

MUSC 3900 Music for Elementary Teachers (1.5)
A course designed to cover the principles and practices of music in the elementary school classroom. **NOTE:** Must be concurrently enrolled in ART 3900. (Fall, Spring)

MUSC 4060 Orchestration and Arranging (3)
A study of the standard combinations of instruments and voices and how to utilize them in varying combinations as an arranger or composer. Prerequisite: MUSC 2520, 3070, or permission of the instructor. (Spring, every other year)

MUSC 4350 Advanced Instrumental Conducting (2)
A course designed to teach advanced baton techniques, score preparation and basic rehearsal procedures for instrumental ensembles. Prerequisite: MUSC 2350, 2520, 3070, 3500, 3510, or permission of the instructor. (Spring, every other year)

MUSC 4360 Advanced Choral Conducting (2)
A course designed to teach advanced baton techniques, interpretation and pedagogy relating to choral organizations. Prerequisite: MUSC 2350, 2520, 3070, 3500, 3510, or permission of the instructor. (Spring, every other year)

MUSC 4400 Individual Applied Music Instruction (1)
May be repeated for credit. Prerequisite: Average grade of "B" or higher in two hours of MUSC 3400 and permission of the instructor. (Fall, Spring)

MUSC 4410 Individual Applied Music Instruction (2)
May be repeated for credit. Prerequisite: Average grade of "B" or higher in four hours of MUSC 3410 and permission of the instructor. (Fall, Spring)

MUSC 4800 Senior Recital (0)
A course designed to fulfill performance requirements for concentrations in the Bachelor of Arts degree. Prerequisite: Permission of the instructor. (P/F) (Fall, Spring)

MUSC 490C Choral Literature and Methods (3)
A course to study the administrative and practical problems of teaching vocal music in the schools. Prerequisite: MUSC 2350, 2520, or permission of the instructor. (Fall, every other year)

MUSC 490E Music in the Elementary School (3)
A survey of pedagogical techniques, approaches and materials for the elementary music specialist. Prerequisite: Permission of the instructor.

MUSC 490I Instrumental Music Methods (3)
The study of the administrative and practical problems of teaching instrumental music in the schools. Prerequisite: MUSC 2350, 2520, or permission of the instructor. (Fall, every other year)

MUSC 4980 Student Teaching (P/F) (Fall, Spring) (2)

MUSC 6990 Special Projects (1-3)

NATURAL RESOURCES (NR)

NR 1010 Introduction to Natural Resources (L) (3)
Survey of the professions of Forest, Range, and Wildlife management and relationship of conservation and multiple uses of wildland resources to the welfare of the state and nation. Three lectures per week. This course serves as a valuable prerequisite for BIOL 2140 Ecology Lab, which involves many field trips. (Spring)

NR 3000 Management of Natural Resources & Environment (3)
Addresses how people from diverse disciplines must integrate knowledge of biophysical, ecological, and socioeconomic processes to manage natural resources. Considers different approaches for managing the environment and emphasizes how diverse perspectives require interdisciplinary empathy, communication, and collaboration. Three hours of lecture per week. No prerequisites (Fall)

NURSING (NURS)

NURS 1010 Exploration of Nursing (2)
Exploration of professional nursing roles and responsibilities. Introduction to the basic principles of nursing, requirements for entry into practice and nursing employment opportunities. Introduces medical terminology, communication and collaboration, and working as part of the health care team. 2 lecture hours per week. (Fall)

NURS 3120 Introduction of Health Assessment (3)
Health assessment across the life span through development of interviewing and physical assessment skills. Focuses on skills to conduct comprehensive health assessment. 3 lecture hours per week. Prerequisites: Acceptance into the nursing program. (Fall, Spring)

NURS 3130 Fundamentals of Nursing Practice (8)
Introduces students to fundamental nursing skills, communication, and problem-solving utilized in basic nursing care. Nursing concepts, processes, and practices provide nursing students with a firm foundation for nursing study. Credit hours (8:4+4), 4 lecture hours per week and 12 clinical hours per week. Prerequisites: Acceptance into the nursing program. (Fall, Spring)

NURS 3140 Foundations of Professional Nursing (3)
Theoretical and practice concepts upon which nursing is based. Expectations for professional writing; evidence-based practice; historical evolution of nursing; health teaching; principles of health promotion; primary, secondary, and tertiary prevention. 3 lecture hours per week. Prerequisites: Acceptance into the nursing program. (Fall, Spring)

Course Descriptions

NURS 3220 Pharmacology and Therapeutic Interventions (3)
Pharmacotherapeutics and complementary interventions to facilitate coping and healing processes. Credit hours (3), 3 lecture hours per week. Prerequisites: completion of all 3100 level courses. (Fall, Spring)

NURS 3230 Care of Adults (8)
Conceptual basis for understanding acute physical health alterations in adult clients. Roles and responsibilities of nurses; physical, mental, emotional, social and environmental factors that alter health. Provide nursing care to adults in a variety of settings. Credit hours (8:4+4), 4 lecture hours per week and 12 clinical hours per week. Prerequisites: completion of all 3100 level courses. (Fall, Spring)

NURS 3240 Concepts in Mental Health Nursing (2)
Nursing concepts basic to mental health and wellness across the lifespan: common mental illnesses, therapeutic relationships; family dynamics; self-image/self-esteem; crisis intervention; group process; coping with acute and chronic illness; stress management. Credit hours (2), 2 lecture hours per week. Prerequisites: completion of all 3100 level courses. (Fall, Spring)

NURS 3260 Nursing Theory and Research (3)
Theoretical and research base for nursing practice. Understanding nursing theory; research critique and application to enhance nursing practice. Credit hours (3), 3 lecture hours per week. Prerequisites: completion of all 3100 level courses. (Fall, Spring)

NURS 4330 Care of the Family (6)
Needs of the family during childbearing and childrearing phases of family development. Emphasis on nursing actions to preserve, promote, and restore health of families in a variety of settings. Credit hours (6:3+3), 3 lecture hours per week and 9 clinical hours per week. Prerequisites: completion of all 3100 level courses. (Fall, Spring)

NURS 4340 Concepts in Geriatric Nursing (2)
Needs of older adults addressing emotional, social, physiologic and behavioral changes. Focuses on ageism, gender issues, chronicity, death and dying, loss, life review. Credit hours (2), 2 lecture hours per week. Prerequisites: completion of all 3100 level courses. (Fall, Spring)

NURS 4350 Community Health Nursing (6)
Theory, concepts and practices of community health nursing. Emphasis on culturally sensitive care for individuals, families, and groups in a variety of community settings. Includes identification of community resources for implementing change to promote community health. Credit hours (6:3+3), 3 lecture hours per week and 9 clinical hours per week. Prerequisites: completion of all 3100 level courses. (Fall, Spring)

NURS 4430 High Acuity Nursing (5)
Focus on care of individuals across the lifespan with multiple complex health alterations. Students practice critical decision making in a variety of settings. Credit hours (5:3+2), 3 lecture hours per week and 6 clinical hours per week. Prerequisites: completion of all 3200 level courses. (Fall, Spring)

NURS 4440 Contemporary Issues in Nursing (3)
Exploration of current legal, ethical, moral, economic and political impact on health care. Exploration of the role of nurses in today's health care environment. Credit hours (3), 3 lecture hours per week. Prerequisites: completion of all 3200 level courses. (Fall, Spring)

NURS 4550 Leadership and Management in Nursing (8)
Historical and contemporary management and leadership concepts are studied, evaluated and applied. Students conduct self-analysis of leadership traits and develop individual leadership abilities. Clinical experience provides individual opportunity for transition to the role of

professional registered nurse. Credit hours (8:4+4), 4 lecture hours per week and 12 clinical hours per week. Prerequisites: completion of all 3100, 3200, and 4300 level courses. 4400 classes must be completed or be a co-requisite to this course. (Fall, Spring)

NUTRITION & FOOD SCIENCE (NFS)

NFS 1020 Scientific Foundations of Human Nutrition (L) (3)
An introduction to the science of nutrition and the relationship of food intake and health. Nutrient requirements and food selection to meet those requirements are discussed. Students evaluate their own food intake and eating behaviors and learn to be informed consumers of food and nutrition information. (Fall, Spring, Summer)

NFS 1200 Sigma Delta Omicron (1)
Student affiliate of American Association of Family and Consumer Sciences (AAFCS). Enhances leadership skills while exploring career opportunities. Includes experience in planning professional catering services. Instructor permission required. (P/F) (Fall, Spring)

NFS 2020 Nutrition in the Life Cycle (3)
Application of nutrition principles to the human life cycle: nutrient functions, needs, sources and alterations during pregnancy, lactation, growth, development, maturation and aging. Pre-requisite: NFS 1020. (Fall, Spring)

NFS 2120 Nutrition of the Infant and Child (3)
Comprehensive look at nutrition of the child from conception through age 12, including nutrient requirements and practical applications of what and how to feed. School menu planning and nutrition instructional methods discussed. Designed to educate the pre-service teacher to incorporate nutrition concepts into the school curriculum. [This course is for students in early childhood development and elementary education, not for nutrition or FACS majors.] Pre-requisites: NFS 1020; ECD 1500. (Fall, Spring)

NFS 2200 Culinary Arts (1)
Discussion of the influence of type and proportion of ingredients, manipulation techniques, and methods of preparation to obtain a standard food product. Laboratory experiences will accompany and support discussion. Co-requisite: NFS 2210. (Spring)

NFS 2210 Culinary Arts Lab (1)
Laboratory experiments designed to accompany and support the discussion of ingredients, manipulation techniques, and food preparation methods discussed in NFS 2200. Co-requisite: NFS 2200. (Spring)

NFS 3020 Nutrition as Related to Fitness and Sports (3)
Designed to provide coaches, teachers, trainers, physically active people and competitors with the most recent factual information on sound nutrition. Includes information on essential nutrients, metabolism during exercise, specific problems experienced by athletes or highly active people; myths, ergogenic aids, and current interests. Pre-requisite: NFS 1020. (Fall, Spring)

NFS 4020 Advanced Human Nutrition (3)
The study of nutrients and their interrelationships in human nutrition. Structures, properties, digestion, absorption, cellular biochemistry and metabolism are addressed. Prerequisites: NFS 1020, 2020; CHEM 1120/1140 or CHEM 1220/1240. BIOL 2010/2020 recommended. (Spring)

NFS 4200 Food Science (3)
Scientific principles underlying modern food preparation. Relationship to food preparation of the physical and chemical properties of food components and their systems. Co-requisite: NFS 4210. Prerequisites: NFS 2200, NFS 2210, NFS 3200, and one of the

following chemistry series: CHEM 1110/1120 and CHEM 1130/1140 or CHEM 1210/1220 and CHEM 1230/1240. (Fall)

NFS 4210 Food Science Lab (2)
Laboratory experiments designed to illustrate the effect of varying ingredients and preparation procedures in the quality of the product. Two labs per week. Co-requisite: NFS 4200. (Fall)

NFS 4480 Community Nutrition (3)
Introduction to public health nutrition, epidemiology, food programs, and national nutrition monitoring. Pre-requisite: NFS 1020, 2020. (Spring)

NFS 4830 Readings and Conferences (P/F) (1-4)

NFS 4840 Cooperative Education (P/F) (2-8)

NFS 4890/5890 Internship (P/F) (2-4)

PARALEGAL (PLGL)

PLGL 1100 Introduction to Law (4)
Introduction to the origin of our legal system and the theories giving rise to our common law, civil law, ethics, substantive and procedural law, and statutory law systems, with emphasis on legal terminology in our contemporary legal system. Review of the court system and emphasis on our state courts and an overview of substantive law and legal assistant skills. (Fall)

PLGL 1200 Legal Ethics for Paralegals (3)
This course examines the concepts of an ethical code, the application to the legal profession, and the specific conduct regulated for paralegals. Students will explore the common rules of ethics including the need for zealous representation, confidentiality, conflicts of interest, and unauthorized practice of law. (Fall)

PLGL 1400 Legal Interviewing, Investigation, Case Prep (4)
Strategies, techniques, and tactics of interviewing witnesses and clients including investigation procedures, preparation of reports of cases from intake to litigation. Includes a study of court rules and procedures with appropriate legal terminology. (Fall, alternate years)

PLGL 1500 Family Law (3)
Law and theory relating to family law dissolution of marriage, separation custody, adoption, change of name, guardianship, support, and separation agreements. (Spring alternate years)

PLGL 1900 Civil Procedure (3)
Preparation of legal documents in special areas: real estate planning, debt collection, and corporate. Legal terminology and court rules and procedures as applied to these special areas. (Spring alternate years)

PLGL 2000 Legal Research and Writing (3)
Functions of the law library, indexing, and cataloging systems. Development of research skills using indexing systems, digests, encyclopedias, reporter systems, practice manuals, and computerized legal research programs and related legal memoranda. Extensive legal briefs and appellate practicum with significant out-of-class research. (Recommended prerequisite: PLGL 1100.) (Fall, alternate years)

PLGL 2100 Estate Planning and Probate Law (3)
Law and theory of estate planning, probate, and options of probate with emphasis on wills, trusts, community property agreements, gifts, estate taxation, probate procedures, and administration and accounting. (Recommended prerequisite: PLGL 1100) (Spring, alternate years)

PLGL 2400 Real Estate and Property Law (3)
Law of personal and real property with emphasis on common types of real estate transactions and conveyances such as deeds, contracts, leases, deeds of trust, liens, zoning agreements, assessments, searches and foreclosures. Drafting on conveyance instruments and methods of recording and searching public records. (Recommended prerequisite: PLGL 1100.) (Spring alternate years)

