



COURSE DESCRIPTIONS

COURSE DESCRIPTION GUIDE

This section of the catalog lists all of the undergraduate courses and their descriptions that are offered at Midwestern State University. They are listed in alphabetical order by their prefix. See page 89 for details regarding MSU's course numbering system.

TCCNS (Texas Common Course Numbering System): Midwestern State University has joined with other colleges and universities in Texas in support of the Texas Common Course Numbering System (TCCNS). The purpose of the system is to assist students who are transferring between participating institutions. The system utilizes single unique course alphabetic prefixes and numbers to identify freshman and sophomore level courses which are common between two or more member colleges or universities. Although Midwestern State did not change its numbers to the common course system, a crosswalk is provided in the back of the catalog. The TCCNS prefix and number is also displayed adjacent to each MSU course title that is equivalent to a Texas Common Course Number.

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(ACCT) ACCOUNTING**2143. Financial Accounting (TCCNS = ACCT 2301) 3(3-0)**

Introduction to fundamental concepts and principles underlying accounting information, the accounting cycle, service and merchandising operations, sole proprietorships and partnerships, and corporations.

2243. Managerial Accounting (TCCNS = ACCT 2302) 3(3-0)

Prerequisite: ACCT 2143.

Accounting for cash flows, financial statement analysis, responsibility and cost accounting, and budgeting.

3023. Accounting Information Systems 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and ACCT 2243.

Use of accounting data as an information system; general ledger programs and sub-programs relevant to the basic accounting cycle.

3033. Intermediate Accounting I 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and ACCT 3023 with a grade of "C" or higher.

Financial accounting theory and problems; statement presentations; an intensive course combining theory and practical applications.

3043. Intermediate Accounting II 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and ACCT 3033 with a grade of "C" or higher.

A continuation of Accounting 3033. An intensive course combining theoretical concepts and practical applications of accounting for a wide range of business activities.

3073. Federal Income Tax I 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and ACCT 2243.

General concepts of federal income taxation applicable to individuals and business entities.

3203. Cost Accounting I 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and ACCT 2243.

Theory and procedures used in determining costs of business operations with emphasis on manufacturing accounting for materials, labor, and overhead in job order, process, and standard cost systems.

3633. Financial Analysis (Same as FINC 3633) 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, ACCT 2143, ACCT 2243, and MATH 1203 or MATH 1233.

The study of financial tools and techniques used in the analysis of financial statements and other information for the purpose of deriving reasonable judgments about past, present, and future conditions of the firm and the effectiveness of its management.

4043. External Auditing 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and ACCT 3043 or concurrent enrollment.

Theory, practice, and procedure of auditing, internal accounting control, auditing standards and principles, and working papers and reports.

4053. Internal Auditing 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and ACCT 2243.

Topics in auditing, theory, and practice. Includes internal controls, auditing procedures for automated accounting systems, and operations.

4083. Federal Income Tax II 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and ACCT 3073.

Survey of federal income tax laws applicable to corporations, partnerships and S-corporations, and fiduciary relationships.

4093. Federal Income Tax III 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and ACCT 3073.

Survey of federal income tax laws applicable to corporations, partnerships and S-corporations, and fiduciary relationships.

4123. Advanced Accounting 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and ACCT 3043 or concurrent enrollment.

Intensive study of special areas in accounting with emphasis on consolidated statements; other topics include multinational companies, fiduciaries, insolvencies, partnerships, and fund accounting.

4333. Governmental and Nonprofit Entity Accounting 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and ACCT 2243.

Application of accounting principles and systems of budgeting, accounting, and reporting of governmental units and other nonprofit entities.

4883. Problems in Accounting 3(3-0)

Prerequisites: Junior standing or above and consent of the chair.

Research in a specific area selected by the student in conjunction with a member of the accounting faculty. This course is open only to students of high scholastic standing. Enrollment in this course must be approved prior to registration.

4893. Internship in Accounting 3(3-0)

Prerequisites: Junior standing or above and consent of the chair and the dean.

Field experience in accounting with local or regional firms. Provides significant accounting work experience involving training and supervision by an employer. A written report and employer evaluation are required. May be repeated once. Must be approved with all paperwork completed prior to registration. Total hours granted for internships in all areas of business administration may not exceed six hours of credit.

(AMUS) APPLIED MUSIC - PERFORMANCE

(See MUSC courses beginning on page 284.)

Courses in performance (private lessons) are available for one or three semester hours credit. Performance course numbers have a first digit of 1 or 3 corresponding to the level of study. The final digit corresponds to the number of semester hours in which a student is enrolled. The central digits show the area of performance study (piano, voice, non-major voice, etc.) according to the table below.

Students majoring in performance as candidates for the Bachelor of Music degree may enroll for no more than three semester hours in their primary performance area each semester. Candidates for the Bachelor of Music degree with Teacher Certification, music minors, and non-majors/non-minors may enroll for no more than one semester hour each semester.

	Central Digits for Performance Area
Performance Area:	
Voice	20
Voice for non-majors/non-minors	70
Keyboard	
Piano	22
Piano Proficiency (repeat once only-two semesters total)	23
Organ	24
Harpsichord	28
Keyboard for non-majors/non-minors	72
Percussion	26
Strings	
Guitar	38
Winds	
Flute	40
Oboe	42
Clarinet	44
Saxophone	46
Bassoon	48
Brasses	
French Horn	50
Trumpet (Cornet)	52
Trombone	54
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Instrumental for non-majors/non-minors	74
Conducting	60
Composition	69
Junior Recital, Performance	86
Senior Recital, Performance or Education	96

Voice, piano, or instrumental for non-majors may be taken only with consent of instructor and department chair.

(ART) ART

1113. **Design I** (TCCNS = ARTS 1311) 3(2-4)

Fundamental elements and principles of 2-dimensional design. Construction, presentation, and rendering skills developed.

1123. **Design II** (TCCNS = ARTS 1312) 3(2-4)

Fundamental principles of 3-dimensional design. Continuation of 1113 with emphasis on small construction format developing the use of various tools, materials, and presentation skills.

1213. **Art Appreciation, Applied** 3(2-2)

Hands-on opportunities in basic 2- and 3-dimensional media, such as drawing, painting, printmaking, ceramics, and sculpture, together with the usual foundation lecture experience in art appreciation. For non-art majors.

1313. **Drawing I** (TCCNS = ARTS 1316) 3(2-4)

Drawing a variety of subjects in both wet and dry media with emphasis on black and white visual organization and expression.

1323. Drawing II (TCCNS = ARTS 1317) 3(2-4)

Prerequisite: ART 1313.

Continuation of 1313 with emphasis on color drawing media and development through both individual and group projects.

1413. Art Appreciation (TCCNS = ARTS 1301) 3(3-0)

Lectures, slides, and discussion of the visual elements and their application to the arts. Prerequisite for all art history courses.

2013. Photography I (TCCNS = ARTS 2356) 3(2-4)

Prerequisites: ART 1113, 1123, 1323 or consent of instructor.

Introduction to camera, film, and basic darkroom techniques in black and white photography. Emphasis on photography as a fine art.

2153. Printmaking I (TCCNS = ARTS 2333) 3(2-4)

Prerequisites: ART 1113, 1123, 1323 or consent of instructor.

Introduction to printmaking. Beginning instruction in one of the following printmaking media: intaglio, dealing with etching, aquatint, softground, and relief printing methods applicable to the intaglio process; lithography, dealing with stone and metalplate printing; and screen process printing (serigraphy) dealing with photo-methods; unique prints; monoprint and monotype processes.

2313. Painting I (TCCNS = ARTS 2316) 3(2-4)

Prerequisites: ART 1113, 1123, 1323 or consent of the instructor.

Introduction to painting. Instruction in one of the following areas: Oil medium, acrylic medium, or watercolor medium. Oil and acrylic painting including the fabrication of stretchers and surface preparations.

2323. Painting II (TCCNS = ARTS 2317) 3(2-4)

Prerequisite: ART 2313.

Introduction to a second painting medium with emphasis on skill development and individual exploration of ideas. (See Painting 2313 for media options.)

2513. Three-Dimensional Design 3(2-4)

Basic design principles applied to three-dimensional space. Emphasis on the development of the problem-solving process in a wide variety of media.

2523. Sculpture I (TCCNS = ARTS 2326) 3(2-4)

Prerequisites: ART 1113, 1123, 1323 or consent of instructor.

Introduction to sculpture. Emphasis on exploration of a medium through the proper use of appropriate tools and working processes. Beginning instruction in one of the following sculpture media: steel fabrication, involves oxyacetylene and arc welding; casting, involves mold making in sand and plaster, pattern making in wax and styrofoam, substitution materials in concrete, plaster, and bronze; woodworking, involves use of power and hand equipment.

2613. Ceramics I (TCCNS = ARTS 2346) 3(2-4)

Prerequisites: ART 1113, 1123, 1323 or consent of instructor.

Basic studio practices in handbuilding or wheelthrowing skills and design with an introduction to techniques in decoration and glaze application.

2623. Ceramics II (TCCNS = ARTS 2347) 3(2-4)

Prerequisite: ART 2613 or consent of instructor.

Intermediate studio practices in handbuilding or wheelthrowing techniques and design with instruction in glazing and firing.

2713. Commercial Art I 3(2-4)

Prerequisites: ART 1113, 1123, 1323 or consent of instructor.

Introduction to commercial art. Beginning instruction in one of three main areas: graphic design, typography, and advertising design. Design, layout, and computer skills will be used in publication and symbol design.

2723. Commercial Art II 3(2-4)

Prerequisite: ART 2713 or consent of instructor.

Continuation of Commercial Art I. Problems in concept development and visual expression in editorial and corporate design.

2813. Metals & Jewelry I 3(2-4)

Prerequisites: ART 1113, 1123, 1323 or consent of instructor.

Introduction to metalsmithing. The development of basic construction and manipulation processes of various non-ferrous metals. Rivets, soldering, piercing, and die forming are among the techniques covered. Also various surface treatments will be explored including etching, stamping, and roll milling. Emphasis on design and craftsmanship.

2823. Sculpture II (TCCNS = ARTS 2327) 3(2-4)

Prerequisite: ART 2523 or consent of the instructor.

Introduction to a second sculpture medium with emphasis on skill development and individual exploration of ideas. (See Sculpture 2523 for media options.)

3013. Photography II 3(2-4)

Prerequisite: ART 2013 or consent of the instructor.

Photography as an expressive medium, with an emphasis on personal style. Continued development of advanced darkroom techniques. These include the use of a medium format camera and an introduction to archival processing.

3023. Photography III 3(2-4)

Prerequisite: ART 3013 or consent of the instructor.

Color photography as a fine arts medium with emphasis on development of professional skills. This course includes color slide processing, printing, positives from color slides, and color negatives. May be repeated once for credit by mass communication majors.

3143. Printmaking II 3(2-4)

Prerequisite: ART 2153 or consent of instructor.

Introduction to a second print medium: intaglio, lithography, or serigraphy emphasizing color printing. (See Printmaking 2153 for definition of media.)

3153. Printmaking III 3(2-4)

Prerequisite: ART 3143 or consent of instructor.

Advanced study in a previously enrolled medium or introduction to a third process. Emphasizing color printing and technical development. (See Printmaking 2153 for definition of media.)

3213. Drawing III 3(2-4)

Prerequisite: ART 1313 or 1323 or consent of the instructor.

Emphasis on advanced pictorial attitudes and mixed media production through prolonged drawing problems.

3333. Painting III 3(2-4)

Prerequisite: ART 2323 or consent of instructor.

Introduction to a third painting medium with emphasis on continued individual exploration and skill development. (See Painting 2313 for media options.)

3413. History of World Art: Survey I 3(3-0)

Prerequisite: ART 1413 (for art majors); ART 1213 or 1413 (for non art majors); or consent of instructor.

An introduction to art and architecture as social products of a global human history. Both the comparability and diversity of human social organizations and the role of visual culture in them will be discussed. From the Prehistoric through the Gothic era in Europe.

3423. History of World Art: Survey II 3(3-0)

Prerequisite: ART 1413 (for art majors); ART 1213 or 1413 (for non art majors); or consent of instructor.

An introduction to art and architecture as social products of global human history. Both the comparability and diversity of human social organizations and the role of visual culture in them will be discussed. From the fifteenth century to the present

3613. Ceramics III 3(2-4)

Prerequisite: ART 2623 or consent of the instructor.

Selected studio problems in handbuilding and throwing techniques with an emphasis on the combining of the two techniques. An understanding of ceramic raw materials and basic glaze will be developed.

3623. Sculpture III 3(2-4)

Prerequisite: ART 2823 or consent of instructor.

Advanced study in a previously enrolled medium or introduction to a third medium with emphasis on continued individual exploration and skill development. (See Sculpture 2523 for media options.)

3633. Sculpture IV 3(2-4)

Prerequisite: ART 3623 or consent of instructor.

Advanced study in a previously enrolled medium with emphasis on combining media. Stressing individual development of ideas and a refinement in techniques and skills. (See Sculpture 2523 for media options.)

3713. Commercial Art III 3(2-4)

Prerequisite: ART 2723 or consent of instructor.

Design and production using computerized type. Design as a means of visual and verbal communication will be explored. May be repeated once for credit by mass communication majors.

3723. Commercial Art IV 3(2-4)

Prerequisite: ART 3713 or consent of instructor.

Design and production of books, brochures, and posters utilizing computerized Macintosh equipment.

3813. Metals & Jewelry II 3(2-4)

Prerequisite: ART 2813 or consent of the instructor.

The continued development of metalsmithing skills in various non-ferrous metals with a focus on one of the following metalsmithing techniques: raising; casting; enameling. Particular emphasis placed on design and craftsmanship.

3823. Metals & Jewelry III 3(2-4)

Prerequisite: ART 3813 or consent of the instructor.

Introduction to a second metalsmithing technique with an emphasis on continued individual exploration and skill development. (See Metalsmithing 3813 for media options.)

3913. Professional Practices

3 (3-0)

Prerequisites: Art majors only. Consent of instructor.

Practical and philosophical aspects concerned with success outside of the academic environment. A survey of information centering on career opportunities, interviewing, business and professional concerns, this course will involve in-class and outside-of-class activities, discussions, and assignments. To include instruction on graduate school, photo documentation, participation in national competitive exhibitions, grant writing, ethics, etiquette, portfolio contents and presentation, finances, philosophy and psychology of art-making.

4013. Photography IV

3(2-4)

Prerequisite: ART 3023 or consent of the instructor.

This course will explore color photography as a fine arts medium. Experimental approach to color will be explored. These approaches will include: Cliche vere, non silver, dye transfer, and electronic imaging.

4023. Photography V

3(2-4)

Prerequisite: ART 4013 or consent of the instructor.

This course will explore advanced techniques of both black and white and color. The course will introduce students to the 4x5 camera and studio lighting. Each student will pursue his or her individual creative path culminating in a final portfolio. May be repeated for credit.

4143. Printmaking IV

3(2-4)

Prerequisite: ART 3153 or consent of instructor.

Selected studio problems with emphasis on combining or mixing media. Stressing individual development and production.

4153. Printmaking V

3(2-4)

Prerequisite: ART 4143 or consent of instructor.

Further emphasis in individual development of image and technique stressing production of prints to be included in the Senior Exhibition. May be repeated for credit.

4213. Drawing IV

3(2-4)

Prerequisites: 15 studio hours or consent of the instructor.

The development of personal attitudes towards drawing. Designed to deal with individual problems and concepts.

4303. Foundations of Art I

3(2-4)

A study of the essential elements of fine arts as outlined by the Texas Education Agency. The course provides experience in the value of art, art judgment, creativity, and awareness of art fundamentals. It also combines experience in working with both two- and three-dimensional media with reading and research in art.

4313. Painting IV

3(2-4)

Prerequisite: ART 3333.

Selection of media previously investigated. Individual exploration of ideas focused; techniques and skills refined.

4323. Painting V

3(2-4)

Prerequisite: ART 4313.

Selection of media previously investigated. Consistency of imagery, idea, and refinement of technical skill expected. Production of paintings to be included in Senior Exhibition. May be repeated for credit.

4403. Foundations of Art II

3(2-4)

A study of the philosophy, organization, and theory related to art programs. Focuses

on the development of curriculum and lesson plan organization. Also provides field observation and teaching experience.

4413. Art of the European Renaissance 1300-1600 3(3-0)

Prerequisite: ART 1413 (for art majors); ART 1213 or 1413 (non art majors); or consent of instructor.

Art and architecture examined in terms of style, cultural meaning, context, and ideology. Investigation of conditions of art production, change in role of artist, relationship between theory and practice, and the question or concept of Renaissance. Italy, France, Germany, and southern and northern Netherlands.

4423. Art in Early Modern Europe I: Art from 1600-1750 3(3-0)

Prerequisite: ART 1413 (for art majors); ART 1213 or 1413 (non art majors); or consent of instructor.

Exploration of art and architecture of Europe from the Counter-Reformation shrine of St. Peter to Louis XIV's palace at Versailles; from the Jesuit altarpieces in Antwerp to the Dutch Republic of Vermeer and Rembrandt and more. Italy, Spain, France, Germany, England, Flanders, Netherlands.

4433. Art in Early Modern Europe II: Art from 1750-1900 3(3-0)

Prerequisite: ART 1413 (for art majors); ART 1213 or 1413 (for non art majors); or consent of instructor.

An investigation of the visual arts and architecture in Europe from the stirrings of revolution in the late eighteenth century to the new age of imperialism that reached its apogee before World War I. Neoclassicism, Romanticism, Historicism, Realism, Impressionism, Post-Impressionism, Symbolism, Art Nouveau.

4443. Modern and Contemporary Art 3(3-0)

Prerequisite: ART 1413 (for art majors); ART 1213 or 1413 (for non art majors); or consent of instructor.

Investigation of the visual arts and architecture from Post-impressionism to the present. Special emphasis on cultural definitions of modernity and modernism, the ideologies of the avant-garde, and the ideas and issues surrounding the production, reception, marketing, interpretation, and criticism of painting, sculpture, drawing, photography, installations, performance, video, and other mixed media modes of presentation. International in scope.

4453. Art in the United States 3(3-0)

Prerequisite: ART 1413 (for art majors); ART 1213 or 1413 (for non art majors); or consent of instructor.

Investigation of the role visual culture has played in the United States as Americans attempted to situate themselves geographically, culturally, economically, and politically within their own society and within the world at large. Traces change within the visual arts within the context of important social, political, and intellectual events from ca. 1600 to 1945.

4513. Exhibition and Presentation Methods 3 semester hours

Prerequisite: Consent of instructor.

A practicum in the fundamentals of exhibition organization. Emphasis on gallery installation and advanced presentation skills beyond the studio experience. May be repeated for credit.

4523. Ceramics IV 3(2-4)

Prerequisite: ART 3613 or consent of the instructor.

Advanced individual problems in clay construction and design with an emphasis on the development of personal direction. Problems in non-utilitarian forms with consid-

eration for the technical problems inherent to the process and materials selected by the student.

4533. Topics in History of Art 3(3-0)

Prerequisite: ART 1413 (for art majors); ART 1213 or 1413 (for non art majors); or consent of instructor.

Survey and investigation of a particular topic, problem, or issue in art history with emphasis on those not covered in other courses (e.g., issues in contemporary art, Mesoamerican art before the conquest; women in art; history of museums and collecting; problems in methodology; history, criticism, theories of photography; etc.). Exact content will be announced before each offering. May be repeated once for credit.

4613. Ceramics V 3(2-4)

Prerequisite: ART 4523 or consent of instructor.

Advanced individual problems in clay construction and design with further emphasis on the development of a personal direction stressing production of works suitable for use in the Senior Exhibition. May be repeated for credit.

4623. Sculpture V 3(2-4)

Prerequisite: ART 3633 or consent of instructor.

Further emphasis in individual development of forms and techniques stressing production of works to be included in the Senior Exhibition. May be repeated for credit.

4713. Commercial Art V 3(2-4)

Prerequisite: ART 3723 or consent of instructor.

Introduction to advertising design. Problems of design and production in a variety of advertising media.

4723. Commercial Art VI 3(2-4)

Prerequisite: ART 4713 or consent of instructor.

Use of illustration, typography, and photography in advertising. Portfolio presentation and development for seniors. May be repeated for credit.

4813. Metals & Jewelry IV 3(2-4)

Prerequisite: ART 3823 or consent of instructor.

Advanced study in a previously enrolled process or an introduction to a third metal-smithing technique with emphasis on combining processes and stressing individual exploration and skill development. (See Metalsmithing 3813 for media options.)

4823. Metals & Jewelry V 3(2-4)

Prerequisite: ART 4813 or consent of instructor.

Advanced individual problems in metals with emphasis on the development of a personal direction stressing production of works to be included in the Senior Exhibition. May be repeated for credit.

4913. Advanced Problems in Art 3 semester hours

Prerequisites: Nine hours in the field to be investigated.

Problems to be worked out in conjunction with instructor of the field being investigated. May be repeated for credit when fields of study vary.

4923. Senior Exhibition 3 (2-4)

Prerequisite: Consent of instructor.

Special emphasis on all aspects of preparation for the selection and presentation of work included in the senior exhibition. Includes production of resume, artist's statement, exhibition announcement, public relations practices, and various forms of correspondence and communication. For B.F.A. majors only. To be taken during final semester. Exhibition scheduling will be determined by the instructor in consultation with the gallery director. Instructor oversees all aspects of every senior exhibition.

4933. Visual Arts Apprenticeship 3 semester hours

Prerequisite: Consent of instructor.

Student serves as an apprentice to the instructor in the development of works of art designed by the faculty member. Medium and instructor may not be repeated.

4943. Art Internship 3 semester hours

Prerequisite: Limited to B.F.A. majors of senior standing with 3.0 overall grade point average.

Practical work experience in an environment related to the student's art career objectives. A minimum of 160 hours on the job is required. Must be approved and arranged prior to registration and receive consent of the Department Chair. May be repeated in a different work experience for a total of six hours credit.

(ATRN) ATHLETIC TRAINING**1063. Introduction to Athletic Training** 3(2-3)

Prerequisite: KNES 2213.

An introduction to the field of athletic training with emphasis on the history of Athletic Training as a profession, certification guidelines, risk management, roles and responsibilities of athletic trainers, and injuries common to the physically active individual.

1203. Contemporary Health Topics (formerly KNES 1203) 3(2-3)
(TCCNS = PHED 1304)

Prerequisite: Permission of instructor.

Study of the physiological basis for health and disease with emphasis on current health topics including mental health, alcoholism, drug abuse, and social diseases.

**All of the following ATRN courses require acceptance
into the Athletic Training Educational Program.**

2801. Practicum in Basic Athletic Training 1(0-3)

Prerequisite: ATRN 1063. Co-requisite: ATRN 2803.

Introduction to the clinical practice of athletic training.

2803. Care and Prevention of Athletic Injuries (formerly 3303) 3(2-3)

Prerequisite: ATRN 1063. Co-requisite: ATRN 2801.

Foundational principles for prevention, assessment, and management of injuries common to the physically active individual.

2901. Application of Therapeutic Modalities 1(0-3)

Prerequisites: ATRN 2803, 2801. Co-requisite: ATRN 2903.

Clinical practicum in the selection, implementation, and evaluation of the effectiveness of therapeutic modalities in athletic training.

2903. Therapeutic Modalities (formerly 4803) 3(2-3)

Prerequisites: ATRN 2803, 2801. Co-requisite: ATRN 2901.

Investigation of the scientific principles underlying therapeutic modalities in athletic training. Includes discussion of selective modalities therapeutic purposes, indications, contraindications, and adverse effects.

3313. Pharmacology and Athletic Training 3(3-0)

Prerequisites: BIOL 3004 and NURS 3203.

Develops the principles of pharmacology and drug protocols commonly prescribed by physicians to treat alternations or to promote health in physically active individuals with respect to the discipline of athletic training.

3801. Practicum in Orthopedic Assessment and Management 1(0-3)

Prerequisites: ATRN 2901, 2903. Co-requisite: ATRN 3803.

Clinical practicum in the evaluation and management of orthopedic sports injuries and conditions.

3803. Evaluation of Athletic Injuries (formerly 4003) 3(2-3)

Prerequisites: ATRN 2901, 2903. Co-requisite: ATRN 3801.

Integration of understanding the mechanism of injury into assessment techniques used to distinguish injuries common to the physically active individual.

3901. Application of Therapeutic Exercise 1(0-3)

Prerequisites: ATRN 3801, 3803. Co-requisite: ATRN 3913.

Clinical practicum in planning and implantation of therapeutic exercise related to the rehabilitation of the physically active individual.

3913. Therapeutic Exercise (formerly 4813) 3(2-3)

Prerequisites: ATRN 3801, 3803. Co-requisite: ATRN 3901.

Theory and practice of rehabilitation of physically active individuals.

4423. Research and Athletic Training 3(3-0)

The focus on this lecture course is to instruct the athletic training student in the role that research plays in the practice of athletic training. Topics include problem development, literature review, data analysis techniques and interpretations, institutional review boards, and communicating the results.

4801. Application of Athletic Training Techniques 1(0-3)

Prerequisites: ATRN 3901, 3913.

Capstone clinical practicum in athletic training.

4901. Practicum in Administration of Athletic Training Programs 1(0-3)

Prerequisites: ATRN 3901, 3913. Co-requisite: ATRN 4903.

Clinical practicum in the administration of an athletic training program.

4903. Administration of Athletic Training (formerly 3903) 3(2-3)

Prerequisites: ATRN 3901, 3913. Co-requisite: ATRN 4901.

Overview of administrative and finance principles applicable to the operation of athletic training programs.

(BAAS) APPLIED ARTS AND SCIENCES

3113. Internship in Public Administration 3(0-3)

Prerequisite: Junior standing.

Students will be assigned jobs that can be demonstrated to be an integral learning portion of their career development in approved employment situations. Students will be supervised by their employer and the Director of the B.A.A.S. program. Applications for internship require the approval of the B.A.A.S. Director. Application for permission to enroll in the internship must be received by the Director no later than three weeks prior to registration. The internship may be repeated once for additional credit up to a maximum of six semester hours of internship for the degree. B.A.A.S. students enrolled in the internship should keep a journal relating to the internship, noting the tasks undertaken and relating how they relate to employment and future career goals. From that journal, students should write an internship report of no less than five double spaced pages relating learning experience to career objectives. The report is due no later than one week before the end of the applicable term.

(BCIS) BUSINESS COMPUTER INFORMATION SYSTEMS**3113. Business Programming Language** (formerly 2113) 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, BUAD 2153 or equivalent, and MATH 1203 or MATH 1233.

An introduction to a programming language which has relevance to business applications. Includes language theory and programming logic as well as implementation. May be repeated if topic differs.

3153. Advanced Microcomputer Applications in Business 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, BUAD 2153 or equivalent, and MATH 1203 or 1233.

Discussion and applications of recent advances in hardware, software, and/or telecommunications in business. This course may be repeated for credit when topic content changes.

3203. Electronic Commerce 3 (3-0)

Prerequisite: Junior standing or above or consent of the chair.

This course will explore business uses of the tools and technologies needed for Electronic Commerce. Topics include business concepts, opportunities, challenges, and strategies that surround the emergence of electronic commerce. Problems related to the impact of electronic commerce such as social issues, risk, security, authentication, encryption, privacy, and methodologies will be discussed.

3303. Business Telecommunications 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and BUAD 3113.

Telecommunication applications and regulating environment as they apply to business. An introduction to the technical aspects of current telecommunications technology and the managerial aspects of telecommunications in business organizations.

3403. Desktop and Web Publishing 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and BUAD 2153 or equivalent.

This course explores popular software for creating various types of business publications and internet documents. A group project allows students to design newsletters, product information brochures, web pages, and other documents for local businesses.

4123. Database Applications in Business 3(3-0)

Prerequisites: Senior standing or consent of the chair, and BUAD 2153 or equivalent.

An examination of database management systems and their applications in business. Emphasis is placed on design, consideration of the end-user, and management of databases. There will be extensive hands-on use of a microcomputer-based database package.

4133. Business Systems Analysis 3(3-0)

Prerequisites: Senior standing or consent of the chair, and BUAD 3113.

Study of the analysis phase of the system development life cycle. Emphasis is placed on feasibility studies, requirement analysis, human factors, and preliminary design. Diagramming techniques and CASE tools, and team presentations will be studied and/or utilized.

4143. Business Systems Design and Implementation 3(3-0)

Prerequisites: Senior standing or consent of the chair, and grade of "C" or better in BCIS 4123 and 4133.

Study of the design and implementation phases of the system development life cycle. Emphasis is placed on detailed, physical design of a system, and its implementation in

a microcomputer environment. Students will work in a team environment to develop a prototype computer-based system for a client, either real or hypothetical.

4893. Internship in Business Computer Information Systems 3(3-0)

Prerequisites: Junior standing or above and consent of the chair and the dean.

Field experience in selected areas of information systems with local enterprises and agencies. May be repeated once. Must be approved with all paperwork completed prior to registration. Total hours granted for internships in all areas of business administration may not exceed six hours of credit.

(BIBL) BIBLICAL HISTORY AND LITERATURE

1133. Introduction to the Old Testament (TCCNS = PHIL 1316) 3(3-0)

A study of the history, literature, and teachings of the Old Testament.

1233. Introduction to the New Testament (TCCNS = PHIL 1317) 3(3-0)

A study of the history, literature, and teachings of the New Testament.

1333. Life and Teachings of Jesus 3(3-0)

A study of the life, teachings, and significance of Jesus of Nazareth as can be determined from the four Gospels and related historical and archaeological data.

(BIOL) BIOLOGY

1113. Introduction to Clinical Laboratory Science 3(2-2)

An introduction to medical technology, professional ethics and the major disciplines in clinical laboratory sciences. Students perform basic laboratory experiments and learn the correlation between test results and common disease states.

1134. Anatomy and Physiology I (TCCNS = BIOL 2401) 4(3-2)

Structure and function of the human body. Anatomical terminology, chemical and cellular bases of life, tissues, the integumentary, skeletal, muscular, and nervous systems, including sense organs. Concurrent laboratory participation with animal dissection required.

1144. General Zoology (TCCNS = BIOL 1413) 4(3-2)

Survey of the animal world emphasizing the morphology, life cycles, and distribution of major phyla. Dissection of representative animals.

1234. Anatomy and Physiology II (TCCNS = BIOL 2402) 4(3-2)

Prerequisite: BIOL 1134.

Structure and function of the endocrine, cardiovascular, lymphatic, immune, respiratory, digestive, urinary, and reproductive systems of humans. Concurrent laboratory participation with animal dissection required.

1544. General Botany (TCCNS = BIOL 1411) 4(3-2)

An introduction to the plant world including structure and physiology of flowering plants, survey of plant diversity and ecological roles of plants.

2333. Nutrition (formerly 1333) (TCCNS = BIOL 1322) 3(3-0)

Prerequisites: One year of biology.

(Same as KNES 2333, page 269)

3004. Microbiology 4(3-3)

Prerequisites: One year of biology and one year of chemistry.

Introduction to the study of medically important bacteria, protozoa, viruses, helminths, and fungi. May not be applied to biology major.

- 3024. Vertebrate Zoology** 4(3-2)
Prerequisites: BIOL 1144 and 1544.
Survey of the zoogeography, systematics, and natural history of fishes, amphibians, reptiles, birds, and mammals. Emphasis on Texas species. Field trips required.
- 3033. Field Zoology** 3(1-4)
Prerequisites: BIOL 1144, 1544, and consent of instructor.
Introduction to vertebrate field studies, involving data recording and collection/preservation of study specimens. Emphasis on non-game species of mammals. Field trips required.
- 3044. Bacteriology** 4(3-3)
Prerequisites: One year of biology, CHEM 1241, 1243, or equivalent.
Morphology, physiology, and classification of bacteria; their economic relation to man. Laboratory exercises emphasize culture techniques and identification of bacteria.
- 3054. Principles of Biology I** 4(3-3)
Prerequisites: BIOL 1144 and 1544; one year General Chemistry or concurrent enrollment.
A study of the cellular basis of life, principles of inheritance, and principles of evolution.
- 3064. Principles of Biology II** 4(3-3)
Prerequisite: BIOL 3054.
A survey of the diversity of living organisms; a consideration of structures and functions unique to plants; an overview of mammalian systems and processes; an examination of ecological interactions among living organisms.
- 3113. Biogeography** 3(3-0)
Prerequisites: BIOL 1144 and 1544.
Study of the biological and physical factors which influence the present and historical distribution patterns of plants and animals.
- 3133. Wildlife Management** 3(3-0)
Prerequisites: One year of biology.
Recognition, distribution, and importance of game birds, mammals, and fish of the United States. Principles of management of wildlife resources. The commercial freshwater fishery and fur industry. Non-game wildlife.
- 3144. Physiology** 4(3-3)
Prerequisites: BIOL 3054, 3064; CHEM 3001 and 3003; BIOL 3234 and 3333 recommended.
General principles of physiology including the functional analysis of the nervous, muscular, cardiovascular, endocrine, digestive, and respiratory systems.
- 3234. Comparative Anatomy of the Vertebrates** 4(3-3)
Prerequisites: One year of biology; BIOL 3064 recommended.
Organ systems of chordates considered in relation to each other with emphasis on mammalian groups. Dissection of representative animals.
- 3331. Genetics Laboratory** 1(0-2)
Prerequisite: Prior or concurrent enrollment in BIOL 3333.
Laboratory exercises illustrating basic principles of genetics using plant and animal model systems.
- 3333. Genetics** 3(3-0)
Prerequisites: One year of biology; BIOL 3054 recommended.
Fundamental principles of genetics and their application to living organisms.

- 3344. Developmental Biology** (formerly 3343) 4(3-3)
Prerequisites: BIOL 3054, 3064, and 3333.
Embryogenesis, including fertilization, embryonic patterning, and organogenesis, emphasizing molecular mechanisms. Laboratory overview of classical embryology, introduction of current techniques and survey of primary literature.
- 3434. Entomology** 4(2-4)
Prerequisites: One year of biology.
Principles of insect life. Classification, life histories, and economic relations.
- 3534. Systematic Botany** 4(2-4)
Prerequisite: BIOL 1544 or equivalent.
Identification and taxonomic classification of plants using local flora as examples. Survey of major plant families indigenous to North America.
- 3644. Invertebrate Zoology** (formerly 3643) 4(3-3)
Prerequisites: One year of biology.
A survey of the structure, function, systematics and habitats of the protist and invertebrate phyla.
- 3993. Cooperative Biology Education Practicum** 3(0-3)
This course is designed to provide students with opportunities to integrate the basic principles of biology obtained from biology courses to field applications or a research laboratory. The course provides professional experiences in biology prior to graduation, allowing students to have a better understanding of basic principles applications.
- 4001. Seminar in Biology** 1(1-0)
Prerequisite: Restricted to senior biology or general science majors.
Recent advances in the biological sciences.
- 4021. Immunology Laboratory** 1(0-3)
Prerequisite: Credit or concurrent enrollment in BIOL 4023.
Immunological and molecular techniques used for the diagnosis and identification of bacteria, parasites, and viruses in animals and humans.
- 4023. Immunology** 3(3-0)
Prerequisites: One year of biology; one year of chemistry; BIOL 3333 and either BIOL 4714 or CHEM 4243 recommended.
Fundamental principles of immunology to include cells and tissues of the immune system, immunoassays, humoral and cell-mediated immune responses, molecular biology of the immune system, immune regulation, and application to clinical diagnostic procedures.
- 4043. Human Genetics** 3(3-0)
Prerequisites: BIOL 3144, 3333; CHEM 3011, 3013.
Principles of genetics as applied to human beings. Special reference to causation of heritable disorders and to gene flow in populations.
- 4143. Evolution and Systematics** 3(3-0)
Prerequisites: BIOL 3054, 3064, and 3333.
Study of organic evolutionary processes, including mutations, genetic drift, patterns and rates of change, and how this knowledge is used to determine systematic relationships of taxa.
- 4231. Molecular Biology Laboratory** 1(0-3)
Prerequisite: Concurrent enrollment in BIOL 4233.
Laboratory experience in the practices of genetic engineering.

4233. Molecular Biology 3(3-0)

Prerequisites: BIOL 3333, CHEM 3011, 3013; CHEM 4243 recommended.

Structure and function of nucleic acids in the storage, transmission, and expression of genetic information. Proteins as the primary structural and catalytic agents of cellular and organismal biology. Prokaryotic, eukaryotic, and viral model systems. Principles of genetic engineering.

4443. Histology 3(2-2)

Prerequisites: One year of biology.

Cytology and histology of epithelium, connective tissue, muscular tissue, nerve tissue, and organology.

4463. Plant Anatomy 3(1-4)

Prerequisite: BIOL 1544.

Examination of cells and tissues that constitute the plant body. Primary tissues and their functions in the root, stem and leaf; secondary tissues: vascular cambium, cork cambium, wood; reproductive structures: structure and function of the flower, fruit and seed; sporogenesis and gametogenesis; embryogenesis; secretory structures, ecological plant anatomy.

4523. Animal Parasitology 3(2-3)

Prerequisites: One year of biology.

Host-parasite relationships in representative groups, with emphasis on taxonomic, ecological, and preventive aspects.

4564. Plant Physiology 4(3-3)

Prerequisites: BIOL 3054, 3064, and CHEM 3003.

Study of physiological processes in higher plants. Dormancy, germination; mechanisms of transport in the phloem and xylem; mineral nutrition; hormones; role of light on growth and development; phytochrome and cryptochrome, tropic responses; photosynthesis: C3, C4, CAM and photorespiration; nitrogen fixation; flowering: photoperiodism and vernalization; senescence and abscission.

4684. Ecology 4(3-3)

Prerequisites: One year of biology, MATH 1233; BIOL 3534 recommended.

Distribution of organisms in the world: biomes; the physical environment; energy flow in ecosystems; population structure and dynamics; growth, distribution, dispersal patterns; species interactions; community structure: species abundance and diversity, theories of diversity; community changes: succession.

4693. Tropical Rainforest Ecology 3 semester hours

An introduction to the neotropical rainforest which includes topics on biodiversity of plants and animals, climate, deforestation and conservation, ecotourism, and other pertinent topics. An organized 10-14 day field trip to a neotropical rainforest is required.

4714. Cell Biology 4(3-3)

Prerequisites: BIOL 3054, 3064, and 3333.

Organization, structure, function, and evolution of eukaryotic cells; intermediary metabolism and biosynthesis: respiration and photosynthesis; membrane composition, function and synthesis; cytoskeleton structure and function; signal transduction; regulation of the cell cycle; programmed cell death; gene function and regulation of information flow; growth, and reproduction.

4911, 4912, 4913. Special Problems 1-3 semester hours

Prerequisites: A major in the program of biological sciences and consent of the college dean. (Also see prerequisites on page 91.)

Directed research and study in the field of the student's interest and preparation. A minimum of 45 laboratory hours per one semester hour credit.

(BUAD) BUSINESS ADMINISTRATION

1033. Business Environment and Public Policy (TCCNS = BUSI 1301) 3(3-0)

A general survey course emphasizing the interaction of business with the economic, governmental, social, ethical, and international environments. Introduction to the public policy process and issues with focus on ethical and moral considerations. Recommended for students having an interest in majoring or minoring in business.

2153. Microcomputer Applications (TCCNS = BCIS 1301) 3(3-0)

An introduction to common software programs for business and academic applications. Emphasis is on the use of electronic spreadsheets, preparing the student for subsequent business courses. Other topics include word processing and presentation software.

3103. MIS for Non-Business Majors 3(3-0)

Prerequisite: BAAS major or consent of instructor.

Introduction to management information systems and the importance of systems in achieving organizational goals. Includes an overview of hardware, software, databases, and other technology impacting management issues. May not be counted toward a major or minor within the College of Business Administration.

3113. Management Information Systems 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and BUAD 2153 or equivalent.

Introduction to management information systems and the importance of systems in achieving organizational goals. Includes topics such as systems concepts, time-sharing, telecommunications, distributed databases, and associated software and hardware.

3213. Business Statistics I 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, MATH 1203 or MATH 1233, and BUAD 2153 or equivalent.

Emphasizes the use of statistics in business decision making. Topics of study include probability distributions, sampling and estimation, and hypothesis testing of means.

3223. Business Communications 3(3-0)

Prerequisite: Junior standing or above or consent of the chair.

Study and applications of the concepts of inter- and intra-organizational communication — oral and written. Includes listening skills, letters, memos, proposals, resumes, giving instructions, chairing meetings, and interviews.

3233. Legal Environment of Business 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, POLS 1333, and POLS 1433.

An introduction to the procedures of the American legal system and how law operates in the business environment with international, economic, political, and social influences. Topics include legal and ethical responsibilities in organizations and society, legal process, alternative dispute resolution, legal and ethical decision making, international law, torts, contracts, and sales law. This course is beneficial for pre-law students.

3243. Commercial Law 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and BUAD 3233 or consent of the instructor.

Agency, real property, bankruptcy, and Uniform Commercial Code Article 2 (sales), Article 3 (commercial paper), Article 4 (banking), and Article 7 (documents of title). This course is beneficial for students taking the CPA exam, business majors, and pre-law students.

3423. Business Statistics II 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and BUAD 3213.

A continuation of BUAD 3213 as an intermediate course in business statistics. Topics of study include hypothesis testing of two variables, analysis of variance, an introduction to forecasting, time series analysis, multiple correlation, and regression analysis. Computer software is used throughout the course.

4763. International Business Decisions 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, MGMT 3013, and MKTG 3723.

An in-depth examination of problems, strategies, and techniques frequently encountered and utilized by global business managers in structuring, implementing, and monitoring international business activities. Focus will be both global and country-specific. Culture, marketing, legal, forms of organizations, joint ventures, trading blocks, and technology development are among the topics covered.

4873. Seminar in Business 3(3-0)

Prerequisites: Senior standing in Business Administration and consent of the dean.

Seminar discussions and projects dealing with topics in business administration. May be repeated for credit when topics vary.

4883. Problems in Economics and Business 3(3-0)

Prerequisites: Junior standing or above and consent of the chair.

Research in a specific area selected by the student in conjunction with a member of the school faculty. This course is open only to students of high scholastic standing. Enrollment must be approved prior to registration.

4991. Current Events in Business 1(1-0)

Prerequisites: Junior standing or above or consent of the chair, and consent of the instructor.

Seminar discussions and projects dealing with current events in one or more designated business disciplines. May be repeated once for credit when topics vary.

4993. International Issues in Business 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and consent of the instructor.

Examination of government regulation and culture in the European Union as it affects the different disciplines of business.

(CHEM) CHEMISTRY

1101. Introductory Chemistry Laboratory (TCCNS = CHEM 1105) 1(0-2)

Prerequisite: Credit or concurrent enrollment in CHEM 1103.

Laboratory experiments and demonstrations to accompany CHEM 1103.

1103. Introductory Chemistry (Essentials of Chemistry) 3(3-0)
(TCCNS = CHEM 1305)

Prerequisite: MATH 1003.

Recommended for students majoring in business, criminal justice, education, liberal arts, and allied health science programs. An introduction to chemical principles and concepts, environmental chemistry, nuclear chemistry, nutritional chemistry, and other topics.

- 1141. General Chemistry Laboratory** (TCCNS = CHEM 1111) 1(1-3)
Prerequisite: Concurrent enrollment in CHEM 1143.
Basic laboratory practice in chemistry.
- 1143. General Chemistry** (TCCNS = CHEM 1311) 3(3-0)
Prerequisite: Credit or concurrent enrollment in MATH 1233 or 1533.
Atomic and molecular structure, periodic law, states of matter, reactions.
- 1203. Introductory Chemistry** (TCCNS = CHEM 1307) 3(3-0)
Prerequisites: CHEM 1103, 1143, or high school chemistry within 4 years.
Recommended for students in nursing and the allied health sciences. A continuation of CHEM 1103, essentials of organic and biochemistry.
- 1241. General Chemistry Laboratory** (TCCNS = CHEM 1112) 1(1-3)
Prerequisites: CHEM 1141 and concurrent enrollment in CHEM 1243.
Qualitative and quantitative analysis.
- 1243. General Chemistry** (TCCNS = CHEM 1312) 3(3-0)
Prerequisites: CHEM 1143 and credit or concurrent enrollment in MATH 1233 or 1533.
Solutions, chemical thermodynamics, equilibrium, electrochemistry, and kinetics.
- 3001. Organic Chemistry Laboratory** 1(1-3)
Prerequisites: CHEM 1241 and concurrent enrollment in CHEM 3003.
Laboratory experiments to accompany CHEM 3003. Separation and purification techniques and quantitative methods in organic chemistry. An introduction to organic synthesis.
- 3003. Organic Chemistry** 3(3-0)
Prerequisite: CHEM 1243 with a grade of C or better.
A comprehensive study of the physical and chemical characteristics of compounds of carbon. Reaction mechanisms, synthesis, and reactions of hydrocarbons, alkyl halides, and alcohols.
- 3011. Organic Chemistry Laboratory** 1(1-3)
Prerequisites: CHEM 3001 and concurrent enrollment in CHEM 3013.
Laboratory experiments to accompany CHEM 3013. Methods of organic synthesis, qualitative analysis, and spectroscopic techniques.
- 3013. Organic Chemistry** 3(3-0)
Prerequisite: CHEM 3003 with a grade of C or better recommended.
A continuation of CHEM 3003. Includes properties, synthesis, and reactions of aldehydes, ketones amines, carboxylic acids, and derivatives, multi-functional, and aryl compounds. Spectroscopy of organic compounds.
- 3305. Analytical Chemistry I** 5(3-4)
Prerequisites: CHEM 1241 and 1243.
Theory and laboratory applications of methods of quantitative analysis. Topics include statistical analysis of data, gravimetric analysis, volumetric analysis, potentiometry, basic electrochemistry, spectroscopy, and analytical separations.
- 3405. Analytical Chemistry II** 5(3-4)
Prerequisite: CHEM 3305.
Theory and laboratory applications of modern instrumental methods of analysis. Topics include signal processing, advanced spectroscopy, mass spectrometry, electroanalysis, chromatography, and electrophoresis.

- 3504. Introductory Environmental Chemistry** 4(3-3)
Prerequisites: CHEM 1241 and 1243.
A systematic study of the important chemical principles applicable to environmental systems, including considerations of the sources, detection, treatment and prevention of air, water, and soil pollution.
- 3603. Physical Chemistry/Thermodynamics** 3(3-0)
Prerequisites: CHEM 1241, 1243; MATH 1734; PHYS 1624 and 2644 or consent of instructor.
Classical and statistical thermodynamics, kinetic molecular theory and chemical kinetics.
- 3705. Physical Chemistry** 5(3-4)
Prerequisites: CHEM 3405, 3603, and credit or concurrent enrollment in MATH 2534.
Atomic and molecular structure, experimental physical methods, electrochemistry, theory of reaction rates, and physical chemistry laboratory practice.
- 4001. Seminar** 1 semester hour
Prerequisites: Six advanced hours in chemistry and four seminar attendance credits. (See your chemistry adviser for details.)
Participation in seminar presentations and discussions.
- 4133. Advanced Organic Chemistry** 3(3-0)
Prerequisite: CHEM 3013.
Reaction mechanisms, structure elucidation, stereoisomerism, and conformational analysis.
- 4233. Molecular Biology** 3(3-0)
(Same as BIOL 4233, page 231.)
- 4242. Biochemistry Laboratory** 2(0-4)
Prerequisites: CHEM 3011 and credit or concurrent enrollment in CHEM 4243.
Experimental methods in biochemistry, including quantitative and qualitative techniques, enzyme kinetics, and separation methods for biomolecules.
- 4243. Biochemistry** 3(3-0)
Prerequisite: CHEM 3013.
The structures and properties of biomolecules, enzyme kinetics and mechanism of action, and metabolic energy-yielding pathways.
- 4253. Biochemistry** 3(3-0)
Prerequisite: CHEM 4243.
Oxidative phosphorylation, intermediary metabolism, membrane transport, hormone action, replication, transcription, and translation of genetic information.
- 4305. Advanced Inorganic Chemistry** 5(3-4)
Prerequisites: CHEM 3405 and 3705 (may be concurrent).
A systematic study of the basic principles applicable to inorganic chemistry and the chemistry of selected main group elements, transition metal complexes, organometallic compounds, bioinorganic systems, and inorganic chemistry laboratory practice.
- 4353. Quantum Physics** 3(3-0)
(Same as PHYS 4353, page 295.)
- 4505. Environmental Chemical Technology** 5(3-4)
Prerequisites: CHEM 3305 and 3504.

A survey of chemical principles applicable to the properties and toxicology of hazardous wastes, and prevention and pretreatment strategies for pollution sources, and instruction in advanced techniques in environmental chemical analysis.

4900. Research Orientation

Prerequisites: Consent of the instructor and department chair.

An introduction to research topics and methods.

4911, 4922, 4933. Special Problems in Chemistry 1-3 semester hours

Prerequisites: CHEM 4900; consent of instructor and department chair. See problem course restrictions in general information section of catalog.

Directed chemical research in problems of interest to the student and instructor. Minimum of 54 hours of laboratory work per semester hour credit. Requires a formal written research report. May not be counted toward the minor in chemistry.

4941, 4942, 4943. Chemical Topics 1-3 semester hours

Prerequisites: Consent of the instructor and junior standing.

Advanced topics in chemistry selected according to interests and needs of students.

(CMPS) COMPUTER SCIENCE

1023. Introduction to Computing (TCCNS = COSC 1300) 3(2-2)

Study of topics related to the use of computers, including history of computing, hardware, software, socioeconomic impact, data communications, the Internet, and World Wide Web. Hands-on laboratory introduces system operation and application of micro-computer-based software packages and World Wide Web. (May not count toward a CMPS major or minor.)

1043. Computer Science I 3(3-0)

Prerequisite: Concurrent enrollment in MATH 1233 or 1533 or MATH 1203 (for Business majors).

Introduction to methods of problem solving and algorithm development. A high-level programming language is taught with an emphasis on program design, coding, debugging, testing, and documentation. Discussion of ethical, social, and legal issues related to computing.

1053. Computer Science II 3(3-0)

Prerequisites: Minimum grades of C in CMPS 1043 and MATH 1233 or 1533 or MATH 1203.

A continuation of the development of a disciplined approach to the design, coding, debugging, and testing of programs. Introduction to algorithmic analysis, recursion, data structures, and sorting mechanisms using a high-level language.

2084. Introduction to Computer Architecture (formerly 2083) 4(3-2)

Prerequisite: Minimum grade of C in CMPS 1043.

An introduction to the components, functions, and logical relationships present in current scalar computers, including the central processing unit, different levels of memory, control signals, bus systems, data channels, and input/output devices. Also covered are instruction sets and assembly language programming.

2133. Data Structures 3(3-0)

Prerequisites: Minimum grades of C in CMPS 1053 and MATH 2333.

Object-oriented approach to design and analysis of algorithms, particularly those related to the processing of data structures, including trees, graphs, and linked lists. Other techniques include searching, sorting, and merging. Discussion of legal, social, and ethical issues.

3023. Logic Design 3(3-0)

Prerequisite: Minimum grade of C in CMPS 2084.

Study of topics related to the design of modern microprocessors, including Boolean algebra, logic gates, design simplification techniques, memory design, programmable control units, and use of hardware description languages.

3233. Theory of Computation 3(3-0)

Prerequisites: Minimum grades of C in CMPS 2133 and MATH 2333.

Study of the fundamental mathematical properties of hardware, software, and their applications. Emphasis is on the capabilities and limitation of computers, including finite automata, push-down automata, and Turing machines.

3493. Internet Programming 3(3-0)

Prerequisite: Minimum grade of C in CMPS 2133.

This class introduces the technologies and issues involved with programming Internet and Intranet applications. It involves the study of several Internet languages such as Dynamic HTML and Javascript, file format types, basic database access, SQL, and common tasks such as representing, storing, compressing, manipulating, interacting with, and presenting text, drawings, still images, animations, audio and video in web pages.

3533. Numerical Analysis 3(3-0)

Prerequisites: CMPS 1043 and MATH 1734.

Use of numerical methods to solve problems including but not limited to the following: function approximation solutions of equations, numerical calculus, and differential equations. Includes analysis and the design and writing of programs. (May not be counted toward a major in computer science for the BS degree. MATH 3533 and CMPS 3533 cannot both be taken for credit.)

4103. Introduction to Operating Systems 3(3-0)

Prerequisites: Minimum grades of C in CMPS 2084 and CMPS 2133.

An introduction to operating systems for contemporary multitasking, single processor computers. Topics include processes, process management and scheduling, inter-process synchronization and communication, memory management, and file management. Selected theory and concepts are supplemented with an examination of their implementation in contemporary operating systems. Discussion of legal, social, and ethical issues.