PLGL 2600 Business and Corporate Law (3)
Significant state law regarding corporations and partnerships, preparation and filing of corporate shareholder and director meetings, corporate distributions, commercial litigation, and secured transactions. (Recommended prerequisite: PLGL 1100.) (Spring alternate years)

PLGL 2800 Law Office Management (2)
Law office organization, specialized record keeping and accounting, scheduling, filing, management of personnel and other aspects of law office management. (Recommended prerequisite: PLGL 1100.) (Spring alternate years)

PLGL 2890 Internship (1-3)
Supervised learning experience in a law office or other legal facility for specialized paralegal internship. (Prerequisite: Consent of department.) (P/F) (Fall, Spring)

PERFORMING AND VISUAL ARTS (PVA)

PVA 2010 Convocation (1)

PVA 2120 Service Learning (1)
This course is designed to take the student volunteer through the process of volunteerism and its application to themselves and their academic training through practical experience and critical reflection. May be taken two times for credit. Pass/Fail grade only. (Fall, Spring, Summer)

PHYSICAL EDUCATION (PE)

PE 1030 Skiing/Snowboarding (Beginning) (.5)
(Fee \$225 at site) (Spring)

PE 1130 Bowling (.5)
(Fee TBA) (Fall, Spring)

PE 1190 SCUBA Diving (.5)
(\$46 Lab Fee) (Fall, Spring)

PE 1270 Weight Training (.5)
(Fall, Spring)

PE 1280 Racquetball (.5)
(Fall, Spring)

PE 1400 Varsity Football (1)
(Fall, Spring)

PE 1410 Varsity Basketball (1)
(Fall, Spring)

PE 1420 Varsity Softball (1)
(Fall, Spring)

PE 1430 Varsity Baseball (1)
(Fall, Spring)

PE 1435 Varsity Soccer (1)
(Fall, Spring)

Course Descriptions

PE 1440 Varsity Track & Field/Cross Country (1) (Fall, Spring)	PE 2000 Health and Fitness Dynamics (1) The promotion of health and fitness by emphasizing healthy lifestyle behaviors. Also included will be assessment of health and motor related fitness. (Fall, Spring)
PE 1450 Varsity Gymnastics (1) (Fall, Spring)	PE 2030 Skiing (Nordic) (.5) (\$25 Lab Fee) (Spring)
PE 1460 Varsity Tennis (1) (Fall, Spring)	PE 2100 Stress Management and Wellness Concepts (2) Examines the psycho/physiological correlates of stress and the various approaches to minimize negative effects. This course will also review the wellness concept as it relates to stress and quality lifestyle improvement.
PE 1470 Varsity Golf (1) (Fall, Spring)	PE 2150 Ballroom Dance Tour Team (2) SUU's premier ballroom dance team. Audition only. Instructor permission required for enrollment. Admission by audition. (Fall, Spring)
PE 1480 Varsity Rodeo (1) (Fall, Spring)	PE 2160 Ballroom Dance Backup Team (1) Backup for SUU's ballroom dance tour team. Instructor permission required. Audition only. Prerequisite: PE 2150. (Fall, Spring)
PE 1490 Cheer & Yell Leading (1) (Fall, Spring)	PE 2190 Advanced SCUBA (.5) (\$31 Lab Fee) (Fall, Spring)
PE 1550 Swimming (Beginning) (.5) (Fall, Spring)	PE 2520 Coaching Dance Teams & Drill Teams (1) Designed to give emphasis to the organization and administration of studio teachers and high school/collegiate dance team advisers. Choreography, music selection, costume design, budgeting, etc. included in class content. Taught alternate years, 2004-2005; 2006-2007; 2008-2009 (Fall)
PE 1560 Intermediate Swimming (.5) Required of all physical education majors and minors, or have card. A stroke development course designed to provide students with instruction and practice in swimming. (Fall, Spring)	PE 2600 Football Officiating (1) Rules and mechanics for officiating football. Attention will be given to other game officials and to game administration. (Fall) 1st Session
PE 1630 Waukeeyan Dance Team (2) Waukeeyan is SUU's dance-oriented drill team. By audition only. (Fall, Spring)	PE 2601 Basketball Officiating (1) Rules and mechanics for officiating basketball. Attention will be given to other game officials and to game administration. (Fall) 2nd Session
PE 1670 Tennis (.5) (Fall, Spring)	PE 2602 Football & Basketball Officiating (2) Rules and mechanics for officiating football and basketball. Attention will be given to other game officials such as scorers, timers, and to game administration. (Fall)
PE 1700 Circuit Weight Training (1) (Fee: \$60) (Fall, Spring, Summer)	PE 2610 Baseball Officiating (1) Rules and mechanics for officiating men's baseball. Attention will be given to other game officials and to game administration. (Fall, 1st session)
PE 1730 Golf (.5) (Fall, Spring) (Fee \$35)	PE 2611 Soccer Officiating (1) Rules and mechanics for officiating soccer. Attention will be given to other game officials and to game administration. (Spring, 2nd Session)
PE 1740 Advanced Golf (.5) (Fall, Spring) (Fee \$35)	PE 2612 Baseball & Soccer Officiating (2) Rules and mechanics for officiating men's baseball and soccer. Attention will be given to other game officials and to game administration. (Fall)
PE 1710 Cross Training (1) A class designed to allow students to explore a variety of different individual physical activities. This class is structured to help students develop fitness and an appreciation for a variety of physical activities in a semi-structured environment. (P/F) (Fall, Spring)	PE 2620 Volleyball Officiating (1) Rules and mechanics for officiating volleyball. Attention will be given to other game officials and to game administration. (Fall, 1st session)
PE 1830 Fundamentals of Individual, Dual, and Team Sports I (3) The purpose of this class is to give students the basic instruction of archery, tennis, golf, badminton, basketball, and weight training skills. Opportunities to practice and apply the skills will be provided. Non PE majors and minors must have instructor approval. (Fall)	PE 2621 Softball Officiating (1) Rules and mechanics for officiating women's softball. Attention will be given to other game officials and to game administration. (Spring, 1st session)
PE 1870 Fundamentals of Individual, Dual, Team Sports II (3) The purpose of this class is to provide basic instruction of softball, volleyball, field games that may include soccer, flag football, ultimate Frisbee and additional current activities, racquetball and pickleball. Opportunities to practice and apply the skills will be provided. Non PE majors and minors must have instructor approval. (Spring)	
PE 1880 Physical Activities for Elementary Schools (3) This class is designed to provide the elementary school teacher with a wide variety of activities such as games, fundamental movement skills and individual and partner activities. Both theoretical and practical approaches to elementary activities will be presented. (Fall)	

PE 2622 Volleyball & Softball Officiating (2)
Rules and mechanics for officiating volleyball and women's softball. Attention will be given to other game officials and to game administration. (Fall, Spring)

PE 2740 Lifeguard Training (2)
To provide the necessary minimum knowledge and skills training for a person to qualify to serve as an entry-level lifeguard. (Fall, Spring)

PE 2750 Advanced First Aid-Emergency Care (CPR) (2)
Provide basic skills in emergency care procedures for injuries, including infant, adult, child, and one and two person CPR. Also, to help students obtain first aid and CPR Licensure through an accredited agency. (Fall, Spring)

PE 3040 Motor Development (3)
A course focused on examining the changes in movement potential in individuals based on growth, maturation, aging and life stages. This course is important for educators providing them with fundamental knowledge of movement potential. (Spring)

PE 3050 Motor Learning (3)
The study of motor skill acquisition with application to teaching and coaching. Current approaches focus on the cognitive process and neural mechanisms which contribute to the learning and control of motor skills. (Fall, Spring)

PE 3060 Kinesiology (3)
Designed to study the science of human movement. It includes study of the structure of the human body in terms of its use in activity. A mechanical analyze of a variety of activities is developed, i.e., physical education and coaching. Prerequisite: BIOL 2210 or instructor's approval. (Fall, Spring)

PE 3070 Exercise Physiology (3)
Designed to study the physiological functions of the human body in activity. Physiological principles are applied to physical education, dance and coaching. Prerequisite: BIOL 2010 or instructor's approval. (Fall, Spring)

PE 3080 Athletic Training/Sports Medicine (3)
Attention is given to the practical application of methods in treatment of athletic injuries and athletic training procedures. Prerequisite: BIOL 2210 or instructor's approval. (Fall, Spring)

PE 3090 Adaptive Physical Education (3)
Emphasis on meeting the physical activity needs of students temporarily or permanently impaired. Discussion of the methods and opportunities to involve the impaired/disabled student in physical education classes. (Fall, Spring)

PE 3120 Comprehensive School Health Education/ Methods in Teaching Health Education (3)
The comprehensive school health education portion of the class will focus on the learning and understanding of the policies, procedures and activities designed to protect and promote the health, well being and safety of the students and staff. The eight components of a comprehensive school health education program will be the emphasis. The second part of the class will focus on the methods and techniques of instruction, creative use of media and practical teaching experience for prospective school health education teachers. (Fall)

PE 3190 SCUBA Rescue (5)
(\$31 Lab Fee) (Fall, Spring)

PE 3310 Teaching Individual, Dual and Team Sports (3)
Designed to develop teaching techniques in golf, tennis, badminton, archery, basketball, softball, volleyball, flag football, and soccer.

Prerequisites: PE 1830, PE 1870, PE 4900. **Non PE majors and minors must have instructor approval.** (Fall, Spring)

PE 3320 Water Safety Instructor Training (2)
Attention is given to methods of teaching swimming. The purpose of this instructor course is to train instructor candidates to teach American Red Cross Swimming and Water Safety courses. The instructor course covers the following topics: Teach Swimming and Water Safety courses; Planning and organizing courses; Ensuring participants; health and safety; Providing information and skill-development sessions necessary to conduct and teach Swimming and Water Safety courses; Conducting practice teaching; Evaluating participants' performance; Explaining American Red Cross national and field unit operational policies and procedures related to Swimming and Water Safety courses. (Spring, 1st session)

PE 3330 Skiing/Snowboarding (Advanced) (.5)
(Fee \$225 at site) (Spring)

PE 3400 Clinical Observation (1)
This course is designed for those students who are pursuing Athletic Training as a major. This course involves instruction in the clinical aspects of athletic training programs, emphasizing observation of the function of an athletic training facility and the various duties performed by a Certified Athletic Trainer. Prerequisite: Admission into the academic instruction of the Athletic Training Major. (Fall)

PE 3410 Clinical -Instruction I (2)
This course is designed for those students who are pursuing Athletic Training as a major. This course involves instruction and development of skills in taping, wrapping, padding, and bracing various body parts for the prevention of athletic injuries. Prerequisite: Admission into the academic instruction of the Athletic Training Major. (Fall)

PE 3420 Clinical Instruction II (2)
This course is designed for those students who are pursuing Athletic Training as a major. This course provides an opportunity for students to develop their skills in the application of heat, cold and electrical stimulation modalities in the treatment of athletic injuries. Prerequisite: PE 4420. (Fall)

PE 3430 Clinical Instruction III (2)
This course is designed for those students who are pursuing Athletic Training as a major. This course provides an opportunity for students to develop their skill in the developing of a therapeutic exercise program for an injured athlete. This will include assessing the athlete, designing a program to control inflammation, restoring range of motion, developing muscular strength and flexibility and returning to sport activity. Prerequisite: PE 4410. (Spring)

PE 3440 Clinical Instruction IV (2)
This course is designed for those students who are pursuing Athletic Training as a major. This course provides an opportunity for students to develop their skills in evaluation procedures (history, observation/inspection, palpation, special tests) of injuries of the foot, ankle, lower leg, knee, thigh, hip, pelvis, lumbar spine, chest, and abdomen. Prerequisite: PE 4400. (Spring; taught alternate years 2005-2006, 2007-2008)

PE 3450 Clinical Instruction V (2)
This course is designed for those students who are pursuing Athletic Training as a major. This course provides an opportunity for students to develop their skills in evaluation procedures (history, observation/inspection, palpation, special tests) of injuries of the shoulder complex, elbow, forearm, wrist, and, cervical spine, face, and head. Prerequisite: PE 4430. (Spring; taught alternate years 2004-2005, 2006-2007)

Course Descriptions

PE 3690 Substance Abuse/Drugs & Alcohol (3)

An examination of the pharmacological and physiological aspects of drug and alcohol abuse. The problem of drug abuse is studied from within the context of the total society. Emphasis is given to attitude and values clarification with group interaction being a critical component of the course. (Spring)

PE 3750 Methods of Teaching Human Sexuality Education (2)

Emphasis is on what and how to teach human sexuality education in the schools. The course includes an overview of biological, psychological and sociological aspects of sexuality education. (Spring)

PE 3900 Methods of Teaching Elementary Physical Education (3)

Physical education in the elementary school places emphasis on program planning, teaching techniques, and the selection and direction of physical education activities that will satisfy the needs of elementary school children. (Fall, Spring)

PE 4190 SCUBA Dive Master (5) (\$31 Lab Fee) (Fall, Spring)

PE 4400 Evaluation of Lower Extremity and Trunk Injuries (3)

This course is designed for those students who are pursuing Athletic Training as a major. It is designed to allow the students to understand evaluation techniques for athletic injuries to the lumbar spine, pelvis, abdomen, chest and lower extremities. The students must integrate anatomical structures, physiological principles and evaluative techniques to provide a basis for critical decision-making in an injury management environment. Prerequisite: PE 3080 (Fall; taught alternate years, 2005-2006; 2007-2008).