4113. Software Engineering 3(3-0)

Prerequisites: CMPS 2133 and 6 advanced hours in computer science.

Application of structured methodology and formal methods to the design, implementation, and documentation of computer software systems. Includes an introduction to the management of software development teams, requirements analysis, testing procedures, and user interface design. Discussion of legal, social, and ethical issues.

4123. Data Base Management Systems 3(3-0)

Prerequisite: CMPS 2133.

A study of concepts, characteristics, design, and implementation of database management systems. Hierarchical, network, and relational approaches to DBMS designs are examined. Advanced models such as object-oriented databases and image retrieval systems are also discussed. Query languages are presented.

4143. Topics in Contemporary Programming Languages 3(3-0)

Prerequisites: CMPS 2084 and 2133.

A study of the syntax, semantics, and implementation of a contemporary programming language with emphasis on program development, program structuring, and the

program development environment of the language. Assignments focus on representative applications of the language. May be repeated for credit with approval of the department chair.

4213. Introduction to Computer Graphics 3(3-0)

Prerequisites: CMPS 2133 and MATH 1634.

A study of computer graphics hardware and software with an emphasis on interactive real-time rendering. Topics include but are not limited to mathematics of graphics, 2D and 3D transformations, 3D viewing, polygonal meshes, hidden line and surface algorithms, collision detection, and surface shading and texturing.

4223. Introduction to Simulation 3(3-0)

Prerequisites: CMPS 2133 and STAT 3573.

Introduction to techniques and special purpose languages for the simulation of discrete systems, with an emphasis on queuing systems. Methods for the statistical analysis of the results is included.

4233. Artificial Intelligence 3(3-0)

Prerequisite: CMPS 2133.

Topics to be studied include but are not limited to the following: classical problems in artificial intelligence, knowledge representation, state space search techniques, image processing, neural networks, pattern matching, machine reasoning, and problem solving using LISP.

4313. Interactive Multimedia Systems 3(3-0)

Prerequisite: CMPS 4213.

Introduction to design and programming of interactive multimedia applications. Emphasis is on event driven, object-oriented programming in the design and creation of applications utilizing sound, video, 3D graphics, and computer animation. Utilization of contemporary graphics API's in development of 3D virtual environments frequently encountered in modern, interactive games.

4433. Computer Communications and Networks 3(3-0)

Prerequisites: CMPS 2084 and CMPS 2133.

A study of hardware and software used in data communication systems; the seven OSI network layers are discussed and compared to other implementations. Consideration is given to communication media, protocols, packet switching networks, local- and wide-area networks, high speed networks, the Internet, and the World Wide Web. Applications such as file transfer, interactive access, web browsers, and server mechanisms are also presented.

4453. Computer Architecture 3(3-0)

Prerequisite: CMPS 2084.

A study of the organization and interconnection of components of computer systems. Emphasis is given to the study of the instruction set and performance analysis of different computer architectures. Also included in the study are microprogramming, pipeline, overlap processing, superscalar, parallel, and massively parallel architectures. Current trends in computer design are also discussed.

4883. Topics in Computer Science 3(3-0)

Prerequisite: Consent of the instructor.

Selected topics from advanced computer science. May be repeated for credit with consent of chair.

4991. Seminar in Social Responsibility 1 semester hour

Prerequisite: Must be in last year prior to graduation.

A self-study in the ethical, legal, and social issues related to computing. Students research, prepare, and present a talk on a related issue.

4993. Special Problems

3 semester hours

Prerequisite: Consent of the chair.

Directed research in computer science.

(COUN) COUNSELING

2023. Human Development

3(3-0)

A study of the principles of normal child growth and development from conception through adolescence. Focus on physical, cognitive, social, moral, and emotional domains of development.

3143. Human Diversity

3(2-2)

A study of individual, family, and cultural community diversity. Field experience required.

4913. Seminar in Counseling

3(2-2)

Topic as announced. Major project and/or field study with group sharing and analysis.

(CRJU) CRIMINAL JUSTICE

1113. Introduction to Criminal Justice (TCCNS = CRIJ 1301)

3(3-0)

Studies the history, development, and philosophy of the criminal justice system. Introduces the agencies, theories and models involved in the administration of criminal justice.

2113. Introduction to Criminal Law

3(3-0)

Preparatory course covering the American criminal legal system. Guides the student in developing an understanding of the characteristics of criminal law through the study of the historical development, major definitions, general concepts, and classifications of crimes and penalties. Texas statutes and codes are used as illustrations.

2123. Police-Community Relations

3(3-0)

Prerequisite: CRJU 1113.

Intergroup relations between the police and the community with emphasis upon the importance of each understanding the problems and perspectives of the other.

2213. Legal Aspects of Law Enforcement (TCCNS = CRIJ 2323)

3(3-0)

Prerequisite: CRJU 1113.

Substantive law relating to law enforcement with special attention on the laws of Texas. Emphasis on the application of statutes and cases to the enforcement of laws and liability of peace officers.

2223. Legal Aspects of Corrections

3(3-0)

Prerequisite: CRJU 1113.

Substantive law relating to corrections with special attention on the laws of Texas. Emphasis on application of statutes and cases to basic rights of convicted persons.

2233. Police Systems and Practice (TCCNS = CRIJ 2328)

3(3-0)

Prerequisite: CRJU 1113.

Study of the police professions, organization of law enforcement systems, the police role, police discretion and ethics, and current and future issues.

2243. Correctional Systems and Practices (TCCNS = CRIJ 2313)

3(3-0)

Prerequisite: CRJU 1113.

Study of corrections in the criminal justice system including institutional operations, alternatives to institutionalization, and treatment and rehabilitation.

2933. The Criminal Justice Judicial System (formerly 3933) 3(3-0)

Prerequisite: CRJU 1113.

Study of the American criminal judicial system. Designed to familiarize the student with the criminal judicial process and the basics of criminal law and procedure.

3103. Criminology 3(3-0)

Prerequisites: Nine hours of CRJU courses, Junior/Senior status.

Analysis of crime and delinquent behavior in the context of human deviance. Emphasis is placed on alternative explanations of the causes of criminal behavior, the degree of crime, community response to crime, and agencies of social control.

3113. Organized Crime 3(3-0)

Prerequisites: Nine hours of CRJU courses, Junior/Senior status.

Historical review and activities of national and international organized crime groups. Emphasis is placed on the nature and concept of organized crime, both traditional and nontraditional, as well as the rise of the modern street gang. Focus is on emerging strategies used in the fight against organized crime.

3123. Theories of Crime Analysis 3(3-0)

Prerequisite: Junior/Senior status.

Overview of the theory behind the crime analysis process covering both basic and advanced concepts. Outlines major issues that crime analysts and crime analysis units must face. Essential study includes setting up a crime analysis unit, crime data, statistics, major investigations and the linking of criminals and their relationship to each other.

3133. MS Office for Community Policing 3(3-0)

Prerequisite: Junior/Senior status.

Overview of the crime analysis process using an application software (Microsoft Office). Essentials of understanding the usefulness of the software and the components in the office package and how it is applicable to crime analysis. Collection and analysis of data is studied through the import/entry process into the software.

3213. Research Methods 3(3-0)

Prerequisite: Junior/Senior status.

Methods and techniques of research in the administration of justice and other behavioral sciences. Historical development of psychological and social research, techniques and problems. Quantitative and qualitative methods of data collection through practical application and research design development.

3313. Law and Society 3(3-0)

Prerequisite: Junior/Senior status.

Examination of the objectives, functions and limitations of criminal law and procedures. Analyzes issues such as substance abuse, victimology, domestic violence and civil liability for criminal justice practitioners.

3463. Community Corrections Supervision 3(3-0)

Prerequisites: CRJU 1113, 2223 or 2243, and Junior/Senior status.

Functions of probation, parole and specialized treatment of offenders within the community environment. Special attention is given to supervision issues, as well as methods and technologies utilized by community corrections practitioners.

3713. Ethical Issues in Criminal Justice 3(3-0)

Prerequisites: Nine hours of CRJU courses or consent of the instructor, Junior/Senior status.

A philosophical and applied knowledge of ethical and moral theories that impact the criminal justice system. Because the nature of criminal justice is control over others, it is imperative that the professional in this discipline understand how this control affects all citizens.

3733. Juvenile Delinquency 3(3-0)

Prerequisite: Junior/Senior status.

Nature, extent and causes of juvenile offenders and delinquency in the criminal justice system. Impact of gangs and violence among youth, delinquency prevention programs, and the institutional controls and correctional programs in the criminal justice system.

3913. Fundamentals of Criminal Investigation (formerly 2913) 3(3-0)

Prerequisite: Junior/Senior status.

Introduction to criminal investigation. Consideration of conduct at the crime scene, including the recognition, collection, and preservation of the various types of evidence. Fundamentals of the interview, interrogations, the use of informants, and surveillance techniques. Particular attention to the identification of the various elements of specific offenses.

4133. Public Administration 3(3-0)

Prerequisite: Junior/Senior status.

Structure, administration, major services, political processes, and decision-making functions of governmental agencies. Comparison of federal, state, and local entities and policy-making. Consideration of the relationship between politics, society, and economics within the administration of justice.

4213. Criminal Law 3(3-0)

Prerequisites: Nine hours of CRJU courses, Junior/Senior status.

Purpose and goals of criminal law and a study of the historic development of its basic concepts. Examines substantive criminal law with emphasis on Texas Criminal Law. Emphasis on analyzing recent court cases and interpretations, as well as a comparison of federal and model codes as they relate to the penal law of the State of Texas.

4223. Criminal Procedures 3(3-0)

Prerequisites: Nine hours of CRJU courses, Junior/Senior status.

Procedural laws of the State of Texas with particular attention to the provisions of the Code of Criminal Procedure. Analysis of constitutional and other limitations, court interpretation and recent Federal statutory provisions as they relate to criminal procedure.

4233. Constitutional Law for the Criminal Justice Practitioner 3(3-0)

Prerequisites: Nine hours of CRJU courses, Junior/Senior status.

Development and interpretation of select Amendments of the United States Constitution specific to the criminal justice practitioner and the administration of justice.

4253. Comparative Criminal Justice Systems 3(3-0)

Prerequisites: Nine hours of CRJU courses, Junior/Senior status.

Comparative study of criminal justice systems, with particular attention to their development, present structures and their influences on American criminal justice.

4263. Correctional Counseling 3(3-0)

Prerequisites: Nine hours of CRJU courses, Junior/Senior status.

Various treatment modalities as they may be applied by correctional practitioners in the course of carrying out the sentence of the court. Course includes strategies for inter-

viewing and dealing with difficult offenders. These theories are the foundation for the changes that are desired in the "correcting" of deviant criminal behaviors.

4333. Contemporary Correctional Issues 3(3-0)

Prerequisites: Nine hours of CRJU courses, Junior/Senior status.

Various concerns affecting efficient delivery of services involving convicted criminal offenders. Special emphasis is given to utilization of guest expert practitioners in the field to facilitate understanding of some of the difficult contemporary problems in the corrections profession.

4403. Profiling Criminal Behaviors 3(3-0)

Prerequisites: Nine hours of CRJU courses, Junior/Senior status.

Acquaint the student with the behavioral profile of persons who commit violent criminal acts. Concepts of victimology, crime scene indicators, staging, personation and serial crime are thoroughly discussed. The study of homicide, arson and sexual assault comprise the majority of the course, with additional attention given to domestic abuse, stalking, workplace/school violence, hostages and assassins.

4413. Administration of Justice 3(3-0)

Prerequisites: Nine hours of CRJU courses, Junior/Senior status.

Principles and procedures for the administration of criminal justice agencies. Introduction to modern management techniques and application of skills required for pragmatic criminal justice issues. Special emphasis includes labor relations, contract negotiations, budgeting, and other relative matters.

4773. Internship in Criminal Justice 3 semester hours

Prerequisites: CRJU major, Junior/Senior status.

Field experience in selected criminal justice agencies. May be repeated for credit up to six hours.

4901. Problems in Criminal Justice 1(1-0)

Prerequisites: CRJU major, minimum of 2.5 cumulative GPA with a 3.0 GPA in the major, Senior status.

Supervised reading in the field of criminal justice.

4902. Problems in Criminal Justice 2(2-0)

Prerequisites: CRJU major, minimum of 2.5 cumulative GPA with a 3.0 GPA in the major, Senior status.

Supervised reading in the field of criminal justice.

4903. Problems in Criminal Justice 3(3-0)

Prerequisites: CRJU major, minimum of 2.5 cumulative GPA with a 3.0 GPA in the major, Senior status.

Supervised reading in the field of criminal justice. May be repeated for credit when topics vary.

4913. Issues in Criminal Justice 3(3-0)

Prerequisites: Nine hours of CRJU courses, Junior/Senior status.

Description and analysis of crucial issues relating to selected structures and processes in the criminal justice system. Review and analysis of recent studies concerning criminal justice. May be repeated for credit when topics vary.

4923. Seminar in Criminal Justice 3(3-0)

Prerequisites: Nine hours of CRJU courses, Junior/Senior status.

Study and research of specific issues in the criminal justice system. May be repeated for credit when topics vary.

(DNHY) DENTAL HYGIENE**3002. Oral Radiology I** 2(2-0)

An in-depth introduction to dental radiography. Subject matter includes the history of dental x-rays; theoretical aspects of x-ray production, the x-ray machine; radiation protection; applications of dental x-ray film; normal radiographic anatomy; and patient education.

3003. Dental Hygiene II 3(3-0)

Prerequisites: DNHY 3113, 3114. Concurrent enrollment in DNHY 3005 (Clinical Practice II).

This course focuses on the fundamental knowledge base necessary to instruct dental patients in prevention of oral diseases with a study of professional and patient utilized plaque removal techniques and aids as they apply to various age groups of patients, use of fluorides, oral irrigation, care of hypersensitive teeth, and cleaning of dental appliances. Discussion of basic research methodology in regard to product evaluation. An examination of common physical characteristics of various age groups with emphasis on how these might affect treatment, as well as content of patient education. Includes discussion and analysis of the patient/healthcare provider relationship regarding ethical and legal responsibilities of each.

3005. Clinical Practice II 5(0-10)

Prerequisites: DNHY 3113, 3114. Concurrent enrollment in DNHY 3003.

Further development of skills acquired in prerequisite Clinical Practice course through treatment of clinical patients under close supervision of program faculty. Introduction and development of selective polishing procedures and practical application of professional methods utilized to clean dental appliances.

3013. Dental Materials 3(2-2)

Properties of the materials used in restorative dentistry and the influence of manipulation upon those properties as related to private practice.

3022. Histology 2(2-0)

Microscopic anatomy of the teeth and related oral structures. Subject matter includes an introduction to General Histology; the embryologic development of the face and oral cavity; development of teeth and their eruption; tooth enamel, dentin, cementum and pulp; periodontal ligament; salivary glands; dental caries; and the temporomandibular joint.

3023. Periodontology 3(3-0)

The study of the normal and pathological structures of the periodontium with emphasis on patient education by the hygienist for the prevention of periodontal disease and gingival problems. Includes information on various treatment modalities for management of periodontal disease.

3102. Oral Radiology II 2(1-2)

Prerequisite: DNHY 3002.

Hands on oral radiology; includes practical experience in both laboratory and clinical applications. Students gain experience in mounting and interpretation of dental radiographs. Also includes discussions of infection control in radiographic procedures, quality assurance in dental radiography, intra and extraoral film placement criteria, and principles of panoramic radiography.

3113. Dental Hygiene I 3(3-0)

Prerequisites: Admission procedures completed or consent of Dental Hygiene Department Chair. Concurrent enrollment in DNHY 3114 (Clinical Practice I).

Overall orientation to program, review of the history of the dental hygiene profession, discussion of institutional accreditation and individual licensing, and an introduction to the current dental health trends, issues, research, and legislation influencing the dental hygiene profession as well as the changing role of the dental hygienist. Emphasis is placed on a study of the prevention of disease transmission, content and rationale for comprehensive assessment of health, dental, and periodontal status; content and rationale for treatment plans and summaries; and instrumentation techniques and patient education based on the needs of the individual patient. This course must be taken in conjunction with Clinical Practice I to achieve basic cognitive, psychomotor, and affective skills in patient care procedures.

3114. Clinical Practice I 4(0-8)

Prerequisites: Admission procedures completed or consent of Dental Hygiene Department Chair. Concurrent enrollment in DNHY 3113.

Application of didactic instruction from the course Dental Hygiene I (DNHY 3113) with emphasis on application of the principles of infection control, acquiring skills to detect and remove calculus and other tooth deposits, and assessment and documentation of patients' medical, dental, and periodontal status. Laboratory practice on manikins and clinical experiences on selected patients (fellow classmates).

3123. Head, Neck, and Dental Anatomy 3(2-2)

Detailed anatomy of dental structures with special emphasis on human dentition in laboratory sessions through study and identification of extracted teeth. Identification of components of the temporomandibular joint as well as nomenclature, osteology, osteous landmarks, muscles, nerves, vascular supply and drainage, and glands of the head and neck region.

4003. Pathology 3(3-0)

Introduction to general pathology relating causative factors to clinical manifestations. Study of gross and microscopic lesions of the teeth and related oral tissues. Emphasis placed on degenerative changes, dental caries and its sequelae, periodontal disease, mucous membrane pathology, and neoplasia.

4013. Dental Health Education 3(3-0)

Prerequisites: DNHY 3003, 3005, 3023.

This course builds on previously learned knowledge by integrating it with the concepts of learning theory and applications, motivation, and the physical, mental, emotional, social, and moral development of various age groups. Emphasis is placed on the interrelationship of physical (general, as well as oral), psychological, social, and economic influences in compliance and noncompliance with preventive dental health programs, techniques, and aides. It explores the dental hygienist's role in the assessment of patient needs, planning treatment and patient education strategies, and then implementation and evaluation of these activities. Preparation of terminal and behavioral objectives, curriculum development, and preparation of lesson plans to be used in community projects in Dental Public Health.

4018. Clinical Practice III 8(0-16)

Prerequisites: DNHY 3114, 3005, 3102. Concurrent enrollment in DNHY 4023.

Clinical practice continued in the Gaines Dental Hygiene Clinic as well as extramural sites in the community. Further development of instrumentation and assessment skills acquired in prerequisite Clinical Practice courses on patients of a more difficult caliber. Introduction and development of techniques for pit and fissure sealant placement, ultrasonic scaling, periodontal scaling and root planning. Enhances proficiency in exposing, developing, and assessing dental radiographs taken on patients by providing clinical application of didactic and laboratory instruction from prerequisite course in oral radiology, under instructor supervision.

4022. Dental Public Health

2(2-0)

Prerequisite: DNHY 4013.

Theory, methodology, and application of the principles of public health in relating the significance of oral health to total health, with special emphasis on the role of the dental team in public health programs and the use of a basic systems approach to the development of any public health program. Provides an overview of how statistics are utilized in research and development of public programs. Specific topics include but are not limited to study design, central tendency and variability, probability, repeated analysis of variance, data association and prediction, and the evaluation of research studies.

4023. Dental Hygiene III

3(3-0)

Prerequisites: DNHY 3003, 3005, 3102. Concurrent enrollment in DNHY 4018 (Clinical Practice III).

A study of the rationale, indications and/or contraindications, and utilization techniques for various procedures including: pit and fissure sealants, ultrasonic scaling, periodontal scaling and root planning. The concepts of decision making are examined to assist students to develop responsibility and accountability for their actions. Recognition and management of life-threatening emergency situations are reviewed, with in-depth discussion of the etiological and/or precipitating factors, and the possible effects of these factors on the oral tissues. Emphasis is placed on the integration of this information with knowledge obtained in prerequisite courses to further develop skills in obtaining comprehensive patient medical histories. This course must be taken in conjunction with Clinical Practice III to achieve cognitive, psychomotor, and affective skills in patient care procedures covered.

4032. Dental Hygiene IV

2(2-0)

Prerequisites: DNHY 4023. Concurrent enrollment in DNHY 4038 (Clinical Practice IV).

A study of the rationale, indications and/or contraindications, and utilization techniques for air-powdered polishing units. CPR recertification and a general review of dental hygiene science, as needed in preparation for the National Board Examination. Preparation for the transition from the school setting to private practice dental offices and/or public health institutions with guest lecturers and discussions on new developments in patient care, resume writing and job interviewing, patient and personal insurance, and legal and ethical decisions facing health care providers. Other major concepts included are the political aspects of dental and dental hygiene care, decision making, responsibility, and accountability. The study of this content assists the students to develop responsibility for personal professional growth.

4038. Clinical Practice IV

8(0-16)

Prerequisites: DNHY 3114, 3005, 4018.

Clinical practice continued in the Gaines Dental Hygiene Clinic as well as extramural sites in the community. Practice in the use of more advanced treatment modalities. Further development of instrumentation and assessment skills with limited instructor assistance. The student will assume responsibility for all aspects of dental hygiene treatment for each of their clinical patients, with limited instructor input and supervision.

4103. Pharmacology

3(3-0)

Study and exercises concerning the general principles of pharmacology and of pharmaceuticals. Emphasis on pain relieving drugs, antibiotics, and the anesthetics used in dentistry. Includes nitrous oxide - oxygen conscious sedation and management of drug related emergencies.

(ECED) EARLY CHILDHOOD EDUCATION**3103. Introduction to Young Children** 3(3-0)

An introductory overview of the field including a study of the history of early childhood education. Emphasis on characteristics of young children and their needs, types of programs, and current issues.

3173. ESL Methods and Materials 3(3-0)

Curriculum, methods and materials for teaching English as a second language.

4123. Early Childhood Development: Language and Literacy 3(3-0)

Emphasis on how young children's language and literacy develop and the application of developmentally appropriate practice in planning for instruction.

4133. Early Childhood Curriculum 3(2-2)

Prerequisite: ECED 3103.

Planning the learning environment, developing learning activities, organizing the school day, and interpreting children's growth to parents. Emphasis on developmentally appropriate practice. Field experience required.

(ECON) ECONOMICS**1333. General Economics (TCCNS = ECON 1301)** 3(3-0)

A non-theoretical approach to describe economic involvement in relevant social and political matters. A subject matter to help fill the general need for improved economic reasoning. (Students majoring or minoring within the College of Business Administration should take ECON 2333 instead of this course.)

2333. Macroeconomic Principles (TCCNS = ECON 2301) 3(3-0)

Scope and methodology of economics. Development of principles useful for understanding aggregate economics and for choosing policy to resolve problems such as unemployment, inflation, recession, poverty, economic stagnation, and resource waste.

2433. Microeconomic Principles (TCCNS = ECON 2302) 3(3-0)

Prerequisite: MATH 1203 or MATH 1233.

Economic principles to describe behavior of business firms under conditions of competition or monopoly and to explain what determines product and resource price levels. An application of economic tools to select problems in monopoly, international trade, economic development, and taxation.

3323. Intermediate Macroeconomics 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, ECON 2333, and ECON 2433.

Macroeconomic analysis is studied to identify forces affecting the economy's performance and to present theory useful in policy development to achieve society's economic goals.

3333. Intermediate Microeconomics 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, ECON 2333, and ECON 2433.

An analysis of the overall functioning of the price system and of the modern business firm in a private enterprise, market-oriented economy. The relation of price, quantity, and profit under competition and imperfect competition.

3543. Introduction to Econometrics 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and BUAD 3213.

The application of statistical methods to economic and financial analysis; particular

attention is given to regression analysis including limited and dichotomous dependent variables, regression diagnostics, hypothesis testing, analysis of variance, and selected topics in time series forecasting.

3553. Economic Geography 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and 3 credit hours of economics.

A study of global economic activity from the geographic and natural resource perspectives. Location economics will be used to analyze global resource allocation and development, technological change, environmental risks, and societal impacts, as well as to develop public policy alternatives.

3703. Money, Banking, and Monetary Theory 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, ECON 2333, and ECON 2433.

Historical development, present organizational structure, and operational importance of the money and banking systems with introduction to monetary theory as a tool for choosing appropriate economic policy.

3713. History of Economic Thought 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and 3 credit hours of economics.

The significance, influence, and development of economic doctrines from ancient times to modern thought.

3743. Public Finance 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, ECON 2333, and ECON 2433.

A critical analysis of government acquisition and disbursement of revenues; detailed attention to the various taxing programs, the economic effects of governmental debt, and the significance of governmental expenditures for national defense, public works, social security benefits, resource development, and education.

4033. Quantitative Methods (same as MGMT 4033) 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and BUAD 3213 or equivalent.

Methods and application of operations research including topics such as linear programming, queuing, simulation, PERT, networks, transportation, and Markov analysis.

4633. Contemporary Economics Issues 3(3-0)

Prerequisites: Junior standing or above and consent of the chair.

Content will vary at different offerings. Topics will be selected as needed to keep students abreast of contemporary economic issues. Course may be repeated when topics vary.

4643. International Economics and Finance (same as FINC 4643) 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, ECON 2333, or ECON 2433.

International trade theory and practice, historical survey, balance of payments, and world economic problems.

4723. Comparative Economic Systems 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and 3 credit hours of economics.

Examination of economic characteristics and institutions related to economic freedom, growth, business enterprise, government planning, taxation expenditure, and transfer payments in the U.S., France, United Kingdom, West Germany, and Japan.

4743. Industrial Organization 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, ECON 2333, and ECON 2433.

The implications as to how the structure of business organization, the conduct of buyers and seller, and the involvement of government affect economic performance and welfare in the society.

4883. Problems in Economics 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, ECON 2333, and ECON 2433.

Research in a specific area selected by the student in conjunction with a member of the school faculty. This course is open to students of high scholastic standing. Enrollment must be approved prior to registration.

(EDBE) BILINGUAL EDUCATION**3213. Foundations of Bilingual Education** 3(3-0)

The historical, legal, legislative, and global contexts of bilingual education as well as models of bilingual education, including characteristics and goals of various types of bilingual education programs.

3313. Methods and Materials in Bilingual Education 3(3-0)

Curriculum, methods, and materials for bilingual education including instructional techniques, materials, evaluations, and classroom management.

4303. Second Language Acquisition 3(3-0)

Established principles and recent developments in second language acquisition and their educational applications.

4313. Concepts of Bilingualism and Biculturalism 3(3-0)

The impact of bilingualism and biculturalism on the learning environment.

4323. Reading & Language Arts in Bilingual Education 3(3-0)

Methods and materials for teaching the language arts and reading in Spanish.

4333. Assessment in Bilingual Education 3(3-0)

Methods of assessing oral and written language and reading to plan and implement literacy instruction in the bilingual classroom.