PE 4410 Therapeutic Exercise and Rehabilitation (3)

This course is designed for those students who are pursuing Athletic Training as a major. It will provide understanding of therapeutic exercise as it relates to the rehabilitation process of athletic injuries. Rehabilitation of the athlete from an injury state to a highly competitive state will be covered. Prerequisite: PE 3080. (Spring)

PE 4420 Therapeutic Modalities & Athletic Training Management (3)

This course is designed for those students who are pursuing Athletic Training as a major. It provides instruction in theory and application of various therapeutic modalities for care and treatment of athletic injuries, emphasizing cryotherapy, thermal therapy, and electrical modalities. An overview of the necessary policies, procedures, maintenance, and daily operation of an athletic training room is also provided. Prerequisite: PE 3080 and instructor's permission. (Spring)

PE 4430 Evaluation of Upper Extremity and Trunk Injuries (3)

This course is designed for those students who are pursuing Athletic Training as a major. It is designed to allow the students to understand evaluation techniques for athletic injuries to the head and neck, abdomen, thoracic spine, and upper extremities. The students must integrate anatomical structures, physiological principles and evaluative techniques to provide a basis for critical decision-making in an injury management environment. Prerequisite: PE 3080. (Fall; taught alternate years, 2004-2005; 2006-2007).

PE 4550 Physical Education Practicum (2)

This course is designed to give prospective teachers and coaches experience in serving as student assistant coaches, or student assistant athletic trainers, or other available opportunities. Prerequisite: Instructor permission. (P/F) (Fall, Spring)

PE 4600 Coaching Softball (1)

Coaching and training softball teams. Emphasis on game strategy. (Fall)

PE 4610 Coaching Volleyball (1)

Coaching and training volleyball teams. Emphasis is on the skills and strategies of the game and on methods of defense and offense. (Fall/Spring)

PE 4620 Coaching Track and Field (1)

Coaching track and field and the conduct of track and field meets. (Fall)

PE 4640 Coaching Soccer (1)

Designed to develop coaching methods and techniques in soccer. (Spring)

PE 4660 Coaching Wrestling (1)

Coaching wrestling: theory and practice, details of each position, training and managing. Complete techniques for developing offensive and defensive tactics are studied. (Fall; taught alternate years 2005-2006; 2007-2008)

PE 4670 Coaching Football (1)

Coaching football: theory and practice, details of each position, training and managing. Complete techniques for developing offensive and defensive tactics are studied. (Spring)

PE 4680 Coaching Basketball (1)

Coaching and training basketball. Emphasis is on the psychology of the game and on methods of defense and offense. (Fall)

PE 4690 Coaching Baseball (1)

Coaching baseball: team play, training, offensive and defensive strategy. (Fall)

PE 4740 Administration of Intramural/Physical Education/Athletics (3)

Designed to provide information and experience in organizing and administering intramural sports/physical education, athletics. The following areas are covered: philosophy of sports, tournaments, point systems, publicity, officials and awards. Also, the administration of physical education and athletics in the secondary schools. Emphasis on such administrative problems as purchasing procedures, inventories, budgets, facility planning, personnel, and curriculum will be covered. (Fall, Spring)

PE 4831 Readings and Conferences (P/F) (Fall, Spring) (1)

PE 4832 Readings and Conferences (P/F) (Fall, Spring) (2)

PE 4833 Readings and Conferences (P/F) (Fall, Spring) (3)

PE 4842 CO-OP (P/F) (2)

PE 4844 CO-OP (P/F) (4)

PE 4846 CO-OP (P/F) (6)

PE 4848 CO-OP (P/F) (8)

The cooperative education program is to provide students an opportunity to participate in a directed work experience for academic credit. Prior approval must be obtained to participate. The employer and a departmental faculty member will evaluate the proposed work experience and determine the credit to be awarded. (Fall, Spring)

PE 4850 Psycho-Social Aspects in Athletics (3)

A course designed to provide students with the necessary skills and understanding to adequately deal with psychological and social aspects of athletic coaching. (Fall, Spring)

PE 4900 Methods of Teaching Secondary Physical Education (2)

Coursework consists of exploring the problems, methods and techniques of teaching physical education in secondary schools.

Required of prospective secondary physical education teachers. Must be taken prior to enrolling in PE 3310. **Non PE majors and minors must have instructor approval.** (Fall, Spring)

PE 4910 Evaluation in Physical Education (3)

Designed to allow students to understand how to evaluate student progress in the schools. Also included: test construction, grading, frequency distribution, measures of central tendency and dispersion, and elementary probability. (Fall, Spring)

PE 4980 Student Teaching (P/F) (Fall, Spring) (2)

GRADUATE STUDIES IN PHYSICAL EDUCATION

PE 6900 Methods of Teaching Elementary Physical Education (3)

Physical education in the elementary school places emphasis on program planning, teaching techniques, and the selection and direction of physical education activities that will satisfy the needs of elementary school children. (Fall)

PHILOSOPHY (PHIL)

PHIL 1010 Introduction to Philosophy (H) (3)

This course will introduce some of the themes, works, figures, and topics in the Western philosophical tradition. It will explore questions involving value, human nature, knowledge, and rationality.

PHIL 1250 Reasoning and Rational Decision Making (H) (3)

This course will introduce students to inductive and deductive logic. The course trains students to recognize, evaluate, and construct arguments. (Fall)

PHIL 2080 Mind, Language, and Reality (H) (3)

This course examines issues in epistemology and metaphysics. Topics include causation, determinism, consciousness, knowledge, artificial intelligence, language, and reality. (Every other Fall.)

PHIL 2090 Ethics (H) (3)

This course examines various theories about normative issues including right and wrong, praise and blame, justice, rights, duties, pleasures and happiness. (Every other Spring.)

PHIL 3010 Philosophy (Variable Topics) (3)

This course has a variable subject matter. It involves in-depth examination of some timely topic, movement, problem, thinker, or writer of philosophy. (Fall, every other year) It is repeatable.

PHIL 4110 Ancient Philosophy (3)

This course examines the development of philosophy from the pre-Socratic through the Hellenistic periods. (Every other Spring.)

PHYSICAL SCIENCE (PSCI)

PSCI 2010 Planetary Geology (D) (3)

An overview of the history of the Earth from a unique planetary perspective. The course approaches Earth history as an evolution, encompassing the origin of cosmos through the inner working of living cells. The course brings a fresh perspective to the study of Earth for students who wish to learn how our planet evolved to its present form. In taking this approach, the student will not only gain knowledge about the Earth, its history, and place in the solar system; he or she will gain an appreciation for the scientific endeavor, including its strengths and limitations. (Spring)

PSCI 3000 Physical Science for Elementary & Middle School (2)

A course designed for prospective teachers of elementary and middle school with the concepts, source materials, methods, and activities available when presenting units of in the physical sciences. Prerequisites: GEOL 1110 or equivalent, CHEM 1110 or equivalent, and PHSC 1010 and 1080. Required of all prospective teachers of elementary and middle school who elect that area of emphasis in physical sciences. (Fall)

PSCI 4840 Cooperative Education (P/F) (1-6)

PSCI 4900 Teaching Science in Secondary Schools (2)

Required of all prospective secondary physical science teachers. (Spring)

PSCI 4980 Student Teaching in Physical Science (P/F) (2)

PHYSICS (PHSC)

PHSC 1010 Conceptual Physics (P) (3)

A conceptual, non mathematical introduction to physics. Topics in mechanics include motion, Newton's laws of motion, momentum, energy, rotational motion, and gravity. MATH 1010 or equivalent is advised. Co-requisite: PHSC 1020. (Fall, Spring)

PHSC 1020 Conceptual Physics Lab (P) (1)

Laboratory to supplement PHSC 1010. A hands-on approach to selected topics covered in the lecture class, using a minimum of mathematics. Co-requisite: PHSC 1010. (Fall, Spring)

PHSC 1080 Introductory Astronomy (P) (3)

A conceptual study of basic astronomy including the night sky as observed from the earth, apparent and real motions of celestial objects, a short history of the development of theories and tools used in astronomy, the wave and particle theories of light and their application, an overview of the solar system including planets, comets, asteroids, and meteors, and a non mathematical approach to the nature of stars, stellar evolution, and cosmology. Designed for non science majors and those seeking a science endorsement for teaching Earth Science in secondary schools. Co-requisite: PHSC 1090. (Fall, Spring)

PHSC 1090 Introductory Astronomy Lab (P) (1)

A laboratory accompanying PHSC 1080. Identification of the constellations of the night sky, co-ordinates systems used in the sky, skills in observation and telescope operation, theoretical experiments will all be part of this hands on laboratory. Labs will be held at the University Observatory 5 miles west of the campus unless otherwise specified. Math 1010 or equivalent is advised. Co-requisite: PHSC 1080 (Fall, Spring)

PHSC 2010 College Physics I (P) (4)

A trigonometric and algebra based introductory course in physics. Topics in mechanics including vectors, motion in one and two dimensions, Newton's laws of motion, work and energy, momentum and collisions, circular motion and rotational dynamics will be studied. Additional topics include solids and fluids, and selected topics in thermodynamics. Lab optional depending on the requirements of your specific program. Prerequisites: MATH 1060; Co-requisite: PHSC 2020. PHSC 2030 is optional depending on the requirements of your specific program. (Fall)

PHSC 2020 College Physics I Lab (P) (1)

A laboratory accompanying PHSC 2010. Computer data acquisition and hands on experience with the concepts and topics discussed in the lecture. Optional, but may be required by your program. Co-requisite: PHSC 2010. (Fall)

Course Descriptions

PHSC 2030 College Physics I Recitation (P) (1)

A problem solving session to accompany PHSC 2010. Problem solving techniques and approaches using examples will be covered. (P/F) Co-requisite: PHSC 2010 (Fall)

PHSC 2040 College Physics II (4)

A continuation of PHSC 2010. Topics to be covered will include vibrations and waves, simple harmonic motion, sound, selected topics in electricity, magnetism, light, optics, atomic and nuclear physics. Prerequisite: PHSC 2010; Co-requisite: PHSC 2050. PHSC 2060 is highly recommended. (Spring)

PHSC 2050 College Physics II Lab (1)

A laboratory accompanying PHSC 2040. Computer data acquisition and hands on experience with the concepts and topics discussed in the lecture. Optional, but may be required by your program. Co-requisite: PHSC 2040 (Spring)

PHSC 2060 College Physics II Recitation (1)

A problem solving session to accompany PHSC 2040. Problem solving techniques and approaches using examples will be covered. Co-requisite: PHSC 2040 (P/F) (Spring)

PHSC 2210 Physics for Scientists and Engineers I (P) (4)

A calculus based introductory physics course. Topics in mechanics include vectors, one and two dimensional motion, Newton's laws of motion, forces, energy, momentum and collisions, circular motion and rotational dynamics. Other topics include solids and fluids and selected topics in thermodynamics. Pre-requisite: MATH 1210; Co-requisite: PHSC 2220. Concurrent enrollment in MATH 1220 is recommended and PHSC 2230 is highly recommended. (Fall)

PHSC 2220 Physics for Scientists and Engineers I Lab (P) (1)

A laboratory accompanying PHSC 2210. Computer data acquisition and hands on experience with the concepts and topics discussed in the lecture. Co-requisite: PHSC 2210. (Fall)

PHSC 2230 Physics for Scientists & Engineers I (P) (1)

A problem solving session to accompany PHSC. 2210. Problem solving techniques and approaches using examples will be covered. Co-requisite PHSC 2210 (P/F) (Fall)

PHSC 2240 Physics for Scientists and Engineers II (4)

A continuation of PHSC. 2210. Topics to be covered will include vibrations and waves, simple harmonic motion, sound, selected topics in electricity, magnetism, light, optics, atomic and nuclear physics. Pre-requisite PHSC 2210 and MATH 1220; PHSC 2260 is highly recommended. (Spring)

PHSC 2250 Physics for Scientists and Engineers II Lab (1)

A laboratory accompanying PHSC 2240. Computer data acquisition and hands on experience with the concepts and topics discussed in the lecture. Co-requisite: PHSC 2240. (Spring)

PHSC 2260 Physics for Scientists and Engineers II Recitation (1)

A problem solving session to accompany PHSC 2240. Problem solving techniques and approaches using examples will be covered. Co-requisite: PHSC 2240 (P/F) (Spring)

PHSC 3310 Quantum Physics I (3)

A chronological study of developments in physics since 1900, including the wave properties of particles, black body radiation, particle scattering, atomic models and quantum mechanics. Prerequisite: PHSC 2210/ 2220, and 2240/2250. A satisfactory level of enrollment must be achieved. (Fall)

PHSC 3320 Quantum Physics II (3)

A continuation of PHSC 3310. A minimum enrollment must be achieved. Pre-requisite: PHSC 3310. (Spring)

POLITICAL SCIENCE (POSC)

POSC 1020 Introduction to Political Thought (S) (3)

An introductory survey of key political ideas, concepts and movements from antiquity to the 21st century. (Summer)

POSC 1100 American National Government (I) or (S) (3)

Source of democratic ideas and principles of the constitutional system. Cultural, group, party and governmental influences on the process of public policymaking. The administration and impact of public policy. (Fall, Spring, and Summer)

POSC 1440 Introduction to the Middle East (S) (3)

An introduction to the study of the Middle East by way of geography, religion, political developments and ideas, and contemporary conflicts. Particular emphasis will be put on how early political events have come to effect the twenty-first century world. (Fall)

POSC 2100 Introduction to International Relations (S) (3)

A fundamental introduction to the essential definitions, concepts, theories, authors, institutions and contemporary background for an understanding of current international affairs. (Fall)

POSC 2200 Comparative Politics (S) (3)

Comparison of traditional, emerging, and modernized societies and their politics; examination of the cultural and social forces that influence political structures and policies. (Fall)

POSC 3010 Current Political Issues (3)

The study of selected controversies in politics revolving around moral, legal, philosophical, policy, and empirical issues. (Fall)

POSC 3030 State and Local Government (3)

Function, structure and politics of state and local government policymaking within the context of the federal system. (Spring)

POSC 3100 Parties, Elections, and Voting Behavior (3)

The study of political parties, elections, voting behavior, campaigns, and electoral systems with an emphasis on the electoral rules of both the U.S. and non U.S. systems. (Fall)

POSC 3110 American Presidency: Executive Process (3)

Examination of the American presidency including: historical foundations, constitutional provisions, the various constituencies the president is expected to serve, the different roles the president fills, and comparisons with executives in other government organizations. (Alternate springs)

POSC 3120 Law, Courts, and Society (3)

Examination of law, courts, judges, the legal profession and their roles in the larger political system with an emphasis on judicial processes, U.S. courts compared to other nations, and current issues surrounding the legal system.