(EDUC) EDUCATION**1023. Computer Applications for Education** 3(2-2)

Experience organizing and manipulating data with computers, including hands-on experience with word processing, databases, spreadsheets, graphics, desktop publishing, and graphing. Focus on computer applications for classroom including hardware and software selection, computer environments, telecommunications, and ethics.

2013. School and Society 3(2-2)

An introduction to the teaching profession and the role of the school in a democratic society with an emphasis on educational equity for all students. Field experiences in diverse communities required.

3153. Educational Psychology 3(2-2)

Concepts of learning theory and applications, motivation, and measurement and evaluation. Field experience arranged through the instructor.

3163. Classroom Management 3(2-2)

The management of the classroom to optimize student learning. The development of management skills such as active listening, reality therapy, and conflict resolution.

4106. Planning and Assessment 6(4-4)

Prerequisites: EDUC 3153, MATH 2033, 2043.

Assessment and models of instructional planning, emphasis on learning with technology and the models of instruction. Field experience required.

4163. Student Teaching in Elementary School 3 semester hours

Prerequisites: Senior standing and approval of the dean.

Used when a student pursues elementary certification with an endorsement. Teaching under supervision in a public elementary school; meets full day for six weeks, including orientation; orientation and supervision by college instructor.

4166. Student Teaching in Elementary School 6 semester hours

Prerequisites: Senior standing and approval of the dean.

Teaching under supervision in a public elementary school; meets full day for twelve weeks, including orientation; orientation and supervision by college instructor.

4173. Student Teaching, Elementary All-Level 3 semester hours

Prerequisites: Senior standing and approval of the dean.

Teaching art, music, or physical education under supervision in a public elementary school; meets full day for six weeks, including orientation; orientation and supervision by college instructor.

4176. Internship 6 semester hours

Prerequisites: Senior standing, a minimum of five years experience as a teacher's aide, and approval of the dean.

Teaching under supervision in a public school; meets full day for twelve weeks, including orientation; orientation and supervision by college instructor.

4183. Student Teaching in Early Childhood and Kindergarten 3 semester hours

Prerequisites: Completion of 6 hours of early childhood course work, senior standing, and approval of the dean.

Student teaching for early childhood and kindergarten endorsement; meets full day for six weeks.

4243. Internship I 3(0-6)

Prerequisites: A bachelor's degree, a Texas Probationary Teaching Certificate, and approval of the dean.

Teacher of record with a mentor in a public school; meets full day for a semester; includes supervision by a college instructor.

4253. Internship II 3(0-6)

Prerequisite: EDUC 4243.

Teacher of record with a mentor in a public school; meets full day for a semester; includes supervision by a college instructor.

4466. Student Teaching in the Secondary School 6 semester hours

Prerequisites: Senior standing and approval of the dean.

Teaching under supervision in a public secondary school; meets full day for twelve weeks, including orientation; orientation and supervision by college instructor.

4473. Student Teaching, Secondary All-Level 3 semester hours

Prerequisites: Senior standing and approval of the dean.

Used only when all-level students desire secondary certification in a minor; teaching

under supervision in a public secondary school; meets full day for six weeks, including orientation; orientation and supervision by college instructor.

4903. Problem Course

3 semester hours

Prerequisites: Senior standing and approval of dean.

Designed for advanced students to work in appropriate areas not otherwise available. May be repeated for credit.

4913. Seminar in Education

3(2-2)

Topic as announced. Major project and/or field study with group sharing and analysis.

(ENDR) ENGINEERING DRAWING

1133. Engineering Graphics

3(2-4)

Prerequisite: MATH 1003 or satisfactory score on the THEA (formerly TASP) test or placement exam.

Essentials of drafting and blueprint reading: orthographic projections, sectional views, pictorial drawing, geometric and dimensional tolerancing, finishing symbols. Introduction to sketching, computer-aided-drafting, and technical graphs.

2134. Computer Aided Drafting

4(2-4)

Prerequisite: ENDR 1133.

Introduction to hardware, software, and nomenclature used in computer aided drafting. Instruction in CAD operations and commands including applications and hands-on use.

(ENGL) ENGLISH

1003. Introduction to College Composition

3(3-0)

The process and practice of essay writing. Emphasis on correct word usage, spelling, punctuation, sentence structure, paragraph writing, and the whole essay.

Required of those who have failed the writing section of the THEA (formerly TASP) test, MSU Placement Test, or other approved state alternative test.

1013. Introduction to College Reading

3(3-0)

The study and practice of reading comprehension through structure, meaning, and evaluation. Analysis of sentences, paragraphs, and whole pieces of writing. Attention given to making inferences, drawing conclusions, building vocabulary.

Required of those who have failed the reading section of the THEA (formerly TASP) test, MSU Placement Test, or other approved state alternative test.

1023. Advanced Oral Skills for International Students

3(3-0)

This course is designed to assist international students in the development of fluency and accuracy in spoken English. The course provides instruction and practice in listening comprehension, pronunciation, stress, intonation, and conversation at the academic level in North American English.

1033. Advanced Grammar for International Students

3(3-0)

This course is designed to assist international students in the development of the English writing skills and fluency needed to be successful in academic subjects at the university level. The course includes a comprehensive look at sentence-level grammatical units.

1113. Rhetoric and Composition (TCCNS = ENGL 1301)

3(3-0)

Prerequisites: Demonstrated readiness for college-level reading and writing. Reading readiness can be demonstrated either by passing the reading section of THEA (formerly TASP), or of an approved alternative test, or being exempt from the reading section

of THEA on the basis of other examination scores. Reading readiness can also be demonstrated by earning a grade of C or better in ENGL 1013, Introduction to College Reading. Writing readiness can be demonstrated either by passing the writing section of THEA, or of an approved alternative test, or being exempt from the writing section of THEA on the basis of other examination scores. Writing readiness can also be demonstrated by earning a grade of C or better in ENGL 1003, Introduction to College Composition. Students who are THEA exempt by military service or associate's degree, or by the former exemptions of grandfathering or high school grade point average, may be required to demonstrate readiness by passing the reading and writing sections of the MSU Placement Test, unless other test scores and/or transfer courses provide such proof.

Training in skills involved in the writing process through the composition of short essays and the reading of prose selections. At least one essay—including all steps in the composition process—will involve instruction and practice in computer-assisted writing and editing.

1123. Rhetoric and Composition (TCCNS = ENGL 1302) 3(3-0)

Prerequisite: English 1113.

Continued training in skills involved in the writing process through composition and reading with the addition of particular skills needed for thoughtful research, including selection, analysis, integration, and documentation of both print and electronic sources. Preparation of a research paper of moderate length demonstrating these skills.

2113. Composition Skills 3(3-0)

Prerequisites: English 1123 and completion of 60 semester hours.

Skill in clear and forceful composition and in standard usage is the primary objective of the course. The course is required of those who have failed the English usage examination. May not be counted toward an English major or minor, or toward English as a first or second teaching field or teaching emphasis.

2413. World Literature (TCCNS = ENGL 2332) 3(3-0)

Prerequisite: English 1123.

A study of the masterpieces of Western world literature from Homer through the Renaissance.

2423. World Literature (TCCNS = ENGL 2333) 3(3-0)

Prerequisite: English 1123.

A study of the masterpieces of Western world literature from the Enlightenment to the present.

2613. Survey of American Literature (TCCNS = ENGL 2327) 3(3-0)

Prerequisite: English 1123.

Survey of American literature with emphasis upon historical background as well as upon important writers from the beginnings through the rise of realism.

2623. Survey of American Literature (TCCNS = ENGL 2328) 3(3-0)

Prerequisite: English 1123.

Survey of American literature with emphasis upon historical background as well as important writers from realism to the present.

2723. Selected Studies in Literature 3(3-0)

Prerequisite: English 1123.

Concentrated study of selected authors, genres, or themes. May be repeated for credit with changed content.

2813. Survey of English Literature (TCCNS = ENGL 2322) 3(3-0)

Prerequisite: English 1123.

A survey of English literature from its seventh century beginnings through the neo-classical era. Emphasis is on the works of principal authors as they reflect literary and historical backgrounds.

2823. Survey of English Literature (TCCNS = ENGL 2323) 3(3-0)

Prerequisite: English 1123.

A survey of English literature of the Romantic, Victorian, and Modern periods. Emphasis is on the works of principal authors as they reflect literary and historical backgrounds.

3003. Folklore 3(3-0)

Prerequisite: English 1123.

An examination of the development of folklore as an academic discipline and of the uses made of folklore in a variety of cultures.

3103. Creative Writing 3(3-0)

Prerequisites: Six hours of English beyond 1123 or consent of chair.

Emphasis on the writing of fiction and poetry, the techniques and concerns of each. Ordinarily only one genre is dealt with in any given semester. May be repeated for credit with consent of instructor and chair.

3203. Technical Writing 3(3-0)

Prerequisite: English 1123.

The purposes and practice of expository writing in the professions, with particular emphasis on writing related to each student's major. Topics include audience analysis, technical editing, and elements of various types of technical reports. Each student will complete one major report as well as numerous shorter letters and reports.

3253. Dramatic Literature 3(3-0)

Prerequisite: English 1123.

A survey of major dramatic works in world literature.

3273. Poetry 3(3-0)

Prerequisite: English 1123.

Reading and analysis of selected poetry.

3293. Short Story 3(3-0)

Prerequisite: English 1123.

Reading and analysis of selected short stories.

3303. Tragedy 3(3-0)

Prerequisite: English 1123.

A study of the tragic view of man in literature from the classical Greeks to the present, including philosophical background.

3313. Comedy 3(3-0)

Prerequisite: English 1123.

A study of the comic vision of man in literature from the classical Greeks to the present, including philosophical background.

3333. Satire 3(3-0)

Prerequisite: English 1123.

Theory of satire and study of its application in representative literary works.

3343. The Novel 3(3-0)

Prerequisite: English 1123.

Reading and analysis of selected novels.

3503. Advanced Survey of Literature 3(3-0)

Prerequisites: Six hours of English beyond 1123 or consent of chair.

Instruction and practice in the written analysis of representative works from Western civilization with an emphasis on the major genres, especially poetry.

3513. Advanced Grammar 3(3-0)

Prerequisites: Six hours of English beyond 1123 or consent of chair.

Discussion and practice of techniques for the grammatical analysis of English sentence structures.

3523. Advanced Composition 3(3-0)

Prerequisite: English 1123.

For those who want to improve their writing skills beyond the basic composition courses. Various forms of exposition will include articles, essays, reviews, abstracts, summaries, and investigative writing. Attention given to structure, diction, and sentence style. For students preparing for teaching, professional work, graduate study, or general communication. May be repeated for credit with consent of instructor and chair.

3533. The Theory of Composition 3(3-0)

Prerequisites: Six hours of English beyond 1123 or consent of chair.

The theory and practice of composition, including process, rhetorical, and thematic models and their relation to individual and group writing.

3703. Themes in American Literature and Life 3(3-0)

Prerequisite: English 1123.

Thematic studies of the American literary, social, and cultural scene from the Puritans to the present.

3713. Contemporary American Literature and Life 3(3-0)

Prerequisite: English 1123.

Contemporary American culture as reflected in American literature, social backgrounds, and the arts.

3723. Selected Studies in Literature 3(3-0)

Prerequisite: English 1123.

Concentrated study of selected authors, genres, or themes. May be repeated for credit with changed content.

4513. History of the English Language 3(3-0)

Prerequisites: Six hours of English beyond 1123 or consent of chair.

The development of the sounds, forms, and structure of English and the implications of modern language problems.

4523. Introduction to Linguistics 3(3-0)

Prerequisites: Six hours of English beyond 1123 or consent of chair.

Methods and nature of language; the interlocking systems that make up language; methods of language analysis.

4533. Literary Criticism 3(3-0)

Prerequisites: Six hours of English beyond 1123 or consent of chair.

A survey of historical and contemporary methods of literary criticism and their application to selected texts. Recommended especially for those intending to teach literature or pursue graduate study in English.

COURSES IN AMERICAN LITERATURE

- 4623. American Romantic Movement** 3(3-0)
 Prerequisites: Six hours of English beyond 1123 or consent of chair.
 Emphasis on the poetry and prose of Emerson, Thoreau, Poe, Hawthorne, Melville, and Whitman.
- 4633. American Realism and Naturalism** 3(3-0)
 Prerequisites: Six hours of English beyond 1123 or consent of chair.
 The realistic and naturalistic approaches in prose fiction with emphasis on Twain, Howells, James, Dreiser, Crane, and Norris.
- 4643. Literature of the South and Southwest** 3(3-0)
 Prerequisites: Six hours of English beyond 1123 or consent of chair.
 The patterns of Southern and Southwestern themes and culture as exhibited in the works of representative writers.
- 4653. Modern American Literature** 3(3-0)
 Prerequisites: Six hours of English beyond 1123 or consent of chair.
 A survey of the major American prose writers and dramatists of the first part of the 20th century.

COURSES IN ENGLISH LITERATURE

- 4753. Old English Language and Literature** 3(3-0)
 Prerequisites: Six hours of English beyond 1123 or consent of chair.
 Language, literature, and world view of Anglo-Saxon England. Emphasis on *Beowulf* and the epic tradition.
- 4763. Middle English Language and Literature** 3(3-0)
 Prerequisites: Six hours of English beyond 1123 or consent of chair.
 Language, literature, and world view of medieval England. Emphasis on Chaucer.
- 4773. Shakespeare** 3(3-0)
 Prerequisites: Six hours of English beyond 1123 or consent of chair.
 Shakespeare's art and thought as seen in drama and poetry.
- 4783. English Renaissance Period** 3(3-0)
 Prerequisites: Six hours of English beyond 1123 or consent of chair.
 Renaissance thought and culture as revealed by the poetry, prose, and drama of the age.
- 4853. Eighteenth Century English Literature** 3(3-0)
 Prerequisites: Six hours of English beyond 1123 or consent of chair.
 The literature and intellectual currents of the period with emphasis on Pope, Swift, and Johnson.
- 4863. The English Romantic Period** 3(3-0)
 Prerequisites: Six hours of English beyond 1123 or consent of chair.
 The literature and intellectual currents of the period with emphasis on Blake, Wordsworth, Coleridge, Byron, Shelley, and Keats.
- 4873. The Victorian Period** 3(3-0)
 Prerequisites: Six hours of English beyond 1123 or consent of chair.
 The literature and major developments during the age of Tennyson, Browning, and Arnold.

4883. Twentieth Century English Literature 3(3-0)

Prerequisites: Six hours of English beyond 1123 or consent of chair.
Authors and trends in English literature of the 20th century.

4893. The English Novel 3(3-0)

Prerequisites: Six hours of English beyond 1123 or consent of chair.
Representative English novels with focus on the development of the genre, major themes, and techniques.

COURSES IN WORLD LITERATURE**4903. Selected Studies in Comparative Literature** 3(3-0)

Prerequisites: Six hours of English beyond 1123 or consent of chair.
Comparative study of selected authors or themes of different cultures or times as reflected in literature. May be repeated for credit with changed content.

4913. National Literatures in Translation 3(3-0)

Prerequisites: Six hours of English beyond 1123 or consent of chair.
Selected topics and works in translation from one or more major national literatures. May be repeated for credit with changed content.

4923. Modern Poetry 3(3-0)

Prerequisites: Six hours of English beyond 1123 or consent of chair.
Major voices in 20th century poetry with emphasis on Pound, Eliot, Williams, Frost, and Stevens.

4943. Modern World Literature 3(3-0)

Prerequisites: Six hours of English beyond 1123 or consent of chair.
A survey of the major authors and trends in world literature of the first part of the 20th century.

4953. Contemporary Literature 3(3-0)

Prerequisites: Six hours of English beyond 1123 or consent of chair.
A selective study of recent literature.

DIRECTED READING OR RESEARCH**4993. Directed Reading or Research** 3 semester hours

Prerequisites: Six hours of advanced English, senior standing, and consent of chair.
Intensive study for the advanced student of a selected topic or area in language or literature. May be repeated once for credit.

(ENSC) ENVIRONMENTAL SCIENCE**1114. Foundations of Environmental Science** 4(3-2)

A survey of topics in environmental science including natural resources, populations, ecosystems, biodiversity, and the impact of humans on the environment.

3103. Environmental Policies and Laws 3(3-0)

Prerequisites: Two science courses which include ENSC 1114; POLS 1333, 1433.
An analysis of contemporary problems in establishing policy, legislation, and regulation to protect the environment at all levels of government from the international to the local level.

4001. Environmental Science Seminar 1(1-0)

Prerequisite: Senior environmental science major or consent of the instructor.
This course will expose students to current research in environmental science

through participation in discussion, presentation of literature or research topics, and interaction with invited speakers.

4103. Internship 3(3-0)

Prerequisites: Seven hours ENSC and two years of biology, chemistry, or geology either combined or separately.

Field experience in selected agencies.

(FINC) FINANCE

1733. Personal Finance (TCCNS = BUSI 1307) 3(3-0)

A study from the consumer's point of view of individual and family financial problems with emphasis on budgeting, credit purchases, insurance, social security, taxes, investments, and sources of consumer information.

3353. Financial Institutions and Markets 3(3-0)

Prerequisite: Junior standing or above or consent of the chair.

The structure, internal operation, regulation, supervision, and interaction of financial institutions and markets within the United States.

3413. Real Estate 3(3-0)

Prerequisite: Junior standing or above or consent of the chair.

Real estate principles and practices and market forces affecting real estate finance, sales, and brokerage; urban land use, and location analysis; the impact of government policies upon the real estate industry.

3633. Financial Analysis (Same as ACCT 3633) 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, ACCT 2143, ACCT 2243, and MATH 1203 or MATH 1233.

The study of financial tools and techniques used in the analysis of financial statements and other information for the purpose of deriving reasonable judgments about past, present, and future conditions of the firm and the effectiveness of its management.

3733. Business Finance 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, ACCT 2143, ECON 2333, and MATH 1203 or MATH 1233.

An introduction to the principles of business financial management on both a national and international basis. Primary emphasis on time value of money, risk, and return, asset valuation, capital budgeting, cost of capital, short and long-term financing, and dividend policy.

3753. General Insurance 3(3-0)

Prerequisite: Junior standing or above or consent of the chair.

Designed to acquaint the student with the general principles of insurance and their application to the business situation; fundamentals of the major types of insurance, including life, casualty, surety, fire, and marine.

4643. International Economics and Finance (same as ECON 4643) 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, ECON 2333, or ECON 2433.

International trade theory and practice, historical survey, balance of payments, and world economic problems.

4653. Financial Management 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, BUAD 3423, and FINC 3733.

The financial management of the corporation with emphasis on the development of

analytical and decision-making techniques. Topics include financial planning, capital budgeting, evaluation of alternative sources of short-term, intermediate and long-term funds and determination of the best combination of these sources, and the financing of growth and development.

4733. Investments 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, BUAD 3213, and FINC 3733.

Study of various investment markets with special emphasis on corporate and government securities; the effect of investment control by the federal government evaluated from viewpoint of the public and the investor.

4833. Security Analysis and Portfolio Management 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and FINC 3733 or equivalent.

A study of the theory of portfolio management including an examination of investment alternatives, security valuation, investment timing, diversification, and risk reduction.

4893. Internship in Finance 3(3-0)

Prerequisites: Junior standing or above and consent of the chair and the dean.

Field experience in finance with local or regional firms. Provides significant finance work experience involving training and supervision by an employer. The maintenance of a weekly log, a written report, and an employer evaluation is required. May be repeated once. Must be approved with all paperwork completed prior to registration. Total hours granted for internships in all areas of business may not exceed six hours of credit.

(FREN) FRENCH

1134. Elementary French (TCCNS = FREN 1411) 4(4-0)

For students who have had no previous instruction in the language or have had one year of high school French. Emphasis is placed on patterns of French pronunciation and grammar as well as the acquisition of basic reading, writing, and conversational skills. One hour of laboratory practice per week is required.

1234. Elementary French (TCCNS = FREN 1412) 4(4-0)

Prerequisite: French 1134.

Continuation of French 1134. One hour of laboratory practice per week is required.

2133. Intermediate French (TCCNS = FREN 2311) 3(3-0)

Prerequisite: French 1234.

Detailed study of French grammatical structures and practice in speaking, understanding, reading, and writing in French.

2233. Intermediate French (TCCNS = FREN 2312) 3(3-0)

Prerequisite: French 2133.

Continuation of French 2133.

3133. Survey of French Literature 3(3-0)

Prerequisite: French 2233.

An historical survey of French literature of the Middle Ages, the Renaissance, and the Classical period.

3233. Survey of French Literature 3(3-0)

Prerequisite: French 2233.

An historical survey of French literature of the period of the Encyclopedists and Philosophes, of Romanticism and Realism, and of modern trends in French literature.

3333. French Conversation and Composition 3(3-0)

Prerequisite: French 2233.

Intensive practice in conversation aimed at attaining fluency. Class discussion of compositions to improve grammar and style.

4013. Topics in French Literature 3(3-0)

Prerequisite: French 2233.

Topics will vary and may include such subjects as French Literature and Film, French-English Translation Studies, French Short Story, and French Civilization. This course may be repeated for credit when topics vary.

4533. Selected Problems in French Literature 3 semester hours

Prerequisite: French 3133 or 3233.

For advanced students with consent of instructor. Special topics assigned for research and investigation.

(GEOG) GEOGRAPHY**3003. Geography of the World** 3(3-0)

Regional, social, and economic characteristics of the geography of the world.

3013. Geography of North America 3(3-0)

Physiographic and natural resource characteristics of North America with emphasis on the United States.

(GEOL) GEOLOGY**1134. Physical Geology (TCCNS = GEOL 1403)** 4(3-2)

Elements of earth science including the study of earth materials, interpretation of geologic evidence, and study of geological processes.

1233. Historical Geology (TCCNS = GEOL 1304) 3(2-2)

Geologic history and evolution of the Earth, including the life histories of plants and animals.

2134. Mineralogy 4(3-3)

Prerequisites: GEOL 1134, CHEM 1141 and 1143 or 1101 and 1103, or consent of the instructor.

An integrated study of the physical and chemical characteristics of minerals and the conditions under which they form, including crystallography and crystal structure, crystal chemistry and variability, mineral associations and genesis, and systematic description and identification.

3023. Environmental Science 3(2-3)

Prerequisites: One year of college-level science is recommended.

A study of the earth as a habitat; conservation of resources, land-use planning and pollution problems arising from intensive use of the land by increasing numbers of people.

3133. Oceanography and Meteorology 3(2-3)

Prerequisite: GEOL 1134 or consent of the instructor.

An introduction to the earth's fluid environment; physical, chemical, biological, and geological oceanography.

3234. Petrology 4(3-3)

Prerequisite: GEOL 2134 or consent of the instructor. CHEM 1241 and 1243, and MATH 1433 are recommended.

An examination of the characteristics and origins of igneous, sedimentary, and metamorphic rocks, including the application of experimental and theoretical studies of rock genesis. Laboratory work emphasizes the systematic description, classification, and identification of rocks in hand specimen and thin section.

3434. Structural Geology 4(3-3)

Prerequisites: GEOL 3234, MATH 1433, or consent of the instructor.

A survey of topics in structural geology, including rock mechanics, classification of structural features, and geotectonics. Laboratory work emphasizes techniques in the solution of both surface and subsurface problems, field mapping, and geophysical techniques.

3534. Invertebrate Paleontology 4(3-3)

Prerequisites: GEOL 1134, 1233.

An introduction to the study of fossil invertebrates, including comparison of living and fossil forms, their morphology, classification, ecology, and geologic history.

3633. Stratigraphy 3(3-0)

Prerequisite: GEOL 3534 or consent of the instructor.

An introduction to the study and interpretation of stratified sedimentary rocks, including their identification, description, condition of origin, sequence, mapping, and correlation.

3734. Geomorphology 4(3-3)

Prerequisites: GEOL 1134 and 1233, or consent of the instructor.

A systematic analysis of the morphology of the Earth's surface—both the continents and the sea floor—and of the processes which shape that surface. Laboratory work emphasizes the use of topographic maps and aerial photography for geomorphic and geologic interpretation.

3836. Field Geology 6(3-6)

Prerequisite: GEOL 3434 or consent of the instructor.

Techniques of geologic surveying utilizing Brunton compass, barometer, air photos, plane table, and alidade. Measuring, mapping, and interpretation of geologic structures and stratigraphy as observed in the field.

4001. Seminar 1(1-0)

Prerequisite: Consent of the instructor.

Participation in seminar discussions, and presentation of formal reports.

4233. Hydrogeology 3(2-3)

Prerequisites: GEOL 1134, 1234, or consent of the instructor.

This course deals with the interrelationships of geologic materials and processes with water. Water resources will be examined based on occurrence, movement, and chemistry.

4334. Advanced Topics in Geology 4(3-3)

Prerequisite: Consent of the instructor.

Lectures, discussion, reading, and/or laboratory work on advanced topics in geology.

4634. Sedimentology 4(3-3)

Prerequisite: GEOL 3234 or the consent of the instructor.

Analysis of depositional environments based on the chemical and physical formation of sediment, the physics of sediment transport, and post-depositional diagenetic phenomena. Laboratory work emphasizes textural analysis of sediments and petrographic analysis of thin sections, general statistical analysis and report preparation.

4911, 4912, 4913. **Special Problems in Geology** 1-3 semester hours

Prerequisites: Upper level classification and consent of the department chair and instructor.

Directed field and laboratory research in problems of geological interest.

(GERM) GERMAN

1134. **Elementary German** (TCCNS = GERM 1411) 4(4-0)

For students who have had no previous instruction in the language or have had one year of high school German. Emphasis is placed on patterns of German pronunciation and grammar as well as the acquisition of basic reading, writing, and conversational skills. One hour per week of laboratory practice is required.

1234. **Elementary German** (TCCNS = GERM 1412) 4(4-0)

Prerequisite: German 1134.

Continuation of German 1134. One hour per week of laboratory practice is required.

2133. **Intermediate German** (TCCNS = GERM 2311) 3(3-0)

Prerequisite: German 1234.

A detailed study of German grammatical structures, synonyms, antonyms, and principles of composition. Study and use of the most common German idioms through conversation.

2233. **Intermediate German** (TCCNS = GERM 2312) 3(3-0)

Prerequisite: German 2133.

Continuation of German 2133.