POSC 3130 American Legislative Process and Behavior (3)

Organization, procedures and leadership of Congress. The committee system, legislative-administrative relationships and inter-legislative relationships. Problems of legislative leadership and procedures. (Offered alternate years.)

POSC 3410 Public Administration (3)

Examination of the mechanics and dynamics of government administration. Emphasis on the rise and impact of bureaucratic state, tasks of administrators, technical aspects of administration and administrative responsibility. (Offered alternate years.)

POSC 3500 Politics and Gender (3)

This course examines some of the classical texts that have focused on the relationship between women and men in the context of

politics. It also touches upon contemporary political issues that confront women, men and politics. (Fall)

POSC 3510 Constitutional Law (3)

The study of the development of constitutional law as it pertains to separation of powers, governmental authority, federalism, economic issues, war powers, taxing and spending, and the elections process. (Summer)

POSC 3520 Civil Rights and Liberties (3)

Origins and philosophic basis of the Bill of Rights; a case law approach focusing on the First Amendment, equality and privacy. (Fall)

POSC 3530 Constitution, Criminal Justice & Equal Rights (3)

The examination of Supreme Court decisions pertaining to the exclusionary rule, fair trials, search and seizure, right to counsel, cruel and unusual punishment, equal rights, affirmative action, and voting rights. (Alternate Spring)

POSC 3650 Politics of Western Europe (3)

This course examines the institutions, political culture, processes, and structures of Western Europe and the European Union. (Every other year)

POSC 3660 Russian and Eastern European Politics (3)

This course both describes and analyzes the politics of Russia and Eastern Europe from 1917 to the present. It will focus on the actors, institutions, culture, and processes of Russian and Eastern European politics. (Alternate Spring)

POSC 3830 Politics, Public Opinion, Socialization, Media (3)

Examination of public opinion, polls, and political socialization with an emphasis on the formation of individual and mass political opinion and their roles in the political process. Can also be applied as a sociology elective. (Spring)

POSC 4100 Studies in American Politics (3)

An examination of specific issues and topics in political science such as social choice theory, American political thought, Ethics and politics, and public policy. This course will vary in substantive content and may be repeated for credit. (Taught on demand)

POSC 4210 History of Political Thought I (3)

This course studies important thinkers and critical concepts in the history of political thought from the pre-Socratics to the Renaissance period. (Fall)

POSC 4220 History of Political Thought II (3)

This course studies important thinkers and critical concepts in the history of political thought from early modern to postmodern period. (Spring)

POSC 4310 Special Topics in Political Theory (3)

This course examines specific issues and topics in political theory such as liberalism, aesthetics, political economy, post-modernism, and social choice theory. This course varies in substantive content and may be repeated for credit. (Fall)

POSC 4410 Middle Eastern Political Thought (3)

Islamic foundations of political thought in the Middle East and North Africa from the Prophet Muhammad and the umma to the modern era of the territorial nation-state and Islamic fundamentalism. (Fall)

POSC 4510 Politics and Religion (3)

This course explores the relationship between politics and religion. Thinkers such as Augustine, Aquinas, and Calvin as well as the Old Testament are examined in order to provide insight into the nature of divine revelation and political order. (Spring)

POSC 4600 Theories of International Relations (3)

Analysis of the major theories of international relations and an overview of the recognized authors in the area of study. (Offered alternate years.)

POSC 4610 International Law and Organization (3)

Historical and theoretical foundations, and the modern application of the law of nations; the nature and function of international organizations including the League of Nations, the United Nations, and other public, private, regional and general institutions and organizations. (Offered alternate years.)

POSC 4660 American Foreign Policy (3)

A fundamental survey of the foundations, institutions, trends and intentions of American foreign policy with particular emphasis on the development and implementation of policies of recent administrations. (Spring)

POSC 4670 The President, Congress, the Constitution and Foreign Policy (3)

Political and constitutional issues and controversies in the making and administration of American Foreign Policy. Particular attention is paid to the growth of presidential power and possible constitutional abuses in foreign affairs, as well as questions concerning the War Power. (Spring)

POSC 4700 International Conflict (3)

Analysis of contemporary international and regional conflicts, identification of the major players and the causes and impact of these conflicts. Areas of focus may include the Middle East, the Persian Gulf, Afghanistan and Southwest Asia and the Balkans. (Fall)

POSC 4830 Read and Conference (P/F) (1-3)

POSC 4890/5890 Internship (1-12)

Credit given for practical experience with a public official or government agency. A maximum of six hours may be counted toward the major and three toward a minor. (P/F)

POSC 4990 Research Seminar in Political Science (3)

The completion of a written piece of original, scholarly research on specific political issues or problems and an oral defense of the paper. Prerequisite: A minimum of 12 upper division credit hours in political science. (Spring and Fall)

PSYCHOLOGY (PSY)

PSY 1010 General Psychology (S) (3)

Psychology is the scientific study of behavior. This course provides a broad overview of this field of science. (Fall, Spring, Summer)

PSY 1110 Lifespan Development (S) (3)

Lifespan Development is concerned with the biosocial, cognitive/emotional, and psychosocial development of individuals across the lifespan. The course begins examination of human life with conception and continues to examine interactive influences until death. This course focuses on theory, research, and application. The General Education Requirement in Social Sciences can be met by taking either this course or ECD 1500 Human Development Through the Lifespan, not both. (Fall, Spring)

PSY 2010 Models, Methods, and Professional Issues in Psychology (3)

This course applies psychology to life and lays the foundation for further studies in psychology. Self-discovery; paradigm exploration; life, career, and education planning; professional organizations; research opportunities; graduate school; APA writing format; goal setting; decision making; life and stress management; learning and

Course Descriptions

memory skills; diversity; and psychology department resources are among the topics addressed. Because the course is team taught students have the opportunity to meet and assess all members of the psychology department faculty. Students wishing to major or minor in psychology should take this course their freshman or sophomore year. Prerequisite: PSY 1010. (Fall, Spring)

PSY 2100 Psychology of Gender (S) (3)

Psychology of Gender explores the similarities and differences in the psychological experiences of men and women. Topics explored will be biological and genetic differences, social roles, gender stereotyping, work roles of men and women and male/female differences in sexual behavior and attitudes. This course is designed for psychology majors and minors. Prerequisite: PSY 1010 (Fall)

PSY 2110 Personal Development (3)

This course is designed to promote self-awareness and personal growth. Emphasis is on accepting personal responsibility for one's success, assessing personal motivation, developing confidence, improving decision making skills, and establishing effective self-management skills. (Spring, Summer)

PSY 2200 Psychology of Ethnicity (S) (3)

This course explores the many and varied theories in Multi-Ethnic Psychology. Topics include history of Multi-Ethnic Psychology, landmark research, current research, and current theories. Students will also examine how culture and ethnicity affect psychological issues. Prerequisite: PSY 1010 (Spring)

PSY 3010 Statistics in Psychology (3)

A presentation of statistical concepts of particular relevance to psychologists. Topics include: descriptive statistics, hypothesis testing, t tests, ANOVA, correlation, regression, and Chi-square. Prerequisites: A grade of "C-" or better in PSY 1010 and PSY. Instructor permission required. (Fall, Spring, Summer)

PSY 3210 Infant and Child Development (3)

A thematic study of human development from birth through childhood. The interaction of biology, mind, and environment on the physical, cognitive, and psychological development of children is explored. Contributions from evolutionary biology and cultural anthropology are included. Prerequisite: PSY 1010. PSY 1110 strongly recommended. (Fall, Spring)

PSY 3220 Adolescent Development (3)

A study of human development during adolescence. The interaction of biology, mind, and environment on the physical, cognitive, and psychological development with an emphasis on developmental theories and psychosocial issues. Prerequisite: PSY 1010. PSY 1110 strongly recommended. (Fall, Spring)

PSY 3230 Adult Development and Aging (3)

A study of human development during adulthood and aging. The interaction of biology, mind, and environment on the physical, cognitive, and psychological development with an emphasis on developmental theories and psychosocial issues. Prerequisite: PSY 1010. PSY 1110 strongly recommended. (Spring)

PSY 3320 Cognitive Psychology (3)

A survey of contemporary, psychological models of human cognition (e.g., memory, attention, perception, problem solving, and communication). The class focuses on research from the field of experimental psychology. Prerequisite: PSY 1010. (Spring)

PSY 3370 Social Psychology (3)

This course explores the social nature of individual behavior. Focus of the course is on how the individual perceives the social group and interacts in social situations. Topics to be covered include social perception and cognition, interpersonal attraction, aggression,

conformity, group processes, and applied aspects of social psychology. Prerequisite: PSY 1010. (Fall, Spring)

PSY 3400 Experimental Analysis of Behavior (2)

This course includes a study of the experimental analysis of behavior method, variables that have been shown to affect behavior and principles that help us to understand, explain and control behavior. Students must register for the lecture and the lab. Prerequisite: PSY 1010. Co-requisite: PSY 3401. (Fall, Spring)

PSY 3401 Experimental Analysis of Behavior Lab (1)

The lab will give students experience in experimentally analyzing the behavior of a subject (a pigeon or a rat). Standard experimental procedures will be assigned and experimental results will be reported in APA publication format. Approximately two hours of lab per week is expected. Lab time is flexible and will be scheduled with each student on an individual basis. Prerequisite: PSY 1010. Co-requisite: PSY 3400. (Fall, Spring)

PSY 3410 Research Design (3)

A consideration of issues in the design and interpretation of research in psychology. Topics include: research ethics, validity and reliability, internal and external validity, within and between subject designs, single and multifactor experiments, correlational and survey designs. This course is strongly recommended for students who plan to enroll in PSY 4915 and intend to later pursue graduate studies. Prerequisites: A grade of C- or better in PSY 1010, 2010, and 3010. (Fall, Spring)

PSY 3430 Principles of Assessment (3)

This course reviews the theory and application of assessment used in psychology and education. Content includes a review of the statistics used in assessment, measurement theory, test development, and the major instruments used to assess intelligence, achievement, and personality. Prerequisites: PSY 1010, 3010 or instructor permission. (Fall)

PSY 3500 Environmental Psychology (3)

Environmental Psychology examines the interaction between the person and environment. Psychological research and theory are applied to specific environments, both built and natural. Topic areas range from the very broad (climate change) to the very specific (design of elderly care facilities). Prerequisite: PSY 1010. (Fall, Spring)

PSY 3600 Stress and Pain (3)

Stress and pain often interact and exacerbate each other. Although considered undesirable by most people, they are to some extent necessary, and can at times be beneficial. This course explores the psychobiological variables which contribute to stress and the perception of pain. Both psychological and biological based therapies are discussed. Opportunities for personal applications will be included. Prerequisite: PSY 1010. (Spring)

PSY 3650 Health Psychology (3)

This course investigates the biopsychosocial factors which contribute to health and illness. Issues within the fields of medical psychology and behavioral medicine are discussed. Topics may include: health-behaviors, stress, pain and illness, seeking and adhering to medical advice, nutrition and mental health, chronic illness, death and dying, and behaviors associated with specific types of illness and disease. Prerequisite: PSY 1010. (Spring)

PSY 3700 Personality Theory (3)

Building on established personality theories, the course offers students the opportunity for expanded self-understanding and understanding of others. Primary focus is on presentation and discussion of diverse theoretical views of personality and personality development. Prerequisite: PSY 1010. (Fall, Spring)

PSY 3800 Practicum (3)
Students in this course receive supervised experience actually using psychology in an applied setting, typically a human service agency or educational institution. The course includes a classroom seminar which covers relevant professional and clinical issues. A prior meeting with the instructor is required to enroll. Prerequisite: PSY 1010. Instructor permission required. (Fall, Spring)

PSY 3820 Human Relations in Group Dynamics (3)
This course offers an experiential exploration of group dynamics where the forces and activities that affect human group cohesion, communication skills, and interpersonal relations are emphasized. Students will also receive didactic instruction in group processes and theories of group dynamics. This course is designed to help prepare students design, plan, and conduct group treatments in the human services professions. Prerequisite: PSY 1010. Instructor permission required. (Fall, Spring)