(GNSC) GENERAL SCIENCE

These courses are limited to students who are pursuing their teacher certification with a Bachelor of Science in Interdisciplinary Studies or a Bachelor of Science (with a science major) with Secondary Certification. (See pages 130-136, 140-143.)

1104. **Life/Earth Science** 4(3-2)

A basic course designed to introduce students to the scientific methods and topics in biology and earth science. Creditable only for students seeking grades 1-4 and 4-8 education certification.

1204. **Physical Science** 4(3-2)

An introductory survey of topics in physics and chemistry. Creditable only for students seeking grades 1-4 and 4-8 education certification.

3104. **Concepts of Science** 4(3-2)

Prerequisites: One year of science.

The curriculum will emphasize the interaction of the science disciplines and feature the fundamental principles of physical, biological and earth sciences in the elementary and middle school science. Creditable only for students seeking grades 1-4 and 4-8 education certification.

3204. **Concepts of Science** 4(3-2)

Prerequisites: Two years of laboratory science (minimum 12 hours).

The curriculum will emphasize the interaction of the science disciplines and feature the fundamental principles of physical, biological and earth sciences in the secondary school science. Creditable only for students seeking secondary certification.

(HIST) HISTORY**SURVEY COURSES****1133. Survey of American History to 1865** (TCCNS = HIST 1301) 3(3-0)

General survey of American History from its European origins to 1865. Required of all baccalaureate students.

1233. Survey of American History since 1865 (TCCNS = HIST 1302) 3(3-0)

General survey of American History from 1865 to the present. Required of all baccalaureate students.

1333. Survey of Western Civilization (TCCNS = HIST 2311) 3(3-0)

An examination of the traditions which contributed to the intellectual background of modern western society. The course spans the period beginning with the early civilization of Egypt and Mesopotamia through classical Greece and Rome to the western Middle Ages concluding with the Renaissance and Reformation and the dawn of the modern era.

1433. Survey of Western Civilization (TCCNS = HIST 2312) 3(3-0)

An examination of the traditions which have directly contributed to the formation of the intellectual and cultural structure of modern western society. The course begins with the Scientific Revolution and the emergence of modern nation states and examines the development of democratic movements and the Industrial Revolution continuing through the wars and disorders of the twentieth century.

HISTORY COURSES FOR ADVANCED UNDERGRADUATES**3003. Survey of Texas History** 3(3-0)

Prerequisites: Six hours of American History.

This course examines Texas history from the time of discovery to the late twentieth century. Topics examined include the Spanish colonial period, Anglo colonization, the Texas Revolution, early statehood, the Civil War and Reconstruction, the cattleman's frontier, the oil industry, and modern Texas politics.

3033. American Beginnings: From Discovery to the Revolution 3(3-0)

Prerequisites: Six hours of history or consent of the chair.

After the migration of man across the Bering Straits, the great Indian civilizations appeared followed by the first European colonies in the sixteenth and seventeenth centuries. Settlement spread, and an American society flowered represented by such figures as William Byrd, Benjamin Franklin and Thomas Jefferson — until estrangement from England provoked a crisis that finally touched off the American Revolution.

3103. History of England 3(3-0)

Prerequisites: Six hours of history or consent of the chair.

A survey of the forces and events which dominated English development from the times of the Romans to the Glorious Revolution of 1688. The course focuses on the constitutional development of England and discusses the contributions of the Anglo-Saxons and Normans as well as those of the Reformation and Elizabethan eras.

3123. History of England 3(3-0)

Prerequisites: Six hours of history or consent of the chair.

A survey of modern England and the emergence of the United Kingdom and the development of the British empire. The course focuses on the developments of British democracy as well as the issues and events of the American Revolution, the Industrial Revolution, the Irish Question, and the impact of the wars of the twentieth century on Britain.

3133. Comparative World Religions and Cultures 3(3-0)

Prerequisites: Six hours of history or consent of the chair.

A study of the major world religions and cultural traditions with an emphasis on Hinduism, Buddhism, Judaism, Christianity, and Islam.

3233. Ancient Greece and Rome 3(3-0)

Prerequisites: Six hours of history or consent of the chair.

A study of the development of Greece and the Bronze Age through the Classical Age of Socrates, Plato, and Aristotle with the emergence of Rome as an imperial power and its expansion through the Mediterranean world. The course concludes with an examination of early Christianity and the collapse of the Roman political system.

3503. Early Russia and Tsardom 3(3-0)

Prerequisites: Six hours of history or consent of the chair.

A survey of Russian history from earliest times to the peak of Romanov power and prestige.

3513. The Modern Russian State and Empire 3(3-0)

Prerequisites: Six hours of history or the consent of chair.

Russian history from 1801 to the present. The crisis and collapse of autocracy, the revolutions, reaction, superpower status, and the decline and fall of empire are some of the major topics covered in this course.

3833. Latin American History, Colonial Period 3(3-0)

Prerequisites: Six hours of history or consent of the chair.

This course investigates the Indian, White, and Black cultures which made up the ethnic and cultural diversity in Ibero-America. The discovery, conquest, and settlement of Ibero-America are covered in detail as are such institutions as the church, *encomienda*, and the military. The course concludes with a discussion of the impact of the reforms of Charles III as they affected Latin America and initiated the independence movement.

3843. Latin American History, Republican Period-Nineteenth Century 3(3-0)

Prerequisites: Six hours of history or consent of the chair.

This course traces the independence of Ibero-American Nations and explains the factionalization caused by the collapse of Spain's empire and the power struggles which resulted. Institutions such as *caudillismo*, the church, the military, and their impact are discussed as they developed during the 19th century.

4023. United States Diplomatic History, 1898-1989 3(3-0)

Prerequisites: Six hours of history or consent of the chair.

A study of United States diplomatic relations in the twentieth century, from the opening of the Spanish-American War to the conclusion of the Cold War. The course will survey the history of United States foreign policy, beginning with American emergence from a tradition of isolation to a position of world leadership and world power. Topics will include the diplomacy of both world wars, the policy of containment underlying the Korean and Vietnam conflicts, relations with the Soviet Union and China, U.S.-Latin American affairs, and American approaches to the Arab-Israeli conflict.

4043. The Old South 3(3-0)

Prerequisites: Six hours of history or consent of the chair.

This course traces the growth of Southern culture; economics and politics from the establishment of the first Southern Colonies to the Civil War. Emphasis is placed upon such topics as social organization, slavery, states rights, and the creation of the Confederacy—always relating developments in the South to events in the nation at large.

4053. Civil War and Reconstruction

3(3-0)

Prerequisites: Six hours of history or consent of the chair.

The bitter sectional conflicts touched off by slavery and westward expansion provoked a mounting crisis in the 1850's—ending in the election of 1860. The course then turns to the battlefield and the question of why the South lost. It concludes with an examination of the attempt to reintegrate the South into the Union and the angry social and political clash which was precipitated.

4073. The Era of Reform: Populism and Progressivism in America

3(3-0)

Prerequisites: Six hours of history or consent of the chair.

A study of the background and development of the agrarian reform movements of the late nineteenth century culminating in the rise and fall of the Populist party, the urban-industrial movements in America during the early twentieth century including municipal, general political, labor, child labor, social welfare, and other movements.

4083. The Age of Washington and Jefferson

3(3-0)

Prerequisites: Six hours of history or consent of the chair.

Federalists and Jeffersonians struggled over the destiny of the young Republic--would it be a unitary, entrepreneurial nation, or an agrarian confederation? Complicating the battle were economic change, and the acquisition of the Louisiana territory, even as Europe began to threaten American commerce and ultimately the independence of the republic.

4093. The Jacksonian Era

3(3-0)

Prerequisites: Six hours of history or consent of the chair.

Using Andrew Jackson as a symbol of his age, the course traces the acrimonious partisan conflict which gave birth to mass democracy and a new two-party system. This is related to such crucial issues as to the bank war, nullification, minority rights and the Mexican War, questions fostered by rapid industrialization, and the migration of pioneers to the Pacific.

4133. America: From the Jazz Age to the Nuclear Age

3(3-0)

Prerequisites: Six hours of American history or consent of the chair.

A study of American life from the end of World War I to the end of World War II with special emphasis upon the prosperity of the twenties, the Great Depression, the New Deal, and the domestic and foreign policy problems of the World War II period.

4143. The New South

3(3-0)

Prerequisites: Six hours of American history or consent of the chair.

The development of the New South from the legacy of the Civil War and Reconstruction. Southern politics, economics, cultural, and industrial development.

**4163. Contemporary America: From the End of
World War II to the Present**

3(3-0)

Prerequisites: Six hours of American history or consent of the chair.

A study of American life and foreign policy trends since 1945 with special emphasis upon the major political, economic, and social changes which have affected the lives of all Americans.

4173. History of Mexico

3(3-0)

Prerequisites: Six hours of history or consent of the chair.

A survey of Mexican history from Pre-Hispanic times to the present with emphasis on the National Period 1820-1967, which includes the age of Santa Anna, La Reforma, the Diaz Dictatorship, and the Revolution of 1910.

4183. Latin America: Nationalism in the Twentieth Century

3(3-0)

Prerequisites: Six hours of history or consent of the chair.

Course will emphasize Vargas in Brazil, Peron in Argentina, Castro in Cuba, Allenda in Chile, and such currently popular problems as those found in Central America.

4213. Europe in the Middle Ages 3(3-0)

Prerequisites: Six hours of history or consent of the chair.

A study of the social, political, and intellectual traditions of western society as they developed after the Germanic invasions. Emphasis will be placed on the evolution of feudal society and its interaction with the community of the Christian church.

4253. Renaissance and Reformation 3(3-0)

Prerequisites: Six hours of history or consent of the chair.

A study of the development of European society in the era of the Black Death, of overseas discoveries, of the Renaissance and Reformation. The emphasis of the course will be a topical study of Renaissance humanism and a detailed analysis of the impact of the Reformation on the doctrines and structure of western Christianity.

4273. The Age of Enlightenment 3(3-0)

Prerequisites: Six hours of history or consent of the chair.

A study of European culture during the age of Louis XIV and the Ancien Regime. The course will focus on the Scientific Revolution and its influence on European thought culminating with the Enlightenment.

4423. Nineteenth Century Europe, 1789-1914 3(3-0)

Prerequisites: Six hours of history or consent of the chair.

Europe from the French Revolution to World War I. Emphasis upon the results of the French Revolution and the influence of Napoleon, the struggle for democratic principles, industrialization, the unification of Italy and Germany, the expansion of colonial empires, and the underlying causes of World War I.

4433. Twentieth Century Europe 3(3-0)

Prerequisites: Six hours of history or consent of the chair.

Development of Europe from the beginning of the twentieth century to the present with emphasis on developments since World War I.

4523. Eastern Europe 3(3-0)

Prerequisites: Six hours of history or consent of the chair.

An examination of the various Eastern European countries, including the Balkans, from earliest times to the present. Particular emphasis on nineteenth and twentieth century social, political, economic, and religious trends and institutions. The course will also include a discussion of the collapse of communism and accompanying regional conflicts.

4533. American Ideas 3(3-0)

Prerequisites: Six hours of history or the consent of the chair.

A survey of the major intellectual currents which have shaped American thought, including Puritanism, the Enlightenment, Romanticism, Transcendentalism, Utopian Idealism, Social Darwinism, and Pragmatism. This course traces the changing intellectual patterns which have characterized the development of American civilization.

4543. History of the Middle East 3(3-0)

Prerequisites: Six hours of history or consent of the chair.

Includes a survey of pre-Islamic society, the rise and spread of Islam, the rise of the Ottoman and Safavid Empires, European Imperialism, and the contemporary Middle East.

4603. The American Frontier, 1607-1838 3(3-0)

Prerequisites: Six hours of history or consent of the chair.

This course surveys the advancing Anglo-American frontier from the founding of Jamestown through the Indian Removal period and the Cherokee Trail of Tears. The course surveys westward expansion from the Atlantic to the Mississippi River with particular emphasis upon the ongoing clash between Anglo and Native American cultures.

4613. The American West, 1803-1890 3(3-0)

Prerequisites: Six hours of history or consent of the chair.

This course surveys westward expansion from the Mississippi River to the Pacific. From Lewis and Clark to Wounded Knee, from the fur traders' frontier to the farmers' frontier, this course surveys the sweeping movement of the American people across the trans-Mississippi West.

4643. United States-Latin American Relations 3(3-0)

Prerequisites: Six hours each of history and political science, and consent of the chair.

Survey of the relations of the U.S. with Latin America from independence to the present. The course keys on the Monroe Doctrine and U.S. policy from the Latin American perception of that policy. The course also covers in some detail U.S. relations with Argentina, Chile, Cuba, and Mexico.

4653. United States Military History 3(3-0)

Prerequisites: Six hours of history or consent of the chair.

An analysis of the actions of the armed forces in five major conflicts. Emphasis will be placed on tactical and strategic decision making, personalities, force structures, and the application of technological innovations to warfare. Conflicts to be studied are: The Revolution, The Civil War, World Wars I and II, and Vietnam.

4663. Everyday Life in Europe, 1500-1950 3(3-0)

Prerequisites: HIST 1133, 1233; 1333, 1433 or consent of instructor.

This course covers the social history of Europe from the Reformation era through World War II. It exams how historical developments affected the lives of ordinary European men and women, including such areas as the life-cycle, material conditions, social issues and popular culture.

4673. History of Women in the United States and Great Britain 3(3-0)

Prerequisites: HIST 1133, 1233; 1333, 1433 or consent of chair.

This course examines the lives of women in the United States and Great Britain from around 1600 to the present. Its central focus is how the factor of gender, along with other factors such as class and race, affected the historical experience of women.

4953. Problems in History 3 semester hours

Prerequisites: Six hours of history or consent of the chair.

This is an undergraduate readings course available on a limited basis to advanced students. Topics will be selected by the student and his/her adviser.

(HSAD) HEALTH SERVICES ADMINISTRATION

3213. The Art of Healing 3(3-0)

Prerequisite: Honors standing or permission of instructor.

Exploration of the expressive art to heal including holistic and complementary healing practices; discussion of general and empiric knowledge as well as practical application; analyzing of both historical and cultural anthropological health practices; examination of complementary/alternative healing practices and traditional medicine.

4103. End of Life Care 3(3-0)

This course provides students from multiple health care disciplines the opportunity to explore issues related to end of life care. Topics to be emphasized include legal

issues, standards of care, advanced care planning, assisted suicide/euthanasia, medical futility, gaps and barriers to good care, pathophysiological changes associated with death, holistic assessment, the normal grieving process, communication and decision-making, pain management, mental health management, and symptom control.

(HUMN) HUMANITIES

2013. Humanities: The Ancient World 3(3-0)

Prerequisite: English 1123 or consent of instructor.

A study of the inter-relationships of literature, music, art, and philosophy in an historical context with emphasis on Mesopotamia, Egypt, Greece and Rome, Judaism, and early Christianity.

2023. Humanities: Medieval Cultures 3(3-0)

Prerequisite: English 1123 or consent of instructor.

A study of the inter-relationships of literature, music, art, and philosophy in an historical context with emphasis on Byzantine, Islamic, European, Indian, Chinese, Japanese, and North and South American cultures.

2033. Humanities: Renaissance through Realism 3(3-0)

Prerequisite: English 1123 or consent of instructor.

A study of the inter-relationships of literature, music, art, and philosophy in an historical context with emphasis on the Renaissance, the Baroque style, the Enlightenment, Romanticism, and Realism (fifteenth through late-nineteenth centuries).

2043. Humanities: Mid-Nineteenth through Twentieth Centuries 3(3-0)

Prerequisite: English 1123 or consent of instructor.

A study of the inter-relationships of literature, music, art, and philosophy in an historical context with emphasis on the Industrial Revolution, Modernism, Cultural Plurality, and Postmodernism.

2053. Humanities 3(3-0)

Prerequisite: English 1123 or consent of instructor.

A study of the inter-relationships of literature, music, art, and philosophy in an historical context.

2063. Humanities 3(3-0)

Prerequisite: English 1123 or consent of instructor.

A continuing study of the inter-relationships of art, myth, literature, and philosophy in an historical context.

4013. Humanities: The Ancient World 3(3-0)

Prerequisite: English 1123 or consent of instructor.

A study of the inter-relationships of literature, music, art, and philosophy in an historical context with emphasis on Mesopotamia, Egypt, Greece and Rome, Judaism, and early Christianity. Individual research and evidence of the ability to synthesize the expressions of the different art forms within a cultural period will be required. May not be taken if student has received credit for Humanities 2013.

4023. Humanities: Medieval Cultures 3(3-0)

Prerequisite: English 1123 or consent of instructor.

A study of the inter-relationships of literature, music, art, and philosophy in an historical context with emphasis on Byzantine, Islamic, European, Indian, Chinese, Japanese, and North and South American cultures. Individual research and evidence of the ability to synthesize the expressions of the different art forms within a cultural period will be required. May not be taken if student has received credit for Humanities 2023.

4033. Humanities: Renaissance through Realism 3(3-0)

Prerequisite: English 1123 or consent of instructor.

A study of the inter-relationships of literature, music, art, and philosophy in an historical context with emphasis on the Renaissance, the Baroque style, the Enlightenment, Romanticism, and Realism (fifteenth through late-nineteenth centuries). Individual research and evidence of the ability to synthesize the expressions of the different art forms within a cultural period will be required. May not be taken if student has received credit for Humanities 2033.

4043. Humanities: Mid-Nineteenth through Twentieth Centuries 3(3-0)

Prerequisite: English 1123 or consent of instructor.

A study of the inter-relationships of literature, music, art, and philosophy in an historical context with emphasis on the Industrial Revolution, Modernism, Cultural Plurality, and Postmodernism. Individual research and evidence of the ability to synthesize the expressions of the different art forms within a cultural period will be required. May not be taken if student has received credit for Humanities 2043.

4053. Humanities: World Civilizations 3(3-0)

Prerequisite: English 1123 or consent of instructor.

A study of inter-relationships in world civilizations of literature, philosophy, mythology, art, and architecture in an historical context with emphasis on the Western tradition, including relationships to Middle Eastern, African, Indian, and Chinese traditions.

4063. Problems in Humanities 3 semester hours

Intensive study by a student who has completed the Humanities sequence in a selected topic which deals with the inter-relationships of different cultural forms of expression.

(JOUR) JOURNALISM

1233. Introduction to Mass Communication (TCCNS = COMM 1307) 3(3-0)

Survey of the media of mass communication: newspapers, radio, television, magazines, and industrial publications.

1243. News Writing I 3(2-2)

Introduction to fundamentals such as accuracy, brevity, clarity, deadlines, news story structure, and the nature of the news. Designed to prepare the student for reporting.

3133. News Writing II 3(2-2)

Prerequisite: JOUR 1243 or consent of instructor.

Study and practice in reporting the significant and complex news such as science, labor, the courts, and critical reviews. Public affairs and investigative reporting.

3233. News Editing and Copy Reading 3(3-0)

Prerequisite: JOUR 1243 or consent of instructor.

Instruction and practice in copy reading, determining news values, use of stylebook, headline writing, photo editing, and newspaper design.

3623. Mass Communication History and Ethics 3(3-0)

Prerequisites: 12 hours of journalism or consent of instructor.

Study of the development of American newspapers and other mass communication media related to the political, economic, and social progress of the American people; case history approach to ethical problems of the media.

3633. Editorial Writing 3(3-0)

Prerequisite: JOUR 1243.

Study and practice of editorial writing techniques. Role of the editorial in contemporary journalism. Organization of facts for interpretation and persuasion.

3653. Feature Writing 3(3-0)

Prerequisite: JOUR 1243.

Procedure in gathering material for feature stories with emphasis on newspaper articles. Analysis of reader appeal, study of feature story structure, and development of style by practice in writing feature stories.

4123. Mass Media Internship 3 semester hours

Prerequisites: Junior standing and 12 hours of mass communication courses.

Instruction and practice in gathering, reporting, and editing the news at a media outlet. A minimum of 120 hours on the job required.

4643. Mass Communication Law 3(3-0)

Prerequisites: 12 hours of journalism or consent of instructor.

Study of how law has developed in mass communication with emphasis on freedom of the press vs. rights of the individual; case history approach to court decisions and to Federal Communication Commission rulings.

4683. Public Relations 3(3-0)

Prerequisites: 12 hours of journalism or consent of instructor.

Study of public relations in modern society, business, and communications. Influencing public opinion through acceptable performance and two-way communication.

4693. Public Relations Campaigns 3(3-0)

Prerequisite: JOUR 4683 or consent of instructor.

Application of public relations principles to cases; analysis of case histories, and evaluation of major public relations campaigns.

(KNES) KINESIOLOGY - ACTIVITY COURSES

(See KNES lecture courses below.)

1002 **Archery**

1011 **Fundamentals of Physical Activity and Health** (TCCNS = PHED 1164)

1022 **Bowling**

1032 **Varsity Sports**

1052 **Golf**

1062 **Conditioning Activities**

1082 ***Adapted Physical Education** (by permission only)

1092 **Dance Activities**

1102 **Sailing**

1112 **Jogging & Physical Fitness Appraisal**

1122 **Angling & Casting**

1132 **Tumbling**

1142 **Badminton**

1152 **Soccer**

1162 **Weight Training**

1172 **Softball**

1182 **Volleyball**

1192 **Flag Football**

1202 **Basketball**

1212 **Step Aerobics**

1272 **Backpacking**

1292 **Walking and Aerobic Fitness**

1312 **Spinning**

1322 **Canoeing**

- 1342 **Beach Volleyball**
- 1402 **Racquetball**
- 1412 **Beginning Cycling**
- 1422 **Advanced Cycling**
- 1432 **Recreational Cycling**
- 1502 **"Majors only" activity course for students majoring or minoring in the department of Kinesiology.**
- 1822 **Tennis**
- 1832 **Kickboxing Aerobics**
- 1852 **Fencing**

(KNES) KINESIOLOGY - LECTURE COURSES

(See KNES activity courses above.)

- 1053. **Foundations of Kinesiology** (TCCNS = PHED 1301) 3(3-0)
 Philosophical, psychological, and sociological basis for sport and exercise including historical origins and the role of sport in modern society.
- 2213. **First Aid and Safety** (TCCNS = PHED 1306) 3(3-0)
 Safety in the home, school, on the playground, and in traffic. Study of the physiology of injury and practice in first aid, bandaging, and care of common injuries. Students must pass a national CPR certification exam.
- 2333. **Nutrition** 3(3-0)
 Prerequisites: One year of biology.
 A directed study of the effects of diet on health and physical activity. Topics addressed include nutrient metabolism, weight control, health-related fitness, supplementation, pharmacology, and drug interactions. Same as BIOL 2333.
- 2353. **Officiating** (TCCNS = PHED 1308) 3(3-0)
 Rules of selected sports, their interpretation, and the mechanics of sports officiating. The course is designed to develop the skills and knowledge required for admission to the Southwest Officials Association in football, basketball, and other sports.
- 2403. **Fundamentals of Team Sports** 3(3-0)
 Study of a variety of team sports, focusing on coaching theories, practice organization, offensive and defensive strategies, skill progressions, and team management.
- 2413. **Fundamentals of Individual Sports** 3(3-0)
 Study of a variety of individual and dual sports, focusing on coaching theories, practice organization, individual strategies, skill progressions, and team management.
- 3363. **Motor Development** (formerly 2363) 3(3-0)
 Prerequisite: One semester of anatomy and physiology.
 Motor and physical development from birth to adulthood, with an emphasis upon childhood. The course includes a study of the neurological, physiological, intellectual, social, and emotional factors that influence gross and fine movement abilities.
- 3603. **Tests and Measurement** 3(3-0)
 Prerequisite: Three hours of math beyond 1003.
 Study of wide variety of testing instruments for evaluating human health and performance. Study of descriptive statistical methods used in constructing tests, interpreting, and evaluating test results.
- 3653. **Physiology of Exercise** 3(2-2)
 Prerequisites: BIOL 1134, 1234.
 An investigation of the physiological principles basic to health and human perform-

ance, emphasizing skeletal muscle energy metabolism, muscular contraction, cardiovascular function, and oxygen transport. Includes active learning experiences demonstrating important physiological processes. Laboratory required.

4033. Sport Psychology 3(3-0)

An introduction into theory, research, and applications of the cognitive, emotional, and behavioral dynamics of sport, physical activity, and health.

4103. Mechanical Kinesiology 3(3-0)

Prerequisite: KNES 4643 or permission of instructor.

Study of forces which act on the human body and the effects which these forces produce. Practice in recognition and correction of incorrect movement patterns through cinematographic analysis.

4333. Outdoor Education 3(3-0)

Prerequisite: Permission of instructor.

Instruction and practice in sports not generally offered in traditional school programs such as sailing, canoeing, backpacking, camping, angling, and shooting.

4433. Cardiopulmonary Dynamics 3(3-0)

Prerequisite: Permission of instructor.

The focus of this lecture course is to provide the student with a thorough understanding of cardiac electrophysiology and clinical hemodynamics. Emphasis is placed on rhythm recognition, and causes and treatments of common dysrhythmias. Other topics include advanced cardiac life support. (Same as RESP 4433.)

4513. Physical Activity for Exceptional Individuals 3(3-0)

A comprehensive study in planning and providing sport and exercise opportunities for individuals with physical, mental, and emotional disabilities. Sports and dance events, such as wheelchair sports and Special Olympics, will be included as well as a study of the kinesthetic and physiological differences of movement for handicapped individuals.

4523. Organizational Management in Health and Fitness Practice 3(3-0)

Prerequisite: Kinesiology majors of at least junior standing or by permission of instructor.

Study of selected concepts of administrative processes, systems, and styles with application to various fitness and allied health environments. Includes program, facility, fiscal, and personnel management.

4603. Research 3(0-6)

Prerequisites: Junior or senior standing in kinesiology and permission of instructor.

Research activities in faculty research efforts in biomechanics pedagogy or physiology.

4643. Anatomical Kinesiology 3(3-0)

Prerequisite: BIOL 1134 or concurrent enrollment.

The application of gross anatomy to the study of human movement. An emphasis will be placed on understanding the interrelated kinetics of normal and abnormal motions of the musculoskeletal system as they influence mobility and function.

4663. Fundamentals of Elementary Physical Education 3(2-2)

Prerequisites: Junior or senior standing and KNES 1011.

Study of the theoretical and practical knowledge and skills necessary to competently plan and implement developmentally appropriate physical education activities for elementary school students. The student will learn necessary planning and teaching methodologies, as well as skill progressions for fundamental motor skills. Lab required. Course required prior to all-level or elementary student teaching in kinesiology.