PSY 4310 Abnormal Psychology (3)
This course examines human behavior typically classified as "abnormal." Diagnostic criteria from the Diagnostic and Statistical Manual of the American Psychiatric Association, current theories of etiology, and contemporary treatment strategies will be reviewed. The course usually includes field visits to programs which treat persons with these diagnoses. The goal of the course is to provide students the opportunity to develop an empathic understanding of individuals with mental illnesses. Prerequisite: PSY 1010. (Fall, Spring)

PSY 4320 Clinical Neuropsychology (3)
Clinical Neuropsychology is the applied science of brain behavior relationships. Topics include functional neuroanatomy, common pathological conditions of the central nervous system and associated behavioral correlates, realms of function assessed in a neuropsychological evaluation, and assessment techniques. Prerequisite: PSY 1010 General Psychology. (Fall, Spring)

PSY 4330 Theories of Learning (3)
The study of major learning theories that contribute to the understanding of learning. Emphasis will be given to the application of these theories to the learning process. Prerequisite: PSY 1010. Strongly recommended: PSY 3400. (Spring)

PSY 4340 Introduction to Counseling and Psychotherapy (3)
This course provides exposure to many of the contemporary approaches to psychotherapy. Lectures are supplemented with experiential exercises. This course is team taught with the instructors presenting therapies that represent their particular interests in psychology. Prerequisite: PSY 1010. Instructor permission required. (Spring)

PSY 4500 Special Topics (3)
From time to time members of the faculty will offer a course pertaining to a special area of interest under this course number. Both the class schedule and handouts in the department office will provide further information as to what is being offered under this special topics title. Prerequisite: PSY 1010. Instructor permission required. (Fall)

PSY 4510 Biopsychology (2)
As a study of the biological bases of behavior, this course begins with an introduction to the basics of neuroanatomy, neurotransmission, and research methods common to the field. The biological basis of specific behaviors (sex, hunger, sleep and dreaming, schizophrenia) are addressed. This course includes instruction on biofeedback and its applications. Lectures run the first and last five weeks of the semester only. Prerequisite: PSY 1010. Co-requisite: PSY 4511. (Fall)

PSY 4511 Biopsychology Lab (1)
These labs are intended to give students hands on experience in the

field of biopsychology. Working with rats, students will learn many of the techniques used by biopsychologists, including stereotaxic (brain) surgery and behavioral analyses. Labs run for the middle five weeks of the semester. Prerequisites: PSY 1010 and 4510. Co-requisite: PSY 4510. (Fall)

PSY 4550 Drugs and Behavior (3)
This course provides comprehensive coverage of issues relating to drug use and abuse in our society. Topics include: psychopharmacology, common drugs of abuse (e.g. cocaine, nicotine, alcohol, depressants, hallucinogens), over-the-counter and prescription drugs, and the treatment and prevention of substance abuse. PSY 4510 (or previous knowledge of biology) is helpful but not required. Prerequisite: PSY 1010. (Fall)

PSY 4800 Advanced Practicum (3)
This course allows students to continue the practicum experience at the same agency or at a new site. It does not include classroom instruction. Rather, each student meets individually with the course instructor. Prerequisites: PSY 1010 and 3800. Instructor permission required. (Fall, Spring)

PSY 4830 Readings and Conferences: (1-3)
As with the special topics course, faculty can use this course number to offer a guided reading and discussion course pertaining to a special area of interest. Both the class schedule and hand-outs in the department office will provide further information as to what is being offered under this title. Credits can vary from one to three. Prerequisite: PSY 1010. (P/F) Instructor permission required. (Fall, Spring, Summer)

PSY 4831 Readings and Conferences: Leadership (1)
This course is designed to give psychology honors students extra opportunity to develop their leadership skills in both an academic and applied setting. This will be accomplished through a series of specific readings and discussion of topics. Application of the topics will be achieved through directed group activities. Prerequisite: PSY 1010. Instructor permission required. (P/F) (Fall, Spring)

PSY 4890 Internship (1-12)
This course provides students the opportunity to receive academic credit for supervised, professional level service. Internship credits do not count toward the minimum number of credits required for a psychology major, but they do count as upper division credits toward graduation. Number of credits, 1 through 12, depends on the number of field hours. Prerequisites: Instructor permission required. (P/F) (Fall, Spring)

PSY 4905 History and Systems (3)
This course serves as one option for satisfying the senior requirement of the psychology major. This course is a comparison of different theories and methods of psychology and their historical context. An evaluation of theories and methods from philosophical and scientific standpoints will be carried out. This is a capstone course and should be taken late in the junior or senior year. Prerequisites: PSY 1010. (Spring)

PSY 4910 Senior Project: Literature Review (3)
This course serves as one option for satisfying the senior requirement of the psychology major. In it students perform an extensive review of the literature on a psychological topic of interest. The end result will be a written, APA style, professional paper which students both submit to the instructor and present to the class. Prerequisites: PSY 1010, 2010, 3010 and two of the Research Methods Courses. (Fall, Spring)

PSY 4915 Senior Project: Independent Research I (3)
Ideally suited to students wishing to pursue hands-on research experience, research oriented careers, or a graduate degree in psychology. This course reviews and expands on skills required to

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conduct research: research methodology, IRB proposals, statistics, APA format, analyzing data using SPSS, graphing with Excel, and poster/paper presentations. By the end of the semester, students are expected to have an approved IRB research proposal. Students are then encouraged to register for PSY 4925, giving them the opportunity to carry out their research projects. Prerequisites: A grade of C or better in PSY 1010, 2010, 3010 and one of the Research Methods Courses. Instructor permission required. (Fall)

PSY 4925 Senior Project: Independent Research II (3)
Ideally suited to students wishing to pursue a graduate degree in psychology. This course allows students to conduct the research for which they receive IRB approval in PSY 4915. Students will complete their research project and submit an APA style professional paper. Though not required, it is anticipated that many students will submit their research for presentation and/or publication. Instructor permission required. (Spring)

RANGE MANAGEMENT (RANG)

RANG 3600 Range Management (3)
Evaluation, improvement and perpetuation of range lands. Three hours of lecture per week. No prerequisites. Co-requisite: RANG 3610. (Fall)

RANG 3610 Range Management Laboratory (1)
Laboratory to accompany RANG 3600. One three-hour meeting per week. Longer field trips may be scheduled. Co-requisite: RANG 3600. (Fall)

SCIENCE (SCI)

SCI 2010 Convocation (1)

SCI 2120 Service Learning (1)
This course is designed to take the student volunteer through the process of volunteerism and its application to themselves and their academic training through practical experience and critical reflection. May be taken two times for credit. Pass/Fail grade only. (Fall, Spring, Summer)

SCI 2300 Emergency Medical Technician Course (EMT) (6)
The EMT course is a basic training program for the first responder to the sick and injured. Course meets Utah state certification to work as an EMT in the state of Utah. Can be used for reciprocity in other states. Also recommended for police, fire, pre-med and nursing students. Course of 120 hours includes lecture, practical skills and emergency room work. Final written and practical exam for certification. Student will pay the certification fee directly to the Bureau of Emergency Services. (P/F)

SCI 3300 Intermediate Emergency Medical Technician (1)
This course continues and expands the skills learned in the basic course. Students must be employed as an EMT for one year prior to registering for this course. Prerequisite: SCI 2300 or equivalent.

SCI 6000 Environmental Education- Living and Interacting Where One Lives (1-3)
A course designed for Master of Education degree students who are teaching at the elementary or secondary level. The course provides a blended lecture and lab format designed to immerse teachers in the complexity and comprehensiveness of environmental studies. Emphasis will be placed on environmental education in the context of place and will include components of literature and history, politics, economics, sociology, biology, range management, ranching, chemistry, geology, and geography. The course will meet for 5-12 hour days and be based out of the Cedar Mountain Science Center.

SCI 6010 Environmental Education- Living and Interacting Where One Lives Lab (1)
A course designed for Master of Education degree students who are teaching at the elementary or secondary level. The course provides a blended lecture and lab format designed to immerse teachers in the complexity and comprehensiveness of environmental studies. Emphasis will be placed on environmental education in the context of place and will include components of literature and history, politics, economics, sociology, biology, range management, ranching, chemistry, geology, and geography. The course will meet for 5-12 hour days and be based out of the Cedar Mountain Science Center.

SECONDARY EDUCATION (SCED)

SCED 3200 Secondary Educational Psychology (3)
Educational Psychology is designed to give pre-service teachers knowledge of the relationship which exists between psychology, students, and the world of teaching and learning. The course explores concepts pertaining to learning modalities along with multi-cultural and gender-based learning theories. Prerequisites: None. (Fall, Spring, Summer)

SCED 3570 Motivation/Management of Diverse Instructional Environments for Secondary Teachers (3)
This course examines multiple perspectives on student motivation and the management of learning environments. Contemporary and proactive perspective linking theories of motivation and management to instructional practice and classroom management will be used to develop content curriculum and assessment. A one-week rural practicum experience is required. Transportation to and from assigned schools and activities is the teacher candidate's responsibility. Prerequisite: Admission to Secondary Education, Admission to Block Program. Co-requisites: SCED 3590. (Fall, Spring)

SCED 3590 Instructional Planning, Delivery, and Assessment (3)
This course examines multiple models of instructional planning, delivery, and assessment. Current trends will be used to implement effective instruction, match models to achievement targets, and evaluate learning based on results of quality assessments before, during, and after instruction. A one-week rural practicum experience is required. Transportation to and from assigned schools and activities is the teacher candidate's responsibility. Prerequisite: Admission to Secondary Education and Admission to Block. Co-requisites: SCED 3570. (Fall, Spring)

SCED 3720 Content Area Literacy (2)
This course examines processes and strategies to assist pre-service candidates in improving the vocabulary, comprehension, and writing skills of their students. Strategies will be emphasized. Teacher Candidates will construct a unit with content literacy strategies that assists diverse learners. Pre-requisites: Admission to Secondary Education and Academic 4900 Course. (Fall, Spring, Online)

SCED 4520 Secondary Practicum (3)
This course is designed to give teacher candidates experience in urban secondary school classrooms. Documented observations of current instructional practice are combined with reflections to link theory with practice. Prerequisites: Admission to Secondary Education, SCED 3570, SCED 3590. (P/F) (Fall, Spring)

SCED 4980 Secondary Clinical Practice (6-7)
An in-school experience designed to help teachers apply methods and materials found to be successful with the adolescent. This course must be taken concurrently with academic 4980 (two credit hours). This clinical practice experience will be supervised by professors from the College of Education and from the student's academic major area. Advance application required. Prerequisites: Admission to Secondary Education, Admission to Clinical Practice, SCED 3570,

SCED 3590, SCED 4520, Academic 4900. See Clinical Practice Fee Schedule. (P/F) (Fall, Spring, Summer -if placements are available).

GRADUATE STUDIES IN SECONDARY EDUCATION

SCED 6980 Secondary Clinical Practice (7)

An in-school experience designed to help teachers apply methods and materials found to be successful with the adolescent. This course must be taken concurrently with academic 4980 (two- three credit hours). This clinical practice experience will be supervised by professors from the College of Education and from the student's academic major area. Academic 4900 is a prerequisite to this clinical practice experience. Advance application required. Must be admitted to the Graduate Educator Licensure Program, Office of Graduate Studies, and have completed all prerequisite classes. Fee required. See Clinical Practice Fee Schedule. (P/F) (Fall, Spring, Summer)

SOCIAL SCIENCE (SOSC)

SOSC 4900 Teaching Social Science Subjects (2)

Problems, concepts, methods, and objective of teaching social science subjects in the areas of history, political science, sociology and economics. (Spring)

SOSC 4980 Student Teaching (P/F) (2)

SOCIOLOGY (SOC)

SOC 1010 Introduction to Sociology (S) (3)

Designed to give students a foundation for all future sociological studies. Develops an understanding of the role of social organization on human interaction. Introduces definitions, terms, and concepts used in sociological literature. (Fall, Spring)

SOC 1020 Social Problems (S) (3)

A study of the current cultural, economic and social aspects of specific problems such as unemployment, poverty, racial and gender inequality, divorce, crime and delinquency, and health and illness. Includes an appreciation of the links and ties between these modern social problems, and their connection to the broader structural issues of inequality and the distinctive arrangement of economic priorities in America today. (Fall, Spring)

NOTE: SOC 1010 or 1020 is prerequisite for entering any Sociology upper-division course.