4671. Internship in Kinesiology 1 semester hour

Prerequisites: Major in kinesiology and permission of instructor.

Students must complete 48 hours of observation or work in an approved setting which offers professional experience in kinesiology.

4673. Internship in Kinesiology 3 semester hours

Prerequisites: Completion of 15 hours of major and permission of instructor.

Students must complete 144 hours work in an approved setting which offers professional experience in kinesiology.

4676. Internship in Kinesiology 6 semester hours

Prerequisites: Completion of 15 hours of major and permission of instructor.

Students must complete 288 hours in an approved setting which offers professional experience in kinesiology.

4693. Fundamentals of Secondary Physical Education 3(2-2)

Prerequisites: Junior or senior standing and KNES 1011.

Study of the theoretical and practical knowledge and skills necessary to competently plan and implement appropriate physical education activities for secondary school students. The student will implement appropriate physical education activities for secondary school students. The student will learn necessary planning and teaching methodologies, as well as rationale for providing non-traditional content at the secondary level. Lab required. Course required prior to secondary student teaching in kinesiology.

4703. Exercise Testing, Prescription, and Programming 3(2-2)

Prerequisites: KNES 2213, 3653.

A study of the benefits and risks of exercise testing in healthy populations, athletic populations, children, at risk individuals, and patients with cardiovascular and metabolic disease. A complementary focus of the course is the biological, mechanical, and behavioral aspects of prescribing and administering exercise programs to a variety of populations. Includes guided experiences with field-based and clinical test technologies.

4813. Therapeutic Exercise 3(3-0)

Prerequisites: KNES 4643 and permission of the instructor.

Theory and practice of methods of rehabilitating injured athletes and patients in order to return them to participation in exercise and sports in a safe and healthy manner. (Same as ATRN 3913.)

4853. Curriculum Development and Administration of Physical Education Programs 3(3-0)

Prerequisite: KNES 4663 or 4693.

Introduction of curriculum models based on philosophical statements, yearly programs, unit plans, and lesson plans. Selection of activities based on current trends, legislation, and community resources. Administrative aspects include budgeting, public relations, legal liability, and scheduling.

4991, 4992, 4993. Topics in Kinesiology 1-3 semester hours

Prerequisites: Junior or senior standing in kinesiology and permission of instructor.

Specialized studies in the scientific and applied areas of the exercise sciences.

(MATH) MATHEMATICS**0003. Beginning Algebra** 3(3-0)

Properties of integers, fractions, decimals, percentages, linear equations and inequalities and their graphs, integer exponents, polynomials, deductive and inductive reasoning; interpretation of data from graphs and charts, and geometric problems.

1003. Intermediate Algebra 3(3-0)

Prerequisite: MATH 0003 with a grade of C or better, math THEA (formerly TASP) score of 230, or satisfactory score on placement exam.

Factoring polynomials, quadratic equations and their graphs, rational expressions, rational exponents, radicals, and systems of linear equations.

1053. Contemporary Mathematics (TCCNS = MATH 1332) 3(3-0)

Prerequisite: MATH 1003, math THEA (formerly TASP) score of 270, or satisfactory score on placement exam.

A survey of the use of mathematics in the modern world. Topics include: theory of elections and apportionment, graphs and networks, growth and symmetry, or statistics.

1113. Concepts of Algebra 3(3-0)

Prerequisite: MATH 1003 with a grade of C or better, math THEA (formerly TASP) score of 270, or satisfactory score on placement exam.

Applications of algebraic concepts for the K-8 pre-service teacher. Equations, inequalities, rational expressions, exponents, radicals, functions, graphs, and systems of equations. This course is designed for students planning to be certified to teach in grades K-8. Each student must have a graphing calculator.

1203. Mathematical Analysis for Business 3(3-0)

Prerequisite: MATH 1003 with a grade of C or better, math THEA (formerly TASP) score of 270, or satisfactory score on placement exam.

Review of algebra, linear and quadratic equations, graphs, progressions and mathematics of finance, matrix operations, and introduction to probability. Each student must have a graphing calculator.

1233. College Algebra (TCCNS = MATH 1314) 3(3-0)

Prerequisite: MATH 1003 with a grade of C or better, math THEA (formerly TASP) score of 270, or satisfactory score on placement exam.

Equations, inequalities, rational expressions, exponents, logarithms, radicals, functions, graphs, and systems of equations. Each student must have a graphing calculator. (This course is designed for students planning to take additional mathematics.)

1433. Plane Trigonometry (TCCNS = MATH 1316) 3(3-0)

Prerequisite: MATH 1233 with grade of C or better.

Trigonometric functions, identities and equations, complex numbers. Each student must have a graphing calculator.

1533. Precalculus 3(3-0)

Prerequisite: MATH 1003 with a grade of C or better, math THEA (formerly TASP) score of 270, or satisfactory score on placement exam.

Applications of algebra and trigonometry to the study of elementary functions and their graphs including polynomial, rational, exponential, logarithmic and trigonometric functions. Each student must have a graphing calculator. This course is intended for students planning to take MATH 1634.

1634. Calculus I (TCCNS = MATH 2413) 4(4-0)

Prerequisite: MATH 1433 or 1533 with grade of C or better.

Differentiation of functions of one variable with applications, integration including simple substitution and numerical evaluation, and applications of integration. Each student must have a graphing calculator.

1734. Calculus II (TCCNS = MATH 2414) 4(4-0)

Prerequisite: MATH 1634 with a grade of C or better.

Elementary transcendental functions, techniques of integration, sequences, series,

Taylor's formula, conic sections, parameterized curves, and polar coordinates. Each student must have a graphing calculator.

2033. Structure of the Number System I 3(3-0)

Prerequisite: MATH 1113 or 1233.

The language of mathematics; the theory of sets, relations and functions; the theory and structure of number systems; the integers, rational numbers, real numbers, elementary number theory, and the mathematical basis for the use of manipulatives. This course stresses problem solving techniques and strategies.

2043. Structure of the Number System II 3(3-0)

Prerequisite: MATH 2033.

An introduction to probability and statistics, geometric shapes, constructions and measurement, and the mathematical basis for the use of manipulatives.

2133. Introduction to Modern Mathematics 3(3-0)

Prerequisite: MATH 1734 or concurrent enrollment.

Introduction to logic and methods of proof, set operations, equivalence relations, functions, mathematical induction, and cardinality. Other topics related to the study of the structure of mathematical proof may be included.

2333. Discrete Mathematical Structures 3(3-0)

Prerequisite: MATH 1233 or 1533.

Logic, combinatorics, functions, graphs, Boolean algebra, logic networks, algebraic structures, finite state machines, and computability.

2534. Calculus III (TCCNS = MATH 2415) 4(4-0)

Prerequisite: MATH 1734.

Space geometry and vectors, vector-valued functions, partial differentiation with applications, and multiple integration with applications. Each student must have a graphing calculator.

3033. Modeling 3(3-0)

Prerequisite: MATH 2043.

Geometric and algebraic models, functions, graphs, limits, rates of change, and techniques for approximating length, area, and volume.

3113. Techniques in Problem Solving 3(3-0)

Prerequisite: MATH 2043.

Problem solving techniques and strategies using patterns, logic, number theory, algebra, geometry, combinatorics, strategy games, and network theory.

3123. Concepts of Geometry 3(3-0)

Prerequisite: MATH 2043.

This course covers standard concepts from Euclidean geometry, including congruence, similarity, parallel postulates, constructions, transformations, area postulates, and constructions using software such as Geometer's Sketchpad. This course is appropriate for those seeking 4-8 mathematics teacher certification.

3133. Foundations of Geometry 3(3-0)

Prerequisite: MATH 2133.

Elementary geometry from an advanced point of view. An axiomatic study of Euclidean geometry plus additional topics which may include finite geometries and non-Euclidean geometries. Students will use a geometry software package. This course is appropriate for those seeking 8-12 mathematics teacher certification.

3293. Algebraic Structures 3(3-0)

Prerequisite: MATH 2133.

Introduction to algebraic structures, groups, rings, fields.

3353. Discrete Dynamical Systems 3(3-0)

Prerequisite: MATH 1734.

Iteration of functions, Quadratic maps on the line and on the plane, orbit diagrams, Julia sets, Mandelbrot sets, iterated function systems.

3433. Differential Equations 3(3-0)

Prerequisite: MATH 1734.

Introduction to the theory of and applications of ordinary differential equations; solution techniques for linear and separable equations; numerical approximation of solutions; introduction to phase plane analysis and non-linear problems.

3533. Numerical Analysis 3(3-0)

Prerequisites: MATH 1734 and CMPS 1043.

Use of numerical methods to solve problems including but not limited to the following: function approximation, solutions of equations, numerical calculus, and differential equations. Includes analysis of problems and the design and writing of programs. (MATH 3533 and CMPS 3533 cannot both be taken for credit.)

3833. Linear Algebra 3(3-0)

Prerequisite: MATH 1634.

Vector spaces, linear equations and matrices, linear transformations and matrices, determinants, polynomials and matrices. Each student must have a calculator with matrix capabilities.

FOR UNDERGRADUATES AND GRADUATES**4003. History of Mathematics** 3(3-0)

Prerequisite: MATH 1734.

A survey of the development of major mathematical topics, including geometry, algebra, calculus, and advanced mathematics. Philosophical and cultural aspects will be integrated with the structure, theorems and applications of mathematics.

4033. Foundations of Discrete Mathematics 3(3-0)

Prerequisites: Six hours of advanced mathematics.

Set theory, mathematical induction, difference equations, number theory, graph theory, and introduction to proofs. (This course is designed for students planning to teach grades 4-8 mathematics.)

4133. Mathematical Statistics I 3(3-0)

Prerequisite: MATH 2534 or consent of instructor.

Probability theory, random variables, distributions, generating functions, and limit theorems.

4143. Mathematical Statistics II 3(3-0)

Prerequisite: MATH 4133.

Sampling distributions, point and interval estimation, hypothesis testing, goodness of fit, ANOVA, correlation, and regression.

4223. Discrete Mathematics 3(3-0)

Prerequisite: MATH 2133.

Combinatorics, graph theory, and difference equations.

4243. **Operations Research I** 3(3-0)
 Prerequisites: MATH 1734 and CMPS 1043.
 A study of linear programming including convex sets, geometric solutions, simplex methods, duality, sensitivity analysis, and integer programming.
4293. **Introduction to Ring Theory** 3(3-0)
 Prerequisite: MATH 3293.
 Foundations of ring theory including properties of modular rings, integral domains, ideals, quotient rings, ring homomorphisms, polynomial rings, and fields.
4453. **Theory of Numbers** 3(3-0)
 Prerequisite: MATH 2133.
 Divisors and prime numbers; congruences; primitive roots; quadratic residues; continued fractions; elliptical curves; cryptography.
4573. **Complex Analysis** 3(3-0)
 Prerequisites: MATH 2133 and 2534.
 Functions of one complex variable, Cauchy integral formula, Taylor series.
4733. **Introductory Analysis I** 3(3-0)
 Prerequisites: MATH 1734 and 2133.
 Foundations of the calculus to include sequences, series, continuity, differentiation, and integration.
4833. **Introductory Analysis II** 3(3-0)
 Prerequisite: MATH 4733.
 A continuation of MATH 4733.
4933. **Topics** 3(3-0)
 Prerequisite: Consent of the instructor.
 Selected topics from advanced mathematics. May be repeated for credit with consent of chair.
- 4991, 4992, 4993. **Special Problems** 1-3 semester hours
 Prerequisite: Consent of the chair (see page 91).
 Directed research in mathematics.

(MCOM) MASS COMMUNICATION

2213. **Appreciation of Film** 3(3-0)
 The history, theory, and aesthetics of film as artistic expression. Lighting, composition, editing, continuity, and genres will be emphasized.
3223. **Advertising** 3(3-0)
 Study of the means of marketing ideas, goods, and services. Emphasis on principles, procedures, and techniques employed in the creation of campaigns.
3313. **Studio Procedures I** (formerly 2313) 3(3-0)
 The theory and practice of television production and procedures. Supervised direction in all aspects of media presentation.
3513. **Selected Studies in Mass Communication** 3(3-0)
 Directed and concentrated study in mass communication. May be repeated for credit when topics vary.
3613. **Studio Procedures II** (formerly 2613) 3(3-0)
 Prerequisites: MCOM 3313. Limited to mass communication majors.
 Advanced theory and practice of television production. Supervised direction in all aspects of media presentation.

4123. Radio and Television Programming 3(3-0)

Prerequisite: Limited to mass communication majors.

Study of radio and television program design and audience analysis, with emphasis on current programming practices and promotional techniques.

4153. Broadcast Diction 3(3-0)

Prerequisite: SPCH 1233.

The application of the International Phonetic Alphabet to improve the vocal processes, articulation, and pronunciation. Extensive reading of broadcast copy.

4163. Mass Communication Applications 3 semester hours

Prerequisite: Consent of the instructor.

Writing for campus newspaper and/or campus television station in a professional atmosphere. May be repeated once for credit.

4173. Problems in Mass Communication 3 semester hours

Prerequisites: Consent of chair. Limited to mass communication majors.

Directed research in mass communication.

4243. Senior Production (formerly 3123) 3(3-0)

Prerequisites: MCOM 3313, 3613, and JOUR 1243. Limited to mass communication majors with a 3.0 G.P.A. in major and minor.

The execution of a television documentary incorporating written, oral, and organizational skills. Emphasis on applied media aesthetics. To be taken in final long semester.

4263. Broadcast News 3 semester hours

Prerequisites: MCOM 3313, 3613. Limited to mass communication majors.

Gathering, writing, and presenting a television news product under a deadline. Developing news judgment as well as an understanding of the complexities of the visual aspect of broadcast journalism.

4313. Media Management 3(3-0)

Prerequisites: 12 advanced hours or consent of the instructor.

The financial, legal, and technical aspects of handling media personnel. Practical application of station operation, administration, and programming.

4363. Advanced Broadcast News 3 semester hours

Prerequisites: MCOM 4263. Limited to mass communication majors.

The application of broadcast journalism in the role of news producer, news director, and other managerial roles. Responsible for on-air quality of the newscast.

(MENG) MECHANICAL ENGINEERING**1101. Introduction to Engineering** 1(0-2)

Prerequisite: Credit for a college level math course or concurrent enrollment in same.

An introduction to engineering as a career. The major fields of engineering and the typical responsibilities of an engineer are introduced through the use of guest speakers and field trips. Development of skills in teamwork, problem solving, and basic computer applications as related to engineering.

1203. Mechanical Design 3(1-4)

Prerequisite: ENDR 1133.

Computer-aided design and problem solving. Use of solid modeling to work with the concepts associated with the design of machine elements such as nuts, bolts, chains and gears.

- 2104. Fundamentals of Electrical Engineering I** 4(3-2)
Prerequisite: MATH 1433 or 1533.
Units, electric fields, DC series and parallel circuits, Kirchoff's Laws, network analysis, and AC circuits.
- 2113. Statics** 3(3-0)
Prerequisites: PHYS 1624, MATH 1634.
A study of forces and force systems, resultants and components of force systems, forces due to friction, conditions of equilibrium, and forces acting on frame structures.
- 2123. Materials Processing** 3(3-0)
A study of casting, joining, forming, and machining; the effects of processing on material properties; and materials selection.
- 2204. Fundamentals of Electrical Engineering II** 4(3-2)
Prerequisite: MENG 2104.
Introduction to semiconductor devices, basic amplifiers and feedback, symbolic logic, Boolean algebra, basic TTL gates, counters and flip-flops, shift registers.
- 2213. Dynamics** 3(3-0)
Prerequisites: MENG 2113 and MATH 1734. Concurrent enrollment in MATH 2534 preferred.
Kinematics of rigid bodies, work and energy, impulse and momentum.
- 2214. Materials Science** 4(2-4)
Prerequisites: CHEM 1143 and sophomore standing.
The study of the physical and mechanical characteristics of materials. The effect of chemical composition, mechanical treatment, and thermal or heat treatment upon material properties will be discussed.
- 3103. Mechanics of Solids** 3(3-0)
Prerequisites: MENG 2213 and MATH 2534.
Analysis of structures using stress-strain diagrams, generalized Hooke's law, stress and strain due to axial, torsional, shear, and flexural loads.
- 3113. Thermodynamics I** 3(2-3)
Prerequisites: PHYS 1624 and concurrent enrollment in MATH 2534.
The fundamental laws of thermodynamics; properties of systems, solids, gases and liquids; and thermodynamic tables.
- 3143. Computer Aided Engineering** 3(2-2)
Prerequisites: MENG 3103 and ENDR 1133.
The study of the CAD/CAM software to generate code for CNC-machine tools. The use of finite element analysis force loaded structures and the design of programmable and hardwired logic circuits.
- 3153. Robotics and Automation** 3(2-2)
Prerequisite: MENG 2104.
Analysis of methods of design and operation of robots and robotic systems. Kinematics and dynamics of manipulators, trajectory planning and motion control, sensing and vision, discussion of command languages and planning of job assignments.
- 3163. Process Engineering** 3(3-0)
Prerequisite: MENG 2214.
Concurrent engineering, process planning, group technology, manufacturing analyses and application of economic analyses.

3203. Applied Fluid Power Design 3(2-2)

Prerequisites: MENG 2104 and knowledge of Laplace transforms.

The fundamentals of fluid mechanics as applied to hydraulic and pneumatic hardware. Mathematical models of pumps, motors, pistons, accumulators, valves and transmission lines. Design and analysis procedures for implementing total fluid power systems with high operating efficiencies and adequate dynamic response.

3213. Thermodynamics II 3(3-0)

Prerequisite: MENG 3113.

A continuation of MENG 3113 including availability, vapor and gas cycles, mixtures of gases, thermodynamics of chemical systems and psychrometrics.

3223. Measurements and Instrumentation 3(2-3)

Prerequisites: PHYS 1624 and PHYS 2644 and MENG 2104.

Fundamentals of measurement systems, standards, treatment of data, statistics, uncertainty analysis, data acquisition, transducers, strain, force, acceleration, pressure, temperature, and fluid flow.

4103. Fluid Mechanics 3(2-3)

Prerequisites: MENG 2213 and either MATH 3433 or PHYS 4303.

Application of laws of statics, buoyancy, stability, energy and momentum to behavior of ideal and real fluids. Dimensional analysis and similitude and their application to flow through ducts and piping. Dynamic lift and related problems.

4113. Control Systems 3(2-2)

Prerequisite: MENG 3103.

The study of components used in mechanical, electronic, and fluid power control systems; system behavior using modelling and performance analysis. Includes PID control and stability of feedback systems.

4123. Mathematical Methods for Engineering 3(3-0)

Prerequisite: MATH 2534.

The use of Fourier series, linear algebra, transforms, and other advanced mathematical methods for the solution of a variety of engineering problems.

4133. Dynamics of Machines 3(2-2)

Prerequisite: MENG 3103.

Introduction to the concepts associated with the design of machine elements. Kinematics in the analysis of mechanisms: centroids, velocities and accelerations in plane mechanisms; computer modeling.

4143. Senior Design I 3(2-3)

Prerequisite: Student must be within one calendar year of graduation with a major in MENG.

Capstone design course emphasizing quantitative analytical/computer and experimental methods including optimization and simulation as applied to the design process for a broad range of practical problems in mechanical engineering including, sometimes, actual problems from local industries. Integrates knowledge gained from most of the required MENG courses in a major system design project.

4203. Mechanical Engineering Analysis 3(3-0)

Prerequisites: MATH 2534 and advanced standing in Mechanical Engineering.

Mathematical modeling, simulation, and statistical analysis of engineering systems and problems.

4213. Engineering Economics 3(3-0)

Prerequisite: Advanced standing in Mechanical Engineering.

The time value of economic resources such as cash flow diagrams, simple and compound interest, present worth, future worth, equal payment series, and the economic evaluation of engineering projects.

4233. Heat Transfer 3(2-3)

Prerequisites: MATH 3433 or PHYS 4303, and MENG 3323 or concurrent enrollment therein.

Fundamental laws relating to heat transfer including steady and transient heat conduction, forced convection, natural convection, and radiation. Introduction to heat exchanger design.

4243. Senior Design II 3(2-3)

Prerequisite: MENG 4143.

A continuation of MENG 4143.

(MENT) MANUFACTURING ENGINEERING TECHNOLOGY

1334. Fluid Power I (formerly 2334) 4(2-4)

The study of components used in hydraulic and pneumatic systems. The students will also learn to size components, analyze, and design fluid power circuits using ANSI fluid power diagrams.

1342. Fluid Power II (formerly 2343) 2(1-2)

Prerequisite: MENT 1334.

The study and design of hard-wired electrical ladder logic as applied to fluid power circuits. The student will also learn to analyze cartridge valve circuits. The students work in groups and design and build a machine tool using fluid power and mechanical components with electrical ladder logic.

2123. Manufacturing Processes I (formerly 1123) 3(2-3)

General introduction to materials, processes, and equipment used in manufacturing. Includes industrial tours. Laboratory emphasis will be on machine tool processes.

2143. Manufacturing Processes II (formerly 1143) 3(2-3)

Theory of welding, casting, powder metallurgy, and other processes. Includes industrial tours. Laboratory emphasis will be on welding processes.

3103. Statics 3(3-0)

Prerequisite: MATH 1433.

Composition and resolution of forces. Equilibrium of forces acting on structures and machines. Friction, moments, couples, centroids, and moments of inertia.

3134. Material Science 4(2-4)

Prerequisites: MATH 1233, CHEM 1143 or high school chemistry.

The study of the physical and mechanical characteristics of materials and an emphasis on building and manufacturing materials. The effect of chemical composition, mechanical treatment, and thermal or heat treatment upon material properties will be discussed.

3333. Engineering Economy and Cost Analysis 3(3-0)

Prerequisites: Junior standing, MATH 1233.

Application of economic analysis to engineering decisions. Considerations include cost, value, depreciation, interest, worth, rate of return, and inflation. Use of a computer to solve problems will be required.

3403. Automation I (formerly 4403) 3(2-2)

Prerequisites: MENT 1342 or a knowledge of electrical ladder logic. The student

must have a knowledge of a high level computer language such as taught in CMPS 1043.

The study of PLC's, robotics, design for automation, automated material handling and storage systems, automated inspection, fixed and flexible automation.

3503. Automation II (formerly 4502) 3(2-2)

Prerequisites: MENT 3403, PHYS 1244 or 2014.

The study of CNC, DNC, servo feedback systems (in particular servo hydraulic feedback systems), computer integrated manufacturing, shop floor control, flexible manufacturing systems, and additional PLC programming.

3993. Cooperative Manufacturing Engineering Technology Education

Practicum

3(0-3)

Prerequisites: Junior standing and a practicum agreement with a selected manufacturer or other industry.

This course provides students with opportunities to integrate the basic principles of manufacturing engineering technology obtained from the program's courses to actual applications in manufacturing or related environment. The course provides professional experiences in manufacturing or related technology prior to graduation, allowing students to have an understanding of basic principle applications.

4103. Strength of Materials 3(3-0)

Prerequisites: MATH 1634, MENT 3103.

Stress and strain and their relation to loads. Axial, torsional and bending loads, beam deflection, columns and combined stresses. Applications emphasized.

4113. Basic Instrumentation (formerly 3113) 3(2-2)

Prerequisite: PHYS 1244 or 2014.

Measurement of temperature, pressure, flow and other variables. Study of sensing and transmission of pneumatic and electrical signals for use in industrial control systems. Use of a computer for word processing and graphing will be required.

4213. Thermodynamics (formerly 3213) 3(3-0)

Prerequisites: PHYS 1144, MATH 1634.

Basic scientific principles of energy and behavior of substances as related to engines and systems. Gas laws, vapors, and engine cycles.

4603. Production Planning and Control 3(3-0)

Prerequisite: ENDR 2134.

Forecasting, motion and time study, inventory control, ergonomics, learning curves, optimization techniques, safety, plant layout, concurrent engineering, design for manufacturing, and related topics such as maintenance.

4742. Capstone Project 2(0-4)

Prerequisites: Senior standing and written permission of the department chair. (Student must be within two regular semesters of graduation, or must have finished all required MENT courses.)

A senior project utilizing the knowledge the student has gained from MENT courses. The project will be conducted at a local manufacturer and will require a report and a presentation.

4911, 4912. Selected Topics 1-2 semester hours

Prerequisite: Consent of the instructor.

Selected topics in manufacturing engineering technology. May be repeated for credit when topics vary.

(MGMT) MANAGEMENT**3013. Organizational Behavior in Business** 3(3-0)

Prerequisite: Junior standing or above or consent of the chair.

A study of the behavior of people at work in all forms of organizations. Topics to be covered include the fundamentals both of organizations and of organizational behavior, including individual differences, attitudes, values, ethics, motivation, group dynamics, decision-making, conflict, power, change, stress, leadership, job design, and organization structure. Also includes the development of management theory, as well as international and technological management, and self-assessment.

3453. Operations Management 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, MATH 1203 or MATH 1233.

Study of concepts, issues, and techniques for systems of production. Development of a basic understanding of the manufacturing function in industry.

3783. Entrepreneurship 3(3-0)

Prerequisite: Junior standing or above or consent of the chair.

Study of entrepreneurship: how to go about starting, financing, and running a successful new business. Topics covered will include: characteristics of successful entrepreneurs, the idea, business plan, sources of capital, self-development, recruiting, forecasting, and financial planning. A term project will involve the development of a business plan for an actual proposed new business.

4033. Quantitative Methods (same as ECON 4033) 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and BUAD 3213 or equivalent.

Methods and application of operations research including topics such as linear programming, queuing, simulation, PERT, networks, transportation, and Markov analysis.

4213. Human Resource Management 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and MGMT 3013.

Personnel and human resource policies and practices related to procuring and training employees, development, careers, job analysis, basic compensation, equal opportunity, and fairness. Also looks at human resource philosophy and the national/international arena.

4413. Human Resource Perspectives 3(3-0)

Prerequisite: Senior standing in business administration or consent of the chair.

Human resource policies and practices relating to benefits, performance appraisal, rewards, motivation, communications, labor relations, and health and safety. Problem solving, applications orientation with emphasis on human resource manager's job.

4513. Employment Relations 3(3-0)

Prerequisite: Senior standing in business administration or consent of the chair.

An experiential study of human relations in varied employment settings, with special emphasis on communications, self-esteem, ethics, motivation, trust, emotional balance, professionalism, team building, conflict, labor-management relations, dispute resolution, and diversity. Extensive use of case analysis, incident-techniques, and panel discussions.

4613. Supervisory Management 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and MGMT 3013.

A study of the art of working with and through people as a first level manager or supervisor or team leader. Topics include the role of supervisory management; the man-

agement functions of planning/decision making, organizing, delegation, motivation, counseling, discipline, and control; and change, stress, and time management. Historical, ethical, and international dimensions will be considered.

4843. Management of Small Enterprises 3(3-0)

Prerequisite: Junior standing or above or consent of the chair.

A study of small business management issues that arise during the early years of a new business. Comprehensive look at the business functions as they relate to small enterprises.

4853. Strategic Management 3(3-0)

Prerequisite: Graduating senior in business administration or consent of the chair.

Formulation and implementation of top-level managerial strategy. Topics include internal/external analysis, business, corporate, and international strategy, competitive dynamics, acquisition/restructuring, strategic leadership, and innovation. Students apply course concepts by developing a strategic case analysis and by participating in a computer business simulation.

4893. Internship in Management 3(3-0)

Prerequisites: Junior standing or above and consent of the chair and the dean.

Field experience in selected areas of business administration with local or regional organizations. May involve a specific project or theoretical integration with the "real world." May be repeated once. Must be approved with all paperwork completed prior to registration. Total hours granted for internships in all areas of business administration may not exceed six hours of credit.

(MKTG) MARKETING

3723. Principles of Marketing 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and ECON 2433 or equivalent.

A description and analysis of business activities designed to plan, price, promote, and distribute products and services to customers. Topics studied include the marketing environment, consumer buying habits and motives, types of middlemen, marketing institutions and channels, governmental regulations, advertising, and current marketing practices.

3763. Professional Selling 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and MKTG 3723.

Professional selling principles and practices for business. Includes principles of communication, listening, selling yourself, and selling a product. Students develop and present two sales presentations.

3803. Marketing on the Internet 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and MKTG 3723.

An introduction to the World Wide Web as an online marketing tool. Includes coverage of user characteristics and behavior, Web technology, design, and management of Web pages as a distribution and marketing communication medium.

3823. Consumer Behavior 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and MKTG 3723.

An exploration and evaluation of the extensive body of research evidence pertaining to the consumer, and an assessment of the marketing implications of the various processes and facets of consumer motivation.

4143. Marketing Research 3(3-0)

Prerequisites: Senior standing in business administration or consent of the chair, BUAD 3213, and MKTG 3723.

Emphasizes the importance and use of marketing research in U.S. businesses. Includes a detailed analysis of the research process from the formulation of the problem to the preparation of the research report. Each student will complete a research project.

4203. Promotion Management 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and MKTG 3723.

An overview of the broad field of promotion. Including promotional program selection, media selection, and determination of advertising effectiveness and coordination of the advertising function with the other promotional tools of personal selling and sales promotion.

4223. Retailing 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and MKTG 3723.

Philosophy and techniques of modern retail merchandising; store location, traffic studies, store layouts and arrangements, store organization, merchandising budget system, and store policies.

4233. Current Marketing Topics 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and MKTG 3723.

Content will vary each semester course is taught. Topics are selected in order to keep marketing majors abreast of contemporary marketing topics. Course may be repeated for credit when topics change.

4303. Sales Management 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and MKTG 3723.

Basics of first-level management in a sales setting. Topics include the boundary spanning role, strategic programs, planning, organizing, staffing, directing and controlling the sales and sales force operation.

4643. International Marketing 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and MKTG 3723.

A survey of international marketing, world markets, political restraints in trade, and international marketing practices.

4723. Services Marketing 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and MKTG 3723.

An understanding of the unique characteristics of services industry, the marketing challenges created by these characteristics, the marketing tools to deal with these challenges, and the strategic issues of utilizing these marketing tools.

4743. Advanced Marketing Problems 3(3-0)

Prerequisites: Senior standing in business administration or consent of the chair, and MKTG 3723.

The utilization of oral and written cases in solving problems in the areas of marketing management and marketing strategy. Emphasis is placed on simulated problem solving and decision making in the marketing environment.

4753. Marketing Management 3(3-0)

Prerequisites: Junior standing or above or consent of the chair, and MKTG 3723.

Marketing management including a study of qualitative and quantitative market analysis, product distribution, sales management functions, sales organization, sales promotion functions, and sales control.

4893. Internship in Marketing 3(3-0)

Prerequisites: Junior standing or above or consent of the chair and the dean.

Field experience in selected areas of marketing with local or regional businesses.

May be repeated once. Must be approved with all paperwork completed prior to registration. Total hours granted for internships in all areas of business administration may not exceed six hours of credit.

(MLSC) MILITARY SCIENCE

These are Air Force ROTC courses taught at the University of North Texas, Denton, Texas. For more information, see page 113.

1031. 1041. **Foundations of the United States Air Force** 1(1-1)

Survey of the structure and missions of Air Force organizations; officership and professionalism; and an introduction to communication skills. (AERO 1030, 1040)

2031. **Evolution of the United States Air Force Air and Space Power** 1(1-1)

Focus on factors contributing to the development of air power from the earliest beginnings through two world wars; the evolution of air power concepts and doctrine; and assessment of communicative skills. (AERO 2030)

2041. **Evolution of the United States Air Force Air and Space Power** 1(1-1)

Focus on concepts preparatory to developing officer leadership skills; ethics and values, group problem solving, leadership methods, and communications. (AERO 2040)

3314. 3324. **Leadership and Management** 4(3-1)

Prerequisite for 3324: MLSC 3314.

Study of leadership and quality management fundamentals, professional knowledge, leadership ethics and communication skills required of an Air Force officer. Case studies are used to examine Air force leadership and management situations as a means of demonstrating and exercising practical application of the concepts being studied. (AERO 3310, 3320)

4314. 4324. **National Security** 4(3-1)

Prerequisite for 4314: MLSC 3314, 3324.

Prerequisite for 4324: MLSC 4314.

Examines the need for national security, analyzes the evolution and formulation of the American defense policy, strategy, and joint doctrine; investigates the methods for managing conflict; and overview of regional security, arms control and terrorism. Special topics of interest focus on the military as a profession, officership, the military justice system, and current issues affecting military professionalism.

(MUSC) MUSIC

(See additional MUSC courses in ensemble beginning on page 288.)

(See AMUS - Applied Music courses beginning on page 217.)

1033. **The Appreciation of Music** (TCCNS = MUSI 1306/1310) 3(3-0)

A course designed to increase the variety and depth of the student's exposure to music and to enhance better understanding and enjoyment of music as an art. Offered as traditional music appreciation or jazz/rock music appreciation.

1101. **Performance Class** 1 semester hour

A course designed to cover all aspects of performance relating to the student's performing medium. Where applicable, areas covered will be pedagogy, history, diction, literature, instrument maintenance, interpretation, and stage presence. Meets one hour a week for one hour credit.

1103. **Piano Class for Non-Music Majors** 3(3-0)

A survey of piano and harpsichord literature from 1685 to the twentieth century. Concurrent class instruction in piano.

1111. Beginning Piano 1(0-2)

Class instruction in piano for students with no previous background; emphasis on the development of fundamental skills. Majors/minors only.

1121. Piano Class 1(0-2)

Prerequisite: Ability to read treble and bass clefs.

Emphasis on basic skills to pass the piano proficiency. Majors/minors only. May be repeated for credit.

1211. Diction I 1 semester hour

A beginning course for the study of singers' diction. The International Phonetic Alphabet will be learned and applied to English, Italian, and Latin pronunciation.

1221. Diction II 1 semester hour

Prerequisite: MUSC 1211.

A beginning course for the study of German and French pronunciation. A working knowledge of IPA is expected.

1601. Elementary Sight-Singing and Ear Training 1(0-2)

Singing in treble and bass clefs with introduction to alto clef, major, and minor modes. Recognition of intervals and triads and melodic dictation. Enrollment limited to students who are enrolled in or have completed MUSC 1603.

1603. Theory I (TCCNS = MUSI 1311) 3(3-0)

Part writing of figured bass exercises and melody harmonizations using triads. Composing on a small scale will be introduced. MUSC 1601 should be taken concurrently.

1611. Elementary Sight-Singing and Ear Training 1(0-2)

Prerequisite: MUSC 1601.

A continuation of MUSC 1601. Enrollment limited to students who are enrolled in or have completed MUSC 1613.

1613. Theory II (TCCNS = MUSI 1312) 3(3-0)

Prerequisite: MUSC 1603.

A continuation of MUSC 1603. MUSC 1611 should be taken concurrently.

2603. Theory III (TCCNS = MUSI 2311) 3(3-1)

Prerequisite: MUSC 1613.

Sight-singing more difficult melodies. Dictation of more advanced melodies. Introduction of two-part and four-part dictation. Part-writing of figured basses and melodies using altered chords, modulations, 9th, 11th, and 13th chords. Students will also have the opportunity to freely compose several short works in various styles using some of the more advanced chords as they are studied. Composing in various styles involving advanced chords will be included.

2613. Theory IV (TCCNS = MUSI 2312) 3(3-1)

Prerequisite: MUSC 2603.

A continuation of MUSC 2603.

3101. Performance Class 1 semester hour

A continuation of MUSC 1101.

3141. Woodwind Instruments Class 1(1-1)

Instruments comprising the woodwind section of the orchestra and band, including practical experience in playing these instruments. The principles concerning history, correct embouchures, tonguing, and phrasing are presented in class. Reed-making and reed-repairing methods are included.

3161. Brass Instruments Class 1(1-1)

Instruments which make up the brass section of the orchestra and band, including practical experience in playing these instruments. The principles concerning history, correct embouchures, tonguing, and phrasing are included. Mastery of the fundamentals of playing these instruments is included to prepare for the direction of school orchestras and bands.

3181. String Instruments Class 1(1-1)

A course designed to familiarize students with the instruments of the string orchestra; namely, violin, viola, violincello, and bass viol. A study of bowing techniques, positions, and fundamentals which are necessary for the correct teaching of these instruments in the public schools.

3211. Diction III 1 semester hour

Prerequisite: MUSC 1211.

Advanced study of Italian and Latin pronunciation. A working knowledge of IPA is expected.

3221. Diction IV 1 semester hour

Prerequisite: MUSC 1221.

Advanced study of German and French pronunciation. A working knowledge of IPA is expected.

3281. Voice Class 1(1-1)

Group instruction and practice in the fundamentals of singing such as breath control, tone production, consonant formations, etc. Individual assignments as indicated by the student's own problems, background, and ability.

3291. Percussion Instruments Class 1(1-1)

A study of the instruments comprising the percussion section of the orchestra or band. Mastery of the fundamentals in playing these instruments is included to prepare students for the direction of school orchestras or bands.

3632. Analysis of Musical Form 2 semester hours

Analysis of musical structure including simple binary and ternary forms, the rondo and sonata-allegro forms, and contrapuntal applications.

3662. Orchestration 2 semester hours

Prerequisite: MUSC 2613.

Techniques of scoring and part extraction for orchestra. Special consideration to aspects of school and church ensembles. Problems involving combinations of instrumental groups with other media. As part of the final projects, students will orchestrate an original composition 16-24 measures in length. The original will be in a keyboard style of the student's choosing with the approval of the instructor.

3723. Western and World Music Literature 3(3-0)

A survey of music through periods, composers, and genres. Study of traditional western European art music, folk music, and music of diverse cultures, including America, Africa, and Asia. Emphasis will be given to the development of study skills necessary for further study in any branch of music history through analysis and identification of written scores and aural examples. For music majors; open to others as space permits.

3733. Music History I 3(3-0)

Prerequisite: MUSC 3723.

A study of the development of music and the related arts from early Greek music through the Baroque period. Recorded illustrations of music show stylistic development of representative composers in each period.

3743. Music History II 3(3-0)

Prerequisite: MUSC 3723.

A study of the development of music and the related arts from the classical period through the Twentieth Century. Recorded illustrations of music show stylistic development of representative composers in each period.

3801. Instrument Repair 1 semester hour

Designed to familiarize students with the fundamentals of instrument repair. Includes care and maintenance, inspections, standard minor repairs, and emergency repairs.

3823. Piano Pedagogy I 3 semester hours

Principles and materials for the instruction of beginning piano students of all ages. Knowledge of the leading printed teaching methods and anthologies, and application of leveling principles through pedagogical composition assignments. Discussion of studio policies. Some in-class teaching. Two lessons of practice teaching per week required.

3833. Piano Pedagogy II 3 semester hours

Prerequisite: MUSC 3823.

Principles and materials for the instruction of intermediate and advanced piano students. Knowledge of the leading printed teaching methods and anthologies, and application of leveling principles through pedagogical composition assignments. Discussion of business practices and studio policies. Some in-class teaching. Two lessons of practice teaching per week required.

3842. Keyboard Literature I 2 semester hours

A survey of keyboard literature from its beginnings through the early Romantic composers. Recorded and student performances of literature used to illustrate various aspects of form and style.

3852. Keyboard Literature II 2 semester hours

A survey of keyboard literature during the Romantic, Impressionist, and 20th Century eras, coming as close to the present day as possible. Various national styles will be discussed, as will the divergent trends in 20th Century keyboard music. Recorded and student performances of literature.

3862. Choral Literature I 2 semester hours

A study of six major choral genres, performance practice and materials from the Renaissance through the 21st Century including a unit on world choral music.

3872. Choral Literature II 2 semester hours

Continuation of Choral Literature I with an emphasis on standards, procedures, and technique for the choral rehearsal.

4612. Practicum in Vocal Accompanying 2 semester hours

Prerequisite: Consent of instructor.

Survey of the song literature from the Italian, German, and French schools. Introduction to foreign language diction and coaching techniques. Development of score reduction skills.

4622. Practicum in Marching Band 2 semester hours

Prerequisite: Pass piano proficiency.

A study of the basic fundamentals of marching band, including history, drill design, music preparation and arranging, show preparation, and importance of auxiliary groups related to the marching band.

4632. Practicum in Instrumental Accompanying 2 semester hours

Prerequisite: Consent of instructor.

Survey of Instrumental Duo repertoire, including sonatas. Work in figured bass realization, orchestral reductions, and rehearsal techniques.

4813. Foundations of Music I 3(3-0)

A study of elementary music education as it relates to musical concepts, music-reading skills, the elements of music, performance, and materials.

4823. Foundations of Music II 3(3-0)

A study and evaluation of music procedures and basic concepts for music programs.

4833. Vocal Pedagogy 3(3-0)

Prerequisite: Consent of instructor.

A study of the principles and techniques of teaching voice. The history of teaching methods and procedures including those of the Italian and German schools is covered. Observation of teaching required.

4843. Basic Conducting 3(3-0)

For music majors and minors. Others may register with the consent of the instructor. Emphasis on basic conducting techniques, style, and interpretation.

4853. Instrumental Conducting 3 semester hours

Prerequisite: MUSC 4843.

Continuation, development, and expansion of MUSC 4843 with emphasis on instrumental conducting.

4862. Choral Conducting 2 semester hours

Prerequisite: MUSC 4843.

Continuation, development, and expansion of MUSC 4843 with emphasis on choral conducting.

4873. Foundations of Music III 3(3-0)

A course designed for music majors working toward the all-level certificate in music. Emphasis is placed upon the specific activities comprising an elementary music program, the materials and skills necessary for implementing such a program, and the integration of music with the total elementary school program. Students receive an introduction to multiculturalism and world music, with focus on the Andean music of South America. Includes laboratory experience in teaching beginning vocal and instrumental techniques individually, in small groups, and in larger classes.

4893. Music Technology 3 semester hours

Prerequisite: Consent of instructor.

A survey including advances in music technology, digital synthesis, sequencing, MIDI, desk-top music publishing, basic music acoustics, music applications of the Internet, recording, microphones, and sound systems. May be repeated for credit.

4963. Problems in Music 3 semester hours

Prerequisite: Consent of Chair.

Directed study on special problems in music. May be repeated for credit.

(MUSC) MUSIC ENSEMBLE

(See additional MUSC courses beginning on page 284.)

(See AMUS - Applied Music courses beginning on page 217.)

The term major ensemble as used in the curricula includes University Symphonic Band or University Marching Band for students concentrating in instrumental music and University Singers for students concentrating in vocal music. Students concentrat-

ing in keyboard music may select from any of the major ensembles mentioned above. Ensembles other than University Symphonic Band, University Marching Band, and University Singers are considered secondary.

1001, 3001. University Singers 1(0-4)

A select choral ensemble open to all students of the University who qualify by audition. At least four hours of rehearsal are required each week and members must participate in all public performances. An extended tour is taken in the spring. Choral music from all historical periods in various genres is explored and performed. The repertoire includes world music from a variety of cultures.

1011, 3011. Oratorio Chorus 1(0-3)

A choral organization open to all interested students and townspeople specializing in the performance of major works with orchestral accompaniment. Historical periods ranging from Renaissance to the 21st Century are varied each semester, as well as the birth origin of the individual composers, so as to provide a fresh multicultural musical experience with each major work.

1021, 3021. University Symphonic Band 1(0-4)

The Midwestern State University Symphonic Band is a select group representing all colleges on campus. The band tours annually and performs several concerts on campus and off campus. Membership is open to all students with band experience, who qualify by audition (spring semester).

1031, 3031. University Pep Band 1(0-2)

The Midwestern State University Pep Band meets twice weekly during the spring semester and performs for all home basketball games and selected outdoor activities. Membership is open to all students with band experience (spring semester).

1041, 3041. University Marching Band 1(0-6)

A group which represents all colleges on campus. During the fall semester, the band performs at MSU home football games. Membership is open to all students with band experience. One hour of credit is given each semester. Two hours credit may be substituted for one kinesiology activity course. May be repeated for credit (fall semester only).

1061, 3061. Wichita Falls Chamber Orchestra 1(0-2)

A large instrumental ensemble open to all interested students and townspeople. Membership is by audition. Fall and spring concerts are presented. Additional concerts for the community are scheduled as needed. Literature ranges from baroque to contemporary classics (fall and spring semesters).

1931, 3931. Opera Workshop (TCCNS = MUSI 1157) 1 semester hour

An ensemble open to all students by audition. Trains singers and directors in the special problems of the musical stage (spring semester).

1941, 3941. University Jazz Ensemble 1(0-3)

An instrumental ensemble representing students from all colleges on campus. The band tours each year and performs for local high school assemblies and civic club programs. Membership is by audition (fall and spring semesters).

1961, 3961. Chamber Ensemble 1 semester hour

Small ensembles devoted to the learning and performing of all styles of chamber music. Membership is by audition (fall and spring semesters).

1981, 3981. Midwestern Singers 1 semester hour

A chamber ensemble selected by audition from members of the University Singers. The Midwestern Singers perform a wide variety of music from different countries, ranging from madrigals and motets to vocal jazz arrangements from America and abroad.

**(MWSU) - MIDWESTERN STATE UNIVERSITY
SPECIAL PREFIX**

1003. Skills for Success 3(3-0)

This course examines learning and thinking processes with an emphasis on experiential application of effective reading, writing, and study strategies. Areas of study include information processing theory, cognitive and behavioral influences in motivation and concentration, assessment of learning and thinking styles and development of an individualized protocol for efficient and effective learning and review strategies.

1233. College Connections 3(3-0)

This course assists new students in their transition to the college environment and focuses on the cognitive and behavioral dimensions of learning. Emphasis is placed on the disciplines of written and oral communication. A career exploration project is required. Limited to new students.

1333. Leadership MSU 3(3-0)

This course is designed to introduce students to leadership concepts and develop an increased awareness of individual interests and abilities. It relies heavily on student involvement and is designed to encourage challenging and stimulating student interaction. The theory and history of leadership as well as the conceptual skills required by leaders, including team building, collaboration, innovation, conflict resolution, communications, and problem solving are emphasized.

1433. Honors Introductory Seminar 3(3-0)

This team-taught, interdisciplinary class is designed to guide Honors students in their transition to the University, to sharpen their academic skills, and to introduce them to University faculty members representing various fields of study. In this course, Honors students learn how to use various research methods to acquire and process knowledge in different fields, how to relate ideas learned in one discipline to those learned in others, and how to participate meaningfully in a learning community.

4433. Honors Capstone Seminar 3(3-0)

This course is designed to provide a venue for Honors students to take a more global view of their undergraduate experience, to work with students completing their studies in different fields in the study of a particular theme, and to present their research to their peers and faculty. The course engages students in a synthesis of knowledge and skills gained during their academic years and addresses the relevance of this knowledge and these skills for the students' future as contributing citizens.

(NURS) NURSING

3103. Theories and Concepts: Introduction to Nursing 3(3-0)

Prerequisite: Sophomore standing.

This course is an introduction to major concepts of concern in the discipline of nursing: person, environment, nursing, and health. Nursing theories and ethical-legal principles related to professional nursing practice are studied. Also addressed are the concepts of critical thinking, communication, and cultural awareness in the context of nursing process.

3203. Pathophysiologic Process 3(3-0)

Prerequisites: BIOL 1134, 1234, 3004, and chemistry (3 hours).

The study of physiologic and psychosocial disorders with emphasis on dynamics of the altered state. Focus is on interpreting diagnostic tests and predicting pathophysiologic adaptations which may occur as a result of these disorders.

3303. Theories and Concepts: Family Health Assessment 3(2-3)

Prerequisites: BIOL 1134 and 1234, Pre- or co-requisites: NURS 3103 (generic BSN); NURS 3203.

The focus of this course is on the assessment of the holistic person as an individual member of families, groups, and communities (IFGC). The role of the nurse in health promotion throughout the life cycle is explored by identifying normal findings. Emphasis will be placed on acquiring skills to record client histories, to perform physical assessments, and to communicate specific findings.

3306. Theories and Concepts: Basic Nursing (formerly 3307) 6(4-6)

Prerequisites: NURS 3203, 3303, ENGL 1113, 1123, MATH 1053 or 1233, PSYC 1103, and SOCL 1133, Pre-or co-requisite NURS 3313.

The course emphasizes the application of beginning theories and concepts fundamental to patient care through the life cycle. In both campus laboratory and clinical experiences the student acquires basic cognitive and psychomotor skills. Students are introduced to the impact cultural diversity has on the outcome of patient care. The nursing process is used to apply knowledge and critical thinking through demonstration of theory-based patient care.

3313. Theories and Concepts: Pharmacology in Nursing Practice 3(3-0)

Prerequisites: NURS 3103, 3303, concurrent enrollment in or completion of NURS 3306.

Explores the nurse's role in relationship to the principles of pharmacology and drug prototypes used to treat alterations or promote health in individuals, families, groups, and communities (IFGC) across the lifespan.

3323. Theories and Concepts: Community Nursing I 3(2-3)

Prerequisites: NURS 3103, 3203, and 3303.

The focus on the course is on the role of the nurse in the community. Students will be introduced to basic epidemiology, health promotion, disease prevention, health planning/teaching, cultural awareness, and state and local resources for community health. Assessment, planning and providing care to families, groups, and communities will be explored.

3406. Theories and Concepts: Mental Health Nursing 6(3-9)

Prerequisites: NURS 3313 and 3306.

Concepts and principles emphasized in this course pertain to communication, interpersonal relationship, and utilization of the nursing process in providing nursing care for clients manifesting psychosocial and/or psychiatric needs. Clinical and classroom discussions provide students with opportunities to develop a greater understanding of self, and to increase their ability in relating to individuals, families, groups, and communities (IFGC) in structured and non-structured settings.

3407. Theories and Concepts: Family Health Nursing I 7(4-9)

Prerequisites: NURS 3313 and 3306.

Application of theories and concepts across the span of adult life to include specific medical-surgical conditions. Emphasis will be placed on integrating previously learned cognitive, psychomotor, and affective knowledge in the holistic care of the individual client, his/her family, as well as groups and communities (IFGC), through application of the nursing process.

3503. Theories and Concepts: Nursing Research 3(3-0)

Prerequisites: Undergraduate statistics course; NURS 3306.

Basic concepts of research and related terminology are studied. Steps involved in conducting useful and sound research studies are explored. Focus is on analysis and evaluation of research reports/studies as they apply to nursing practice.

3705. Theories and Concepts: Advanced Nursing Seminar 5(4-3)

Provides a foundational understanding of theories and concepts related to nursing practice coupled with topics and issues in medical-surgical, maternal-child health, and mental health nursing offered at an advanced level for the registered nurse student. Current health trends, issues, research, and legislation influencing professional nursing are investigated. The role of the professional nurse as a provider of care, a coordinator of care, and a member of the profession is explored with emphasis on the differences accompanying baccalaureate nursing education. Discussion includes topics relevant to clinical practice, research, and education; and will include ethical, legal, political, and cultural aspects of health care, decision making, responsibility, and accountability.

4004. Theories and Concepts: Nursing of the Childbearing Family 4(2-6)

Prerequisites: NURS 3406 and 3407.

The focus of this course is on the application of theories and concepts used by the nurse to assist childbearing families to achieve their maximum potential. There is an emphasis on relationships within families, access to and use of resources, and lifestyle and cultural diversity. Reproductive processes and women's health issues are explored. The spectrum of nursing roles within the context of a variety of healthcare settings along with the process of decision making in healthcare is also explored.

4007. Theories and Concepts: Family Health Nursing II 7(4-9)

Prerequisites: NURS 3406 and 3407.

Provides a continuation of the application of theories and concepts across the span of adult life to include specific medical-surgical conditions. Emphasis is placed on integrating previously learned knowledge in more complex situations with the individual, his/her family, as well as groups and communities (IFGC), through application of the nursing process.

4014. Theories and Concepts: Pediatric Nursing 4(2-6)

Prerequisites: NURS 3406 and 3407.

The focus of the course is on the application of holistic nursing principles and concepts used by the nurse to assist families to achieve their maximum potential. Emphasis is on interrelationships and intra-relationships of children and their families as well as appreciation of cultural diversity. Nursing process will be pediatric specific, with special consideration to developmentally appropriate nursing care and ethical decision making.

4104. Theories and Concepts: Community Health Nursing II 4(2-6)

Prerequisites: NURS 3323, 4007, and 4014.

The focus is on application of holistic nursing principles in the community. Application of nursing process within the community will be explored. Utilization of epidemiological data, health promotion, disease prevention, health planning/teaching, and issues of diversity will be emphasized at the local, state, national, and global levels.

4107. Theories and Concepts: Community Health Nursing 7(4-9)

Prerequisites: NURS 4007 and 4017 (BSN generic).