SOC 2000 Computer Applications for Sociology (3)

The course is a survey of computer applications in sociology, history and political science. It is intended to familiarize students with basic computer usage and how social scientists use computers for teaching and research. The primary focus will be on the organization, presentation and analysis of information in an interdisciplinary context. (Fall)

SOC 2200 The Sociology of Popular Culture (3)

Using general theories of the nature of social and cultural structures, this course provides a sociological analysis of every day American culture. Examining popular culture such as print, media, television, sport, and other aspects of a consumer-driven culture helps understand prevailing values and anticipate changing norms and behaviors. (Spring)

SOC 2600 Marriage and Family (3)

This course focuses on the family as a key societal institution and explores the changes taking place in contemporary marriage patterns. We will examine the various components of the family, the variations of contemporary families and experiences of families of different social classes and ethnicities. We will also explore the

realities of marital power, domestic work, child-rearing, family violence, and overall family changes. (Spring)

SOC 3000 Social Stratification (3)

Analysis of implications of class and status distinctions for individuals and social groups and of the manner in which social power develops and is carried out in a society. (Fall, Spring)

SOC 3010 Origins of Human Society (3)

A sociological/anthropological introduction to the physical, cultural and social origins of human society. Basic theories and principles of physical and cultural anthropology are emphasized. Competing contemporary theories of human origin are reviewed. (Alternate years)

SOC 3100 Social Policy (3)

An array of social welfare policies and programs in the United States will be discussed and evaluated. This course will focus on the sociopolitical context in which various social policies are developed. Specifically, this course examines conflicts and controversies in the policy decision making process and policy implications with an emphasis on policy effects on women, racial minorities and the poor. A comparative perspective is introduced to effectively understand and evaluate these social policies. (Spring)

SOC 3300 Sociology of Education (3)

Analyzes the school as a social organization. Among topics considered are power and control in the school classroom organization and procedures and their relation to learning; roles of educators; and relations between school and community. (Spring)

SOC 3350 Social Psychology (3)

A course exploring the effect of society on the individual and the effect of the individual on society. Such topics as social structure and socialization, the dependence of institutions on personality processes, effects of community systems on personality, and the sociological conditions of personal disorganization are treated. (Fall)

SOC 3400 Race and Ethnic Relations (3)

A study of the ethnic patterns in contemporary American society. Emphasis is placed on contemporary theories of race and ethnic relations, the problems of prejudice and discrimination, and myths concerning group differences, and contemporary issues and dilemmas of inter-group relations. (Fall)

SOC 3500 Deviance (3)

An exploration and analysis of social deviance. Presents diverse theoretical viewpoints used to explain deviant behavior and research regarding each viewpoint. (Fall)

SOC 3550 Sociology of Human Sexuality (3)

Discuss current theoretical perspectives on the social determinants of human sexuality. Emphasizes sociological critique and analyzes the interaction of historical, societal and cultural influences. Also focuses on social consequences of sexuality. (Spring)

SOC 3610 Juvenile Delinquency (3)

This course is an exploration of past and current delinquency theories, trends and issues. Topics included in this course are an extensive review of theory, female delinquency, gangs, the juvenile justice system, police and juveniles, the role of family, peers, schools, and drugs on delinquency and juvenile corrections today. (Spring)

SOC 3700 Crime and Society (3)

This course is a survey and exploration of crime including a review of classic and contemporary criminological theories, trends in crime, and a brief historical overview. Specific topics will include property crimes, violent crimes and hate crimes, white-collar crimes, organized crime and police discretion. The criminal justice system will be

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explored as a process, focusing on the U.S. correctional system today, the prison system, and alternatives to prison. (Fall)

SOC 3710 Gender Studies (3)

An introduction to the field of gender studies with a focus on sex role behavior from several theoretical perspectives. Emphasis is on recent sociological research as well as cross-cultural and historical analysis of women and men in society. (Fall)

SOC 3800 Urban Sociology (3)

History of the rise of urban/industrial societies. Examination of the social and economic structures and organization of modern cities. Emphasis on urban social ecology and modern urban social conditions. (Every other year)

SOC 3850 Sociology of Religion (3)

This course focuses on religion as a key societal institution and uses theoretical perspectives of classical and contemporary sociologists to analyze the role of religion in society. The intersection of religion with race, class, and gender, is explored. Additional topics considered are the relationship of religion to science, the media and politics. (Spring every other year)

SOC 3900 Social Change (3)

Theories of change in relation to empirical studies at both the community and societal level. Emphasis will be upon recent research in modernization of communities and societies. (Fall)

SOC 4000 Political Sociology (3)

The course is a survey of sociological approaches to power, government and politics. It will identify key concepts and theories; analyze substantive issues; and consider current research. Contemporary issues and problems will be examined as well. The course will focus on in-class discussion and a student term paper. Can also be counted as a Political Science credit. (Fall)

SOC 4100 Sociology of Health & Medicine (3)

A course exploring the social construction of health, illness, and healing. Current issues surrounding alternative health care, nutrition, mind/body relationships, and societal change will also be examined. Must be upper division student. Prerequisites: SOC 1010 or SOC 1020, must be an upper division student. (Every other Spring)

SOC 4500 Global Issues in Sociology (3)

Global issues in sociology addresses the globalization of cultures and societies. We will explore global events along with the trends, and issues that are contributing to international inequalities. Specifically, the course focuses on the global impact of the culture of capitalism. This includes: capitalism and the nation-state, population growth, hunger, poverty, disease, exploitation of the environment, and the changing status of indigenous groups through a global economy. The emphasis of this course will be developing a global perspective of the contemporary world. The course will consider the interrelations between imperialism, colonialism, post-colonialism, regionalism, and globalism. (Spring, taught alternate years)

SOC 4620 Environmental Sociology (3)

This class is an exploration of how the U.S. and the global community are struggling to find ways of meeting our human needs for development and survival. Specifically, we will explore the impact that human growth has had on our planet, the social impacts of land and resource development, and contemporary struggles over land use due to competing definitions of the land and various symbolic attachments to it. In addition, we will explore the environmental movement, paying specific attention to recent grassroots organizations and environmental justice issues. (Fall)

SOC 4700 Special Topics (1-3)

From time to time faculty will offer a course pertaining to a special area of interest or particularly timely topic under this course number.

Both the class schedule and handouts in the department office will provide further information as to what is being offered under this special topics title. (As needed)

SOC 4780 Sociology Theory (3)

Major sociological theories of the 19th and 20th centuries will be examined: namely, functional conflict, interaction, and exchange theories. (Fall, Spring)

SOC 4800 Sociological Field Practicum (1-5)

Designed to provide students with an opportunity to apply major sociological theories and concepts within an applied sociological career field. Practical work experiences will be analyzed from a critical, theoretical and/or conceptual sociological framework so that students can see the significance of these ideas in a variety of social work settings, and practice utilizing these important sociological insights for future careers in the discipline. (P/F) (Fall, Spring)

SOC 4810 Social Statistics (3)

An introduction to statistical procedures used in sociological research. Designed to teach students the methods used in making scientific predictions through the use of averages, variation and the testing of hypotheses. Prerequisites: SOC 1010 or 1020 plus permission of instructor. (Fall, Spring)

SOC 4890/5890 Sociological Internship (3-12)

Internship provides a procedure for students to be socialized into the practice of the discipline of sociological research, teaching, and realities of the every day practice of sociological professionals. Students will be provided with opportunities to assist in research projects, classroom teaching preparations, and gain experience as teaching assistants. (P/F)

SOC 4990 Applied Research Methods (3)

This course 1) prepares the student to apply sociological training and research methods to various social issues and settings; 2) puts students in the field to actively employ research methodologies and strategies in evaluating a variety of social issues. Prerequisite: SOC 1010, or 1020. Co-requisites: SOC 4780, 4810 plus permission of instructor. (Fall, Spring)

SPANISH (SPAN)

SPAN 1010 Beginning Spanish I (H) (4)

This is a beginning course designed for students with little or no foreign language experience. The course will emphasize conversation, vocabulary building, and basic grammar. Students with extensive secondary school Spanish should consider enrolling in 1020 or 2010. (Fall, Spring)

SPAN 1020 Beginning Spanish II (H) (4)

Continuation of Span I. (Fall, Spring)

SPAN 2010 Intermediate Spanish (H) (4)

This is a second-year course that emphasizes grammar review, composition, reading and conversation. Prerequisites: Span 1020 or equivalent skills. (Fall)

SPAN 2020 Intermediate Grammar & Conversation (H) (4)

Continuation of Span 2010. Prerequisite: SPAN 2010 or equivalent skills. (Spring)

SPAN 3010 Language Practice Through Hispanic Theatre (3)

Spanish 3010 seeks to improve a student's conversational skills by (1) doing oral interpretations of Spanish dramatic texts and (2) having students listen to Spanish television programs and newscast and then presenting simulated broadcasts of their own.

SPAN 3210 Advanced Spanish Grammar and Composition I (3)

This is a writing intensive course that offers both a detailed review of Spanish grammar and the application of grammatical understandings to the written expression of complex ideas with correct usage and appropriate rhetorical style. (Fall, Spring)

SPAN 3212 Advanced Spanish Grammar and Composition II (3)

Continuation of SPAN 3210. (Fall, Spring)

SPAN 3300 Introduction to the Study of Hispanic Literature (3)

This course is an introduction to the critical study of literature. It provides students with basic principles of literary analysis, including basic ideas on literary history and criticism, as well as an introduction to the common terminology of literary discourse. This course is prerequisite to all Spanish literature courses. (Fall, Spring)

SPAN 3510 Hispanic Cultural History (3)

This course gives an overview of the historical and cultural development of Spain and Spanish America. It serves as enrichment for the survey courses on Spanish and Spanish American literatures through a study of the political, social and intellectual movements reflected in the literature. The cultural histories of Spain and Latin America are taught on alternate semesters or years. The course may be repeated twice for credit. (Fall)

SPAN 4210 Survey of Spanish Peninsular Literature I (3)

This course examines major authors, aesthetic trends and intellectual movements in Peninsular literature from the Middle Ages to the end of the eighteenth century. Prerequisite: SPAN 3300. (Fall)

SPAN 4212 Survey of Spanish Peninsular Literature II (3)

This course examines major authors, aesthetic trends and intellectual movements in Peninsular literature from the nineteenth century to the present. Prerequisite: SPAN 3300. (Spring)

SPAN 4310 Survey of Spanish American Literature I (3)

A survey of Spanish American Literature that includes major periods, trends and authors from the conquest to the late nineteenth century. Prerequisite: SPAN 3300. (Fall)

SPAN 4312 Survey of Spanish American Literature II (3)

A survey of Spanish American Literature that includes major periods, trends and authors from "modernismo" to contemporary literature. Prerequisite: SPAN 3300. (Spring)

SPAN 4410 Spanish Phonetics (3)

This course provides an in-depth study of the sound system of the Spanish language, including some attention to its multiple dialectal variations and their historical development. Of particular use to prospective teachers, the course includes linguistic analysis of error patterns common to beginning students and a review of methods for correcting faulty pronunciation. Prerequisite: SPAN 3210 or 3212. (Fall, Spring)

SPAN 4510 Introduction to Spanish Translation (3)

This course examines the theory and practice of translation, and allows students to develop skills in the translation of journalistic, business, scientific and literary texts. Students are advised to have taken Span 3210 and 3212 before they attempt this course.

SPAN 4610 Readings in Major Authors & Topics (3)

This is an in-depth, intensive course in which the student is exposed to thorough analysis of special authors, literary periods or genres. Before taking this class, the student should take various survey classes of Hispanic literature. Prerequisite: SPAN 3300. (Spring)

SPAN 4893 Internship (P/F) (1-5)**SPAN 4920 Spanish Workshop/Study Abroad (1-5)****SPAN 4980 Student Teaching (P/F) (2)****SPECIAL EDUCATION (SPED)****SPED 3030 Foundations of Special Education (2)**

This course is designed to provide prospective elementary and secondary teachers with an overview of the historical, philosophical, psychology, sociological, and legal forces that affect special education. Participants will also become familiar with current trends and issues in special education including the at-risk learners, mild/moderate disabilities and disorders, and current policies governing special education students. Participants will understand the development, organization, and administration of public schools. Participants will also complete a full day practicum in a local public school. (Fall, Spring, Summer)

SPED 4100 Programming and Management for Students with Mild/Moderate Disabilities (3)

Students are provided with an overview of service delivery patterns, assessment and programming variables, organizational variables, and instructional and classroom management models necessary for programming students with mild/moderate disabilities. Prerequisite: Admission to the Elementary or Secondary Education Department. (Fall)

SPED 4110 Principles of Special Education Law (3)

The role of the federal, state, and local government in special education issues will be covered with special emphasis on case and regulatory law, including Utah regulations. Focus will be placed on the six major principles of the individuals with Disabilities Education Act as they relate to the free appropriate public education for all students. Prerequisite: Admission to the Elementary or Secondary Education Department. (Fall)

SPED 4120 Applied Behavior Analysis and Management (3)

This course will include the examination of behavior management strategies, self-management strategies, social skills instruction and the principles of applied behavior analysis as they apply to the implementation and evaluation of instructional and behavior management programs for students with mild/moderate disabilities in special education and general education settings. Prerequisite: Admission to the Elementary or Secondary Education Department. (Fall)

SPED 4130 Curriculum Strategies and Procedures in Reading, Writing, & Math for Students with Mild/Moderate Disabilities (3)

The purpose of this course is to emphasize and highlight specific strategies and techniques to use in teaching students with learning difficulties both in pull-out special education settings, and more inclusive general education programming. This course is designed for curriculum development and it features reading, writing, and math which seem to be the most occurring academic deficit areas that students with mild/moderate disabilities exhibit. Prerequisite: Admission to Elementary or Secondary Education Department. (Fall)

SPED 4140 Collaboration Skills for Teachers (3)

Participants are taught and provided with opportunities to practice and demonstrate effective collaboration techniques and interpersonal skills with local administrators, teachers, parents, and related service personnel. Prerequisite: Admission to the Elementary or Secondary Education Department. (Fall)

SPED 4150 Transition Programming for Students with Learning and Behavior Problems (3)

People with disabilities are a potentially valuable resource in our society. To assure that students with disabilities can discover and reach their potential, we must have educational programs that are crafted in such a manner that every student is able to pursue varying

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options to reach their goals. Transition from school to adult life is an important stage for anyone, but for the student with disabilities it becomes critical. This course will explore programming in life-career development and transition. Concurrent with 4160, 4170, and 4185. Prerequisite: Admission to the Elementary or Secondary Education Department, SPED 4100, 4110, 4120, 4130, and 4140 completed with a 'B' average or better. (Spring)

SPED 4160 Concepts of Measurement, Assessment, and Report Writing for Students with Mild/Moderate Disabilities (3)

The emphasis of this course is the interplay among assessment and teaching activities. Using a variety of formal and informal tests, the central focus of this class will be how the teacher can evaluate status and progress in reading, language, and mathematics, and the implications of student progress for improving teaching. In addition, this class will provide the connection between gathering assessment information and the analysis and synthesis of data to develop report summaries. Concurrent with SPED 4150, 4170, and 4185. (Lab Fee: \$30) Prerequisite: Admission to the Elementary or Secondary Education Department, SPED 4100, 4110, 4120, 4130, and 4140 completed with a 'B' average or better. (Spring)

SPED 4170 Advanced Cognitive Strategies for Students w/Learning and Behavior Problems (3)

This course is designed for teacher candidates who desire an in-depth look at specialized teaching techniques used with individuals with mild and moderate learning behavior problems. Emphasis is placed on specific techniques to address specific learning problems, developing programming appropriate for a variety of learning styles, and becoming more strategic in their teaching. Concurrent with SPED 4150, 4170, and 4185. Prerequisite: Admission to the Elementary or Secondary Education Department, SPED 4100, 4110, 4120, 4130, 4140 completed with a 'B' average or better. (Spring)

SPED 4185 Elementary and Secondary Practicum (3)

These classes are intensive practicums in dual special education placements at the elementary and secondary levels. Teacher candidates spend a total of 80 hours in the placement locations (40 hours in each placement.) The placements will involve practicum experience with special education mild/moderate students and collaboration and consultation with the general education teacher and the special education teacher. (Fee required: \$15) (Fall and Spring)

SPED 4980 Special Education Clinical Practice (2)

Supervised clinical practice of public school students with mild to moderate learning and behavior problems at the elementary and secondary levels. Fee structure can be found in the Clinical Practice Section. (P/F)

Additional fees for supervision may be added for out-of-state clinical practice.

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SPED 6100 Programming and Management for Students with Mild/Moderate Disabilities (3)

Students are provided with an overview of service delivery patterns, assessment and programming variables, organizational variables, and instructional and classroom management models necessary for programming students with mild/moderate disabilities. (Online, Fall, or arranged for face-to-face cohort groups.)

SPED 6110 Principles of Special Education Law (3)

The role of the federal, state, and local government in special education issues will be covered with special emphasis on case and regulatory law, including Utah regulations. Focus will be placed on the six major principles of the individuals with Disabilities Education Act as they relate to the free appropriate public education for all students. (Online, Fall, or arranged for face-to-face cohort groups.)

SPED 6120 Applied Behavior Analysis and Management (3)

This course will include the examination of behavior management strategies, self-management strategies, social skills instruction and the principles of applied behavior analysis as they apply to the implementation and evaluation of instructional and behavior management programs for students with mild/moderate disabilities in special education and general education settings. (Online, Fall, or arranged for face-to-face cohort groups.)

SPED 6130 Curriculum Strategies and Procedures in Reading, Writing, & Math for Students with Mild/Moderate Disabilities (3)

The purpose of this course is to emphasize and highlight specific strategies and techniques to use in teaching students with learning difficulties both in pull-out special education settings, and more inclusive general education programming. This course is designed for curriculum development and it features reading, writing, and math which seem to be the most frequently occurring academic deficit areas that students with mild/moderate disabilities exhibit. (Online, Fall, or arranged for face-to-face cohort groups.)

SPED 6140 Collaboration Skills for Teachers (3)

Participants are taught and provided with opportunities to practice and demonstrate effective collaboration techniques and interpersonal skills with local administrators, teachers, parents, and related service personnel. (Online, Spring, or arranged for face-to-face cohort groups.)

SPED 6150 Transition Programming for Students with Learning and Behavior Problems (3)

People with disabilities are a potentially valuable resource in our society. To assure that students with disabilities can discover and reach their potential, we must have educational programs that are crafted in such a manner that every student is able to pursue varying options to reach their goals. Transition from school to adult life is an important stage for anyone, but for the student with disabilities it becomes critical. This course will explore programming in life-career development and transition. (Online, Spring, or arranged for face-to-face cohort groups.)

SPED 6160 Concepts of Measurement, Assessment, and Report Writing for Students with Mild/Moderate Disabilities (3)

The emphasis of this course is the interplay among assessment and teaching activities. Using a variety of formal and informal tests, the central focus of this class will be how the teacher can evaluate status and progress in reading, language, and mathematics, and the implications of student progress for improving teaching. In addition, this class will provide the connection between gathering assessment information and the analysis and synthesis of data to develop report summaries. (Online, Spring, or arranged for face-to-face cohort groups.)

SPED 6170 Advanced Cognitive Strategies for Students w/Learning and Behavior Problems (3)

This course is designed for teacher candidates who desire an in-depth look at specialized teaching techniques used with individuals with mild and moderate learning behavior problems. Emphasis is placed on specific techniques to address specific learning problems, developing programming appropriate for a variety of learning styles, and becoming more strategic in their teaching. Prerequisites: SPED 6100- SPED 6160 with a 'B' average or better. (Online, Spring, or arranged for face-to-face cohort groups.)

SPED 6185 Elementary and Secondary Practicum (3)

These classes are intensive practicums in dual special education placements at the elementary and secondary levels. Teacher candidates spend a total of 80 hours in the placement locations (40 hours in each placement.) The placements will involve practicum experience with special education mild/moderate students and collaboration and consultation with the general education teacher and the special education teacher. (Fall and Spring)

SPED 6980 Special Education Clinical Practice (6)
Supervised clinical practice of public school students with mild to moderate learning and behavior problems at the elementary and secondary levels. Must be admitted to the Graduate Educator Licensure Program and have completed all prerequisite classes. Fee required. See Clinical Practice Fee Schedule. (P/F) (Fall, Spring)

TECHNOLOGY (TECH)

TECH 1040 Professional Vocational Leadership (1)
Skills USA VICA, a national vocational club, provides the opportunity for students to develop leadership, character, human relations, self confidence, and explore career opportunities. It also provides the opportunity for service to the school and community. Students will be encouraged to compete in state and national vocational career competition conducted by industry. This will give students recognition for their skill and knowledge, while bringing recognition to SUU. Students may take this class three times for a total of three hours credit. (P/F) (Fall)

TECH 1950 Technology in Society (S) (3)
This course deals with the impact of technology on society. The course covers the evolution of technology, reviewing the major thrusts which brought about the current technological revolution. Emphasis is placed on how technology serves society and improves our way of life. (Fall)

TECH 3000 Occupational Safety (3)
Detailed study of occupational, safety and health hazards. Emphasis on regulation, including air pollution, noise, hazardous chemicals, electrical and industrial safety. (Spring)

TECH 4832 Readings and Conferences (P/F) (2)

TECH 4833 Readings and Conferences (P/F) (3)

TECH 4840 Cooperative Education (2-8)
Designed to allow students to receive credit during an assigned paid work related experience. Credits will be assigned according to work hours. A written report/paper is required to complete the credit. A maximum of 10 credit hours may be taken and do not replace major/minor requirements. (P/F) (Fall, Spring, Summer)

TECH 4890 Internship (1-9)
A course designed to allow students to receive credit during an assigned unpaid work related experience. Credits will be assigned according to work hours. A written report/paper is required to complete the credit. A maximum of 9 credit hours may be taken and do not replace major/minor requirements. (P/F) (Fall, Spring)

TECHNOLOGY EDUCATION (TE)

TE 1700 Electricity and Electronics (3)
Principles of basic electricity, electronics, digital principles, solid state devices, and AC and DC circuit analysis will be covered. Emphasis will be placed on common electrical and electronic circuits and their applications. Laboratory experiences will allow students to apply these principles using modern electronic test equipment. (Fall)

TE 1820 Material Processing (3)
A study of the use of basic tools and machines to include hand tools and portable power tools. Skill, care, and safety will be stressed. Students will complete a series of exercises what will cause them to demonstrate their skill and knowledge. (Fall)

TE 2650 Cabinet Design (3)
This course will use computer software to design, develop materials lists, develop material and hardware list, cutting schedules and production management of typical cabinet styles. (Fall)

TE 3150 Industrial Materials (3)
A course designed to familiarize technology education students with the skills in the use of materials and processes common in industrial applications. Included are forming and fabricating with plastic products, forming and fabricating sheet metal, industrial machining, and welding practices using gas and arc techniques. (Fall)

TE 3160 Communication Systems (3)
A course related to the communication industry and related occupations. The course content will include the concepts and principles of communication as well as the different media used for the communication of information including: video production, audio production, and printed media. Prerequisite: TECH 1700. (Spring)

TE 3550 Transportation and Power (2)
A course for the technology education teacher related to the transportation and power industry to include related occupations. The content will include sources of power, such as: power mechanics, electrical theory and power, and fluid power, and various transportation systems that move people and products. (Spring)

TE 3850 Construction (3)
A course for the Technology Education teacher related to the construction industry, its related occupations and its function in today's economy. The content will include activities in basic carpentry, electrical wiring, plumbing, masonry, and structural building techniques. (Spring)

TE 3870 Cabinet and Furniture I (3)
Advanced practice in furniture and cabinet construction with emphasis on quality craftsmanship. A study of design and layout procedures. Mass production techniques, use of plastic laminates and hardware will be studied. A review of recognized furniture styles. Prerequisite: TE 1820. (Fall, taught alternate years,)

TE 3880 Cabinet and Furniture II (3)
Continuation of TE 3870. Prerequisite: TE 1820. (Spring, taught alternate years,)

TE 3890 Cabinetmaking and Millwork (3)
This course is designed to introduce the student to design, layout and construction of European style and face frame cabinets. The student will be involved in the design and construction of basic kitchen and bath cabinetry. The student will be exposed to the use of plastic laminates and millwork as it relates to small commercial and residential construction. Prerequisite: TE 1820. (Spring, taught alternate years)

TE 3940 Jewelry Fabrication (3)
Principles and practices of jewelry manufacturing. Design and construction of functional objects will be emphasized. Emphasis in will be on tool use, vacuum casting, silver smithing, and gem cutting. Both beginning and advanced techniques will be taught. (Summer)

TE 4100 Manufacturing Problem Solving and Design (3)
This course will place emphasis on developing problem solving skills related to the design and manufacturing processes found in the manufacturing industry. Laboratory activities will include the presentation of a product idea, the design of selected products, the prototyping of these selected products, and the manufacturing processes necessary to produce these products. Team cooperation, management, and planning will also be incorporated into the course. (Spring, Summer-graduate level only)

Course Descriptions

TE 4820 Technology Life Careers/Foundations of Technology (3)

This course introduces the prospective Technology Education teacher to engineering design, career exploration, and the four areas of concentration (communication, power/transportation, construction, and manufacturing). This course also prepares the prospective teacher to teach the middle school/junior high school course Technology Life Careers. (Fall)

TE 4900 Methods of Teaching Technology (3)

The prospective teacher will be able to plan instruction based upon knowledge of subject matter, students, and the community and curriculum goals. They are able to reflect on and continually evaluate the effect of choices and actions on others and actively seek out opportunities to grow professionally. Included in the course are pertinent evaluation methods and school law. (Fall)

TE 4930 Principles of Technology (3)

An applied physics course designed to prepare the prospective educator to teach Principles of Technology in secondary schools. Major areas of study include mechanical, fluid, electrical and thermal systems. Hands-on exposure to force, work, rate, resistance, energy, power, and force transformers will be provided. (Fall)

TE 4950 Facilities Management (3)

A detailed study of the physical layout of technology and vocational laboratories with emphasis on machine placement, traffic patterns, convenience and disbursement procedures relative to materials, tools, student activities and projects. An introduction to ordering procedures and record keeping systems relative to successful laboratory activities. (Fall)

TE 4980 Student Teaching (P/F) (2)

TE 6100 Manufacturing Problem Solving and Design (3)

This course will place emphasis on developing problem solving skills related to the design and manufacturing processes found in the manufacturing industry. Laboratory activities will include the presentation of a product idea, the design of selected products, the prototyping of these selected products, and the manufacturing processes necessary to produce these products. Team cooperation, management, and planning will also be incorporated into the course. Includes a research project. (Spring, Summer-graduate level only)

TE 6900 Methods of Teaching Technology (3)

The prospective teacher will be able to plan instruction based upon knowledge of subject matter, students, and community and curriculum goals. They are able to reflect on and continually evaluate the effect of choices and actions on others and actively seek out opportunities to grow professionally. Included in the course are pertinent evaluation methods and school law. (Summer-graduate level only)

TE 6930 Principles of Technology (3)

An applied physics course designed to prepare the prospective educator to teach Principles of Technology in secondary schools. Major areas of study include mechanical, fluid, electrical and thermal systems. Hands-on exposure to force, work, rate, resistance, energy, power, and force transformers will be provided. Includes a research project. (Fall, Summer-graduate level only)

TE 6950 Facilities Management (3)

A detailed study of the physical layout of technology and vocational laboratories with emphasis on machine placement, traffic patterns, convenience and disbursement procedures relative to materials, tools, student activities and projects. An introduction to ordering procedures and record keeping systems relative to successful laboratory activities. Includes a research project. (Fall, Summer-graduate level only)

THEATRE ARTS (TA)