Students are exposed to a variety of settings where the nurse functions in the community. Concepts relevant to community health nursing of epidemiology, health promotion, health planning/teaching, cultural awareness, consumerism, legislation, and world health concerns are explored. Emphasis on planning and providing nursing care for individuals, families, groups, and communities is related to community assessment, health promotion/patient education, and primary-secondary-tertiary prevention.

4123. Statistics for the Health Sciences 3(3-0)

The focus of this course is to provide a statistics course specifically for health science majors using techniques and data structures relevant to clinical investigations.

General topics include choosing correct procedures and using statistics to understand clinical data. Specific topics include but are not limited to study design, central tendency and variability, probability, repeated measures analysis of variance, data association and prediction, and evaluating diagnostic procedures.

4305. Theories and Concepts: Nursing Management (formerly 4307) 5(4-3)
Prerequisites: NURS 4007, 4004, and 4014.

Emphasis is on the management of nursing care and the management of personnel in health care settings. Theories of management, leadership, economics, and change are explored including the varying patterns of health care delivery and strategies for implementation. Case management as a nursing role in a managed care environment and strategies for implementation of the role are explored including the assessment and evaluation of quality within an organization.

4317. Nursing Management for the Registered Nurse 7(4-9)

Emphasis is on the management of nursing care and the management of personnel in health care settings expanding upon the expertise of the registered nurse. Theories of management, leadership, economics, and change are explored including the varying patterns of health care delivery and strategies for implementation. Case management as a nursing role in a managed care environment and strategies for implementation of the role are explored including the assessment of evaluation of quality within an organization.

4403. Special Topics 3(1-3)

Prerequisite: Senior standing or consent of Chair.

Theoretical and/or clinical application of selected nurses issues.

4503. Selected Nursing Issues 3(3-0)

Prerequisite: Consent of instructor or Chair.

Selected nursing issues. To be conducted on an independent basis with the student and selected nursing faculty member. Issues may vary.

4605. Theories and Concepts: Clinical Decision Making (formerly 4603) 5(3-6)

Prerequisites: Senior standing, NURS 4007, 4004 and 4014; concurrent enrollment or completion of NURS 4104 and 4305.

This course is an application of clinical judgment skills. Emphasis is placed on integrating previously learned concepts and theories with the student in the role of coordinator of care. Critical thinking is applied in resolving actual clinical problems.

(PHIL) PHILOSOPHY

1033. The Primary Concerns of Philosophy (TCCNS = PHIL 1301) 3(3-0)

Prerequisites: English 1113 and 1123.

Methods and problems related to man's search for meaning in the Kosmos.

1533. Logic (TCCNS = PHIL 2303) 3(3-0)

Prerequisites: English 1113 and 1123.

The study of principal methods of organizing thought in ordinary language.

2033. Ethics (TCCNS = PHIL 2306) 3(3-0)

Prerequisites: English 1113 and 1123.

What is the "good" for man: an inquiry into the philosophy of morality.

2233. Classical Philosophy (TCCNS = PHIL 2316) 3(3-0)

Prerequisites: English 1113 and 1123.

A study of the pre-Socratics, Plato, and Aristotle. Discussion of the contemporary uses of classical philosophy.

2633. Contemporary Philosophy (formerly 3433) 3(3-0)

Prerequisites: English 1113 and 1123.

Twentieth century philosophers, including the methods and history of the various movements. May be repeated when topics vary.

3233. Modern Philosophy (formerly 2433) 3(3-0)

Prerequisites: English 1113 and 1123.

A survey of philosophical problems from Descartes through Kant.

3533. Topics in Philosophy 3(3-0)

Prerequisites: English 1113 and 1123.

Specialized studies in philosophy. May be repeated when topics vary.

4993. Problems in Philosophy 3(3-0)

Prerequisites: English 1113 and 1123.

Individual directed readings, with approval of philosophy chair and college dean. May not be repeated.

(PHYS) PHYSICS**1144. General Physics** (TCCNS = PHYS 1401) 4(3-2)

Prerequisite: MATH 1433 or consent of department chair.

Mechanics, heat, and sound. The first part of a two semester course in classical and modern physics designed for students who desire a quantitative understanding of physics without calculus.

1244. General Physics (TCCNS = PHYS 1402) 4(3-2)

Prerequisite: PHYS 1144.

Electricity and magnetism, optics, and modern physics. The second of a two semester course in classical and modern physics designed for students who desire a quantitative understanding of physics without calculus.

1533. Descriptive Astronomy 3(2-2)

Prerequisite: MATH 1003 or equivalent.

A survey course in astronomy designed to meet the needs of students majoring in liberal arts, business, and education. Lectures, films, demonstrations, and laboratory work, including the use of the planetarium and telescopes, will be utilized.

1624. Mechanics, Wave Motion, and Heat 4(3-2)

Prerequisite: Credit or registration in MATH 1634.

The first part of a two-semester course in classical and modern physics for students majoring in science.

2014. Electronics I 4(3-2)

Prerequisite: MATH 1433 or consent of department chair.

Units, electric fields, DC series and parallel circuits, Kirchoff's Laws, network analysis, and AC circuits.

2114. Electronics II 4(3-2)

Prerequisite: PHYS 2014.

Introduction to semiconductor devices, basic amplifiers and feedback, symbolic logic, Boolean algebra, basic TTL gates, counters and flip-flops, shift registers.

2644. Electricity and Magnetism and Optics 4(3-2)

Prerequisites: PHYS 1624 and credit for or registration in MATH 1734.

The second part of a two-semester course in classical and modern physics for students majoring in science.

3313. Mechanics 3(3-0)

Prerequisites: PHYS 1624 and credit for or registration in MATH 2534 or 3433.

A mathematical treatment of classical mechanics. Topics includes vector analysis, Newtonian mechanics, oscillations, calculus of variations, and Lagrangian and Hamiltonian dynamics.

3323. Electromagnetic Field Theory I 3(3-0)

Prerequisites: PHYS 2644, MATH 2534 and 3433.

A mathematical treatment of classical electromagnetic theory. Topics include vector analysis, electrostatics, methods for solving Laplace's and Poisson's Equations, electric and magnetic fields in matter, and electrodynamics.

3333. Thermodynamics 3(3-0)

Prerequisites: PHYS 2644 and credit for or registration in MATH 2534.

A mathematical treatment of the fundamentals of thermal physics. Topics include the concept of temperature, equations of state, first and second laws of thermodynamics, entropy, change of phase, and thermodynamic functions.

3343. Modern Physics I 3(3-0)

Prerequisites: PHYS 2644 and credit for or registration in MATH 2534 or 3433.

A course in relativity and elementary quantum mechanics. Topics include space-time, relativistic energy and momentum, Heisenberg's Uncertainty Principle, Schrodinger's Equation, observables and operators, bound states, potential barriers, and the hydrogen atom.

4303. Mathematical Methods of Physics 3(3-0)

Prerequisite: MATH 2534 or 3433.

A course presenting mathematical techniques used in physics and engineering. Topics include infinite series, integral transforms, complex variables, matrices and tensors, special functions, partial differential equations, Green's functions.

4323. Electromagnetic Field Theory II 3(3-0)

Prerequisites: PHYS 3323, MATH 2534 and 3433.

A continuation of PHYS 3323. Topics include Maxwell's Equations, Conservation Laws, Electromagnetic Waves, Potentials and Fields, Radiation and Relativistic Electrodynamics.

4343. Modern Physics II 3(3-0)

Prerequisite: PHYS 3343.

The constitution of the atomic nucleus; natural radioactivity; artificially induced nuclear transmutations; alpha, beta, and gamma decay; nuclear reactions; nuclear structure and nuclear forces; nuclear fission; neutron physics.

4353. Quantum Physics 3(3-0)

Prerequisite: PHYS 3343, MATH 3433, or consent of instructor.

The Schroedinger Equation, one dimensional systems; the Heisenberg Uncertainty Principle; angular momentum; two and three dimensional systems; approximation methods; scattering theory.

4833. Theoretical Problems 3 semester hours

Prerequisite: Permission of the chair of Physics.

4911, 4933. Experimental Problems 1, 3 semester hours

Prerequisite: Permission of the chair of Physics.

(POLS) POLITICAL SCIENCE**1333. American Government (TCCNS = GOVT 2301) 3(3-0)**

This course, together with Political Science 1433, fulfills the legislative requirement of six semester hours of American government. A study of the American national and state governmental system. Special attention given to Texas. The American experiment in federalism and democracy; origin and development of the United States Constitution; federal state relations; civil liberties; the individual as a citizen; political parties.

1433. American Government (TCCNS = GOVT 2302) 3(3-0)

Legislative, executive, and judicial functions in the United States and Texas governments; foreign policy; the conduct of foreign relations; national defense; government and the economy; governmental services.

2523. Foundations of Government and Politics 3(3-0)

Study of major concepts, theories, and principles of government and politics. Designed to provide a basic understanding of the institutions and processes of government.

3213. Research Methods 3(3-0)

Prerequisites: Six hours of political science.

Introduction to legal and social science research methods with emphasis on practical application. Includes basic procedures of survey research, quantitative analysis, and research design development.

3233. American Political Parties and Pressure Groups 3(3-0)

Prerequisites: Six hours of political science.

The American political system and pressure groups, with particular attention to their development, present structures, and roles in the American political system.

3313. Introduction to Political Theory 3(3-0)

Prerequisites: Six hours of political science.

A basic survey and evaluation of the major classical and contemporary theories of politics. Special emphasis on the influence of classical political philosophy on modern democratic theory.

3443. Municipal Government and Metropolitan Problems 3(3-0)

Prerequisites: Six hours of political science.

Study of the structure, functions, and politics of local government with special emphasis on the problems of governing metropolitan areas.

3533. Government and Politics of Western Europe 3(3-0)

Prerequisites: Six hours of political science.

A comparative study of modern political institutions and processes, with particular attention to the United Kingdom, France, and Germany.

3543. Government and Politics of Eastern Europe 3(3-0)

Prerequisites: Six hours of political science.

A comparative study of the political institutions and processes in the region, with particular attention to Poland, Hungary, and the Czech Republic.

3553. Government and Politics of Central Eurasia 3(3-0)

Prerequisites: Six hours of political science.

A comparative study of the political institutions and processes of the former Soviet republics with particular attention to the Russian Federation.

3563. Government and Politics of the Middle East 3(3-0)

Prerequisites: Six hours of political science.

A comparative study of the political institutions and processes with particular attention to Middle East nation states.

3573. African Politics 3(3-0)

Prerequisites: Six hours of political science.

This course introduces students to African politics and society by depicting in broad strokes the complexities and diversities of the African world since independence, and investigates new paths of understanding into intricate dynamics.

3583. Government and Politics of Latin America 3(3-0)

Prerequisites: Six hours of political science.

A comparative study of the political institutions and processes of eight Latin American countries. Special attention is given to contemporary topics that affect the region such as populism, bureaucratic authoritarianism, drug trafficking, human rights, and neo-Liberal reform.

3653. International Relations 3(3-0)

Prerequisites: Six hours of political science.

A study of the nation-state systems; critical analysis of principles, problems, and factors involved in the foreign policies and relations of the various states.

3843. The Presidency 3(3-0)

Prerequisites: Six hours of political science.

A study of the Presidency and the executive branch in the American system.

3933. The Judicial System and Process 3(3-0)

Prerequisites: Six hours of political science.

A study of the American judicial system and process at the local, state, and national levels. Topics include judicial selection and judicial policy-making.

4043. Legislation (formerly 4013) 3(3-0)

Prerequisites: Six hours of political science.

A study of the role of Congress and the state legislature in the American system.

4133. Public Administration 3(3-0)

Prerequisites: Six hours of political science.

Examination of the basic principles involved in the administration and execution of public policy. Includes such topics as organizational theory, personnel management, budgetary procedures, and the politics of administration.

4153. Quantitative Methods 3(3-0)

Prerequisites: Six hours of political science and POLS 3213.

Examines theory building and testing, statistical modeling, multivariate analysis, and applications for general social science research.

4163. Federalism and Intergovernmental Relations 3(3-0)

Prerequisites: Six hours of political science.

An analysis of the relationships among federal, state, and local governments in the United States with emphasis on the administrative aspects of the expanding area of inter-governmental cooperation.

4173. Organizational Behavior and Decision Making 3(3-0)

Prerequisites: Six hours of political science.

Examines individual, interpersonal, and group behavior in the organizational context utilizing both theoretical and quantitative approaches in the study of these concepts.

4233. American Constitutional Law I 3(3-0)

Prerequisites: Six hours of political science.

The development of the Constitution through the interpretations of the Supreme Court.

4243. American Constitutional Law II 3(3-0)

Prerequisites: Six hours of political science.

A continuation of Political Science 4233. Additional cases in constitutional development. A study of civil rights and civil liberties.

4333. International Law 3(3-0)

Prerequisites: Six hours of political science.

The role of the law of nations in world politics, with emphasis on the history, theories, sources, and enforcement of international law.

4443. Black Politics 3(3-0)

Prerequisites: Six hours of political science.

An examination of the political behavior of Black Americans in the United States by focusing on the relationship between Black Americans and the various actors, institutions and processes of the American Political System. Special emphasis on contemporary problems, trends, and developments of Black Politics.

4453. Political Protest and Revolutions 3(3-0)

Prerequisites: Six hours of political science.

An examination of the study of political protest concentrating on the dynamics of the interaction between the regime and the dissidents. This course provides students with both a factual background of modern political revolutions and protest movements as well as examining such theoretical issues as the collective action problem, relative deprivation and resource mobilization theory.

4553. Twentieth Century Political Thought 3(3-0)

Prerequisites: Six hours of political science.

An analysis of recent trends in political thought.

4653. International Political Economy 3(3-0)

Prerequisites: Three hours of economics and six hours of political science.

An examination of the interaction of economics and politics with specific attention to issues in international trade, international finance, and international economic and political development.

4853. Contemporary American Foreign Policy 3(3-0)

Prerequisites: Six hours of political science.

Study of policies and problems in United States foreign relations since World War II.

4901. Problems in Government and Politics 1(1-0)

Prerequisites: Six hours of political science and consent of the department chair.

Supervised reading and research in the field of government and politics.

4902. Problems in Government and Politics 2(2-0)

Prerequisites: Six hours of political science and consent of the department chair.

Supervised reading and research in the field of government and politics.

4903. Problems in Government and Politics 3(3-0)

Prerequisites: Six hours of political science and consent of the department chair.

Supervised reading and research in the field of government and politics. May be repeated for credit when the topics vary.

4923. Seminar 3(3-0)

Prerequisites: Six hours of political science and consent of the instructor.

Study and research of problems in government and political science. May be repeated for credit when topics vary.

4933. Issues in World Politics 3(3-0)

Prerequisites: Six hours of political science.

Analyses of contemporary problems in international politics.

4953. Public Personnel Administration 3(3-0)

Prerequisites: Six hours of political science.

An intensive examination of personnel administration in the public service including such topics as recruitment procedures, classification systems, promotion policies, and collective bargaining in a public merit system.

4973. Internship in Political Science 3 semester hours

Prerequisites: 12 hours of political science and approval of the department chair.

Field experience in selected government agencies.

(PSYC) PSYCHOLOGY

1103. General Psychology (TCCNS = PSYC 2301) 3(3-0)

Introduction and survey of the basic concepts of psychology as a science of behavior and mental processes. Includes research and current information in the areas of learning, states of consciousness, human development, personality, and abnormal behavior.

2203. Human Behavior 3(3-0)

Prerequisite: PSYC 1103.

A continuation of the introductory examination of psychology. Topics include biological psychology, sensation and perception, motivation, emotion, industrial/organizational psychology, and social psychology.

3023. Human Sexuality 3(3-0)

Prerequisite: PSYC 1103. May also be taken for sociology credit.

Basic study of human sexual behavior. Topics to be covered include psycho-sexual development, sexual attitudes and information, ethics, sexual deviations, sexual problems, therapy, and current issues.

3233. Developmental Psychology 3(3-0)

Prerequisite: PSYC 1103 or consent of instructor.

A study in the development of behavior and mental processes across the life span. Includes normal and abnormal behavior. Also offered for nursing credit.

3313. Psychological Statistics 3(3-0)

Prerequisite: MATH 1003 or equivalent.

Introduction to descriptive and inferential statistics. Topics include data distributions, descriptive statistics, sampling distributions, interval estimation, one- and two-sample significant difference tests, one-way analysis of variance, correlation, and regression. The course also examines computerized statistical analysis.

3403. Social Psychology 3(3-0)

Prerequisites: PSYC 1103, 2203. May also be taken for sociology credit.

Interdisciplinary experimental research linking psychology and sociology, which deals with the influence of groups and social situations on the individual. Includes as areas of study: social and person perception, intragroup and intergroup relations, attitudes and attitude change, conformity, prejudice, leadership, and power structures.

3603. Abnormal Psychology 3(3-0)

Prerequisites: PSYC 1103, 2203.

Historical views of mental disorders; the problems of identifying and classifying deviant behavior; current research concerning the background, development, symptoms, dynamics, and prognosis of the major categories of mental disorders.

3703. Theories of Motivation 3(3-0)

Prerequisites: PSYC 1103, 2203.

An examination of the concepts of needs, drives, and motives as they contribute to human behavior. Motivational processes are examined ranging from the primary, physiological drives, to higher-order motives like achievement, curiosity, and cognitive consistency.

3853. Health Psychology 3(3-0)

Prerequisites: PSYC 1103, 2203.

An examination of the contributions of psychology to the promotion and maintenance of health, the prevention and treatment of illness, and the improvement of the health care system and health policy formulation. Topics include the mind-body relationship, health-enhancing and health-compromising behaviors, stress and coping, patient-practitioner interaction, pain management, and psychological issues in chronic and terminal illnesses.

3863. Sport Psychology 3(3-0)

Prerequisites: PSYC 1103, 2203.

A survey of the literature concerning the relationship of psychological processes and motor performance. Topics include motivation, arousal, attention and personality of the athlete, anxiety and mood, cognitive and behavioral interventions, the social psychology of sport and the psychobiology of sport and exercise.

3873. Psychology of Gender 3(3-0)

Prerequisites: PSYC 1103, 2203.

The course focuses on the history, social customs, and biology of the development and expression of gender behaviors and attitudes within contemporary society.

3913. Personal Relations and Interactions 3(3-0)

Prerequisites: PSYC 1103, 2203 or consent of instructor.

Learning and practice in personal and interpersonal skills. Emphasis is upon experiential role playing and practice in expression, listening, constructive confrontation, resolving conflicts, negotiation, and stress management.

4003. Learning 3(3-0)

Prerequisites: PSYC 1103, 2203.

Scientific research in learning processes; methods and techniques of collecting data on learning; the application of learning procedures to normal and abnormal behavior.

4103. Clinical Psychology 3(3-0)

Prerequisites: PSYC 1103, 2203, 3603.

A critical evaluation of the major theories and methods of psychological treatment and assessment.

4113. Industrial/Organizational Psychology 3(3-0)

Prerequisites: PSYC 1103, 2203 or consent of instructor.

Psychological theories and psychometric principles as applied to the selection, training, and evaluation of workers, worker motivation and job satisfaction, the employee-employer relationship, and consumer psychology.

4123. History and Systems of Psychology 3(3-0)

Prerequisites: 12 hours of psychology including 1103, 2203.

A survey of the historical development of psychology. Important schools of psychology, major contributors, and the shaping influence of the past on contemporary psychology are all considered.

4133. Perception and Cognition 3(3-0)

Prerequisites: PSYC 1103, 2203.

The study of the human being as an information processing system. Topics include sensory aspects of information extraction, selective attention and concentration, problems related to perception and recognition of incoming stimulation, and the structures and processes of human memory systems.

4143. Psychology of Self 3(3-0)

Prerequisites: PSYC 1103, 2203.

This high participation seminar is designed for Junior and Senior students. The course provides an opportunity for students to understand the *self* from an intrapersonal perspective. Concepts such as self-esteem, self-concept, and self-fulfilling prophecies will be discussed. Some self-disclosure is consistent with this seminar format.

4153. Child Clinical Psychology 3(3-0)

Prerequisites: PSYC 1103 and 2203 or consent of instructor.

Introduction to clinical disorders observed in children and adolescents. Course covers concepts of developmental psychopathology and the etiology of disorders. Discussion of the assessment, diagnosis, and treatment of psychological disorders experienced by children and adolescents from a system of care perspective.

4203. Psychology of Personality 3(3-0)

Prerequisites: PSYC 1103, 2203.

A survey of the major theories of personality development and functioning, including an introduction to personality assessment and current research.

4401, 4402, 4403. Special Projects 1-3 semester hours

Prerequisites: PSYC 1103 and consent of instructor.

Intensive study for the advanced student within a special area. May be repeated for credit for a different area of study.

4503. Psychological Tests and Evaluation 3(3-0)

Prerequisites: PSYC 1103, 2203, and 3313.

The basic principles of psychological evaluation, test construction, and administration. Includes a survey of current intelligence, interest, aptitude, and personality tests and their evaluation.

4703. Experimental Psychology 3(3-0)

Prerequisites: 12 hours of psychology including PSYC 3313.

The theory and application of scientific methodology in psychological research.

4773. Selected Topics in Psychology 3(3-0)

Prerequisites: PSYC 1103, 2203.

Intensive study and coverage of selected topics in psychology. May be repeated for credit when topics vary.

4801. Senior Thesis I 1 semester hour

Prerequisites: PSYC 3313, 4703, must be a psychology major and have approval of department chair.

Outstanding students that receive department approval may undertake a research project for credit. The research project is expected to take two semesters to complete

(register for 4801 first semester and 4802 the second semester). Summation of the project will include an oral presentation to the faculty and interested students. Ideally, the student will submit the findings to a regional or national conference or a refereed journal.

4802. Senior Thesis II

2 semester hours

Prerequisites: PSYC 4801 and approval of department chair.

Completion of the senior thesis begun as PSYC 4801. Summation of the project will include an oral presentation to the faculty and interested students. Ideally, the student will submit the findings to a regional or national conference or a refereed journal.

4903. Internship in Psychology

3(3-0)

Prerequisites: Open only to psychology majors. The student must have completed 21 hours of psychology and must be approved by the course instructor.

Field experience in selected agencies.

(RADS) RADIOLOGIC SCIENCES

1012. Introduction to Radiography

2(2-0)

Prerequisite: Admission to the program.

This course includes the historical development of radiography, basic radiation protection, an introduction to medical terminology, ethical and legal issues for health care professionals, and an orientation to the program and the health care system. Learning Outcomes: The student will define basic medical terms; exhibit ethical and legal standards; demonstrate basic radiation protection practices; and relate the role of radiography to health care. (WECM = RADR 1201)

1223. Patient Care

3(2-2)

Prerequisite: RADS 2224.

A course in patient assessment, infection control procedures, emergency and safety procedures, communication and patient interaction skills, and basic pharmacology. Learning Outcomes: The student will correctly assess patient conditions; demonstrate accepted infection control and general safety practices; respond appropriately to emergency situations; practice effective communication skills; and identify pertinent pharmaceuticals and their applications. (WECM = RADR 1303)

1312. Principles of Radiographic Imaging I

2(1-2)

Prerequisite: Admission to the program.

This course will analyze radiographic image qualities and the effects of exposure variables upon these qualities. Learning Outcomes: The student will define, recognize, and evaluate qualities of the radiographic image, and analyze the effects of exposure variables upon each image quality. (WECM = RADR 1213)

1413. Basic Radiographic Procedures

3(2-4)

Prerequisites: BIOL 1134 and 1234.

This course includes an introduction to radiographic positioning terminology, the proper manipulation of equipment, positioning and alignment of the anatomical structure and equipment, and evaluation of images for proper demonstration of basic anatomy and related pathology. Learning Outcomes: The student will define radiographic positioning terms; manipulate equipment properly; position and align anatomical structure and equipment; and evaluate images for proper demonstration of anatomy and pathology. (WECM = RADR 1311)

1423. Intermediate Radiographic Procedures

3(2-4)

Prerequisite: RADS 1413.

A continuation of the study of the proper manipulation of radiographic equipment,

positioning and alignment of the anatomical structure and equipment, and evaluation of images for proper demonstration of intermediate anatomy and related pathology. Learning Outcomes: The student will manipulate equipment properly; position and align anatomical structure and equipment; and evaluate images for proper demonstration of anatomy and pathology. (WECM = RADR 2301)

1513. Radiographic Imaging Equipment 3(2-2)

Prerequisite: Admission to the program.

A study of the equipment and physics of x-ray production, basic x-ray circuits, and the relationship of equipment components to the imaging process. Learning Outcomes: The student will describe the equipment and physics of x-ray production; describe basic x-ray circuits; and relate equipment components to the imaging process. (WECM = RADR 2309)

2112. Radiation Biology and Protection 2(2-0)

Prerequisite: RADS 2232.

A study of the effects of radiation exposure on biological systems, typical medical exposure levels, methods for measuring and monitoring radiation, and methods for protecting personnel and patients from excessive exposure. Learning Outcomes: The student will describe the biophysical mechanisms of radiation damage and the somatic and genetic effects of radiation exposure on humans; state typical dose ranges for routine radiographic procedures; explain basic methods and instruments for radiation monitoring, detection and measurement; and apply appropriate radiation protection practices. (WECM = RADR 2213)

2114. Clinical I 4 semester hours

Prerequisites: RADS 1423 and 2224.

A method of instruction providing detailed education, training and work-based experience and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation and placement is the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary. Learning Outcomes: As outlined in the learning plan, the student will apply the theory, concepts, and skills involving specialized materials, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the particular occupation and business/industry; demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, communicating in the applicable language of the occupation and the business or industry. (WECM = RADR 1460)

2123. Principles of Radiographic Imaging II 3(2-2)

Prerequisite: RADS 1312.

A continuation of the study of radiographic imaging technique formulation, image quality assurance, and the synthesis of all variables in image production. Learning Outcomes: The student will formulate techniques to optimize image quality, minimize patient exposure, and preserve equipment; apply methods of image quality assurance, and adapt technical variables to changing conditions. (WECM = RADR 2305)

2215. Clinical II 5 semester hours

Prerequisite: RADS 2114.

A method of instruction providing detailed education, training and work-based experience and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation and placement is the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary. Learning Outcomes: As outlined in the learning

plan, the student will apply the theory, concepts, and skills involving specialized materials, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the particular occupation and the business/industry; demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, communicating in the applicable language of the occupation and the business or industry. (WECM = RADR 2560)

2224. Advanced Radiographic Procedures 4(3-2)

Prerequisite: RADS 1413.

An advanced course including the proper manipulation of equipment