TA 1013 Inside the Art of Theatre (F) (3)

Students will gain an understanding of our history and ourselves through the enrichment of how theatre operates to entertain, educate, and reflect our past. Learning and participating in various production elements will enhance student's role as trained audience members. (Fall, Spring, Summer)

TA 1040 Arts Retrospective (D) (1)

An examination of how the arts both influence and respond to a societal epoch or theme. Through a selected specific topic the course investigates the interrelationship of three fine art disciplines and how they express the spirit of an age. (Three interlocking one-credit courses combine for this three-credit inquiry) Co-requisites 2 of the following: ART 1040, DANC 1040, or MUSC 1040. (Fall, Spring)

TA 1113 Introduction to Acting (F) (3)

Fundamental acting techniques focusing on training the student's individual physical and vocal instrument in choosing clear character objectives and tactics. Constantin Stanislavski based. Sections will be offered for majors and non-majors. (Fall, Spring)

TA 1203 Stage Makeup (3)

A course dealing with practical application of stage makeup, hair, and wigs. The student will also investigate the relationship of character to makeup and a beginning of the work needed to design a production. (Fall, Spring)

TA 1240 Theatre Practicum Lab (1)

A course in actual performance or technical assignment working under directors and supervisors in rehearsal and performance experience. May be repeated for additional credit. (Fall, Spring)

TA 1513 Stagecraft (3)

A fundamental course in theatrical production techniques and methods. A practical study of stage carpentry and painting techniques. (Fall, Spring)

TA 1523 Costume Construction (3)

A beginning overview of the vocabulary and basic sewing methods of theatrical costuming. The course will also cover simple patterning and some dyeing techniques. (Fall, Spring)

TA 1713 Script Analysis (F) (3)

Students will learn to identify and analyze key elements of dramatic structure from the points of view of directors, actors, and designers, using plays from a variety of periods. There will be three to four presentations, a written midterm and an oral final. (Fall, Spring)

TA 2113 Voice and Diction (3)

Fundamental relaxation and breathing techniques for the speaking voice. Learning skills in scoring the text and elements for good speech. Learning the International Phonetic Alphabet. Applying these techniques to actual texts for performance and feedback. (Spring)

TA 2140 Rehearsal & Performance (1)

An advance level actual performance or technical assignment working under directors and supervisors in rehearsal and performance experience. May be repeated for additional credit. (Fall, Spring)

TA 2240 Theatre Practicum Lab (1)

A course in actual performance or technical assignment working under directors and supervisors in rehearsal and performance experience. May be repeated for additional credit. (Fall, Spring)

- TA 2513 Stage Rendering (3)**
Examination of the uses of the various materials used and the development of the techniques employed in the creation and presentation of theatrical renderings and models. Co-requisites: TA 1513, TA 1533. (Fall)
- TA 2523 Drafting for the Theatre (3)**
Practical examination and practice in theatrical drafting conventions with an emphasis on the development of hand drafting techniques. An introduction to basic CAD (computer-aided drafting) will also be covered. Prerequisite: TA 1513. (Spring)
- TA 2532 Design Analysis (2)**
Students will analyze theatrical scripts from the standpoint of learning to recognize and evaluate the visual and environmental elements that are necessary for the successful production of the play. (Fall)
- TA 3013 Production Management (3)**
Two-part course (both parts taught in the same semester) covering the basics of stage management and arts management for theatre and dance at the introductory level. (Fall)
- TA 3113 Intermediate Acting (3)**
Intensive studio approach to further develop the principles of acting and its artistry through historic and aesthetic theory. Examination of Modernism and extended Realism. Advance scene study, character analysis, and development. Prerequisite: TA 1113 (Fall, Spring)
- TA 3123 Acting Styles I: Classic (3)**
Specific training for actors in period plays. Emphasis on voice, speech, movement and performance. Prerequisites: Permission of the Instructor. (Spring)
- TA 3131 Professional Aspects of Theatre (1)**
Advance course designed for those intending to enter the professional theatre. Special projects in the study of current plays in the preparation of auditions, interviews, resumes, and portfolios. Prerequisites: TA 1113, TA 3113. (Fall)
- TA 3133 Action Styles II: Musical Theatre (3)**
Practical application in musical theatre performance. Focus is on characterization, staging, choreography, and musical audition preparation. Prerequisites: Permission of the Instructor. (Fall)
- TA 3140 Rehearsal & Performance (1)**
An advance level actual performance or technical assignment working under directors and supervisors in rehearsal and performance experience. May be repeated for additional credit. (Fall, Spring)
- TA 3323 Stage Craft II (3)**
A continuation of Stagecraft I with a particular emphasis on the materials, tools, and processes involved in theatrical production. This course is designed to provide a deeper understanding of modern technical theatre practices, particularly in the area of construction materials, techniques, and applications. Prerequisite: TA 1513 (Fall)
- TA 3500 Advanced Studies in Theatre Design/Tech (1-3)**
Advanced course designed to allow the student to obtain valuable experience in their area strength through realized projects in their focus area. Progress meetings held regularly. Prerequisites: Consent of Instructor. (As Needed)
- TA 3513 Collaborative Approach to Design (3)**
Examination of the process of design from the standpoint of the relationship created within the design team. Through class projects, the student will develop a design process which fosters communication of ideas and collaboration in pursuit of a unified design in all aspects of the production. TA 1513, TA 1533, TA 2713 or Permission of the Instructor. (Spring)
- TA 3523 History of Theatrical Styles (3)**
A survey and research oriented course. Studies the impact of the major visual, artistic, historical, and social period movements, and the implication of these on the approach that the actor, director, designer and playwright take in developing their understanding of the overall environment of a play in location and time period. (Fall, Spring)
- TA 3533 Costume Design (3)**
A basic course in design with emphasis on the practical approach to costume design. Included will be research and presentation techniques, with examination of major designers' works and practical experience in designing for all manner of productions. Prerequisites: TA 1513, TA 1523, TA 1713, TA 2532. (Spring)
- TA 3540 Theatre Practicum Lab (1)**
A course in actual performance or technical assignment working under directors and supervisors in rehearsal and performance experience. May be repeated for additional credit. (Fall, Spring)
- TA 3553 Lighting Design (3)**
An intermediate course in lighting design. A study of design principles and objectives for the lighting designer. Application of skills in: observation, communication and collaboration, and execution of lighting for the theatre by means of written critiques, journal writing, hands-on practical projects, drafting light plots, and generating the paperwork necessary for design. Prerequisites: TA 1513, TA 1713, TA 2532. (Spring)
- TA 3563 Scenic Design (3)**
Advanced application of the principles of scenic design with the development of the scenic designs by use of sketches, scaled drawings and scaled perspective renderings. Prerequisites: TA 1513, TA 1713, TA 2532, TA 3523. (Fall)
- TA 3571 Portfolio (1)**
Basic course in the development of a student portfolio for the areas of theatrical design and technology, with emphasis on placement in the theatrical job market or on graduate school interviews. May be repeated for credit. Prerequisites: Permission of the Instructor. (As needed)
- TA 3613 Directing I (3)**
A course designed for the beginning directing student, learning the terminology and fundamentals of stage direction. A foundation course for Directing II. The course involves script and scene work. Prerequisites: Permission of the Instructor. (Fall)
- TA 3713 Theatre History I: The Classic Theatre (F) (3)**
Covers the Greeks through the Restoration. Special section on Asian and traditional African drama. Course modules are: Greek, Roman, traditional Asian, traditional African, Medieval, Renaissance Italy and Spain, early Tudor, Shakespeare and his contemporaries, Jacobean and Carolinian playwrights, Moliere and Racine, and the Restoration of theater in England. (Fall)
- TA 3723 Theatre History II: Realism, Post Realistic and Contemporary Theatre (F) (3)**
Covers the period from the 18th Century through American and European Contemporary. Special section on Musical Theatre. Course Modules are: 18th Century England, France and Italy; early 19th century Germany; 19th century Romanticism, Sturm and Drang, and Melodrama. Late 19th century theatre—Realism vs. Spectacle. Early 20th century theatre—reactions against Realism. Mid-20th century theatre—the rise of American drama, including musical theatre. Late 20th century theatre: the rise of Hispanic, Asian, African-American and women's theatre. (Spring)

Course Descriptions

TA 3900 Theatre for Elementary Teachers (1.5)
A course especially designed for background, theory, and practice in the selecting, preparing, and presentation of plays on the elementary level. (Fall, Spring, Summer)

TA 4113 Acting Styles III: Shakespeare (3)
Text analysis, scansion and performing of Shakespearean scenes. Learning to match the language and sounds to the action.
Prerequisites: Permission of the Instructor. (Fall)

TA 4123 Acting Styles IV: Studio Intensive - Masks (3)
Application of ensemble work into performance applying all techniques classes with in-class project. Prerequisites: Permission of the Instructor. (Spring)

TA 4140 Rehearsal & Performance (1)
An advance level actual performance or technical assignment working under directors and supervisors in rehearsal and performance experience. May be repeated for additional credit. (Fall, Spring)

TA 4333 Technical Direction (3)
This course is designed to provide an exploration into the role of the Technical Director within the framework of modern technical theatre. Including management practices, budgeting and estimating techniques, backstage organization, and scenery construction techniques. Prerequisites: TA 1513, TA 3323. (Spring)

TA 4500 Advanced Studies in Theatre Design/Tech (1-3)
Advanced course designed to allow the student to obtain valuable experience in their area strength through realized projects in their focus area. Progress meetings held regularly. Prerequisites: Consent (As Needed.)

TA 4513 Theatre Technologies (3)
This course is designed to provide a forum for intensive study of a particular aspect of modern theatrical technologies. As such, various topics may be selected based on current industry trends, student needs, and available resources. Sample topics might include but are not limited to Rigging, Automation, Metal Fabrication, or Properties. Prerequisites: TA 1513, TA 3323. (Spring)

TA 4540 Theatre Practicum Lab (1)
A course in actual performance or technical assignment working under directors and supervisors in rehearsal and performance experience. May be repeated for additional credit. (Fall, Spring)

TA 4612 Directing II Lab (2)
Co-requisite: TA 4613. Prerequisite: Permission of the Instructor. (Spring)

TA 4613 Directing II: Methods Approach (3)
A study of theories and actual experience in organization, interpretation, blocking, pacing, casting, and producing a play; includes a survey of secondary teaching directing approaches. Prerequisites: Permission of the Instructor, Co-requisite: TA 4612L. (Spring)

TA 4640 Special Projects in Theatre (1-5)
A course designed to strengthen an individual's weaknesses. Progress meetings held regularly. Can be repeated for additional credit in other project areas upon consent of Department Chair. Prerequisite: Consent of an instructor to act as sponsor, ability to assume responsibility for independent work, and preparation of written and oral reports. **See Student Handbook.**

TA 4751 Capstone I (1)
This course substitutes the written documentation for TA 4752 (Capstone II) and will be taken either after or before that course depending on the nature of the Capstone (whether design, research

or performance based.) Prerequisite or Co-requisite: TA 4752 (Fall, Spring)

TA 4752 Capstone II (2)
This course constitutes a professional level senior project for the graduating Theater Arts and Dance major, either significant acting, directing, design, choreographic project, or a major research paper. It is taken in conjunction with TA 4751 (Capstone I) and will be taken either after or before that course, depending on whether the project is performance, research, or design based. Students must meet with their faculty adviser two semesters before registering for the course to receive approval for the proposed capstone. Prerequisite or Co-requisite TA 4751 (Fall, Spring)

TA 4830 Cooperative Education (P/F) (4,8,12)
TA 4840 Readings and Conferences (P/F) (1-5)

TA 4890 to 5890 Internship (P/F) (3-12)

TA 4980 Student Teaching (P/F) (2)

UNIVERSITY STUDIES (UNIV)

UNIV 1000 First Year Seminar (C) (1)
The First Year Seminar connects students with faculty, staff, and other students and the university community. This First Year Seminar is designed to help launch students' university careers successfully and to equip students with the tools and abilities that will increase their career and academic skills. Students will also participate in service learning activities. (Fall, Spring)

UNIV 1010 University Orientation (1)
Offered at a variety of times during the summer and before spring semester, the Orientation provides academic advisement, social activities and events to introduce students to SUU. Acquaints students with the services, facilities, opportunities, and responsibilities of campus life. Some assignments will be required during the first semester on campus. Required of all first-time freshmen. (P/F)

UNIV 1020 Career Decisions (2)
A course designed to assist student in improving their decision-making skills and in making a tentative occupation choice based on knowledge of themselves and the world of work.

UNIV 1030 Governors Honor Academy (6)
The academy is a ten-day program designed for Utah's most gifted high-school leaders and scholars entering grade 12. The objective of the program is to cultivate the brightest of Utah's high school students in high quality leadership, personal achievement, academics and community service. The program provides students with a stimulating curriculum of study with subjects ranging from science to Shakespeare and from creativity to leadership. These, and other subjects, are discussed by a dynamic Academy Faculty and many distinguished lecturers with corporate, government, media and other professional backgrounds. Students attending the Governor's Honors Academy will obtain a broader vision of personal potential for leadership, develop a keener ability to create and implement new ideas, learn fresh approaches and new skills in group dynamics, acquire an increased awareness of personal goals and objectives, and achieve a collegiate orientation to develop their future. For information, visit the GHA website at www.suu.edu/gha, [http://www.suu.edu email Conference@suu.edu](mailto:Conference@suu.edu) or call the director of the Governor's Honors Academy at (435) 865-8219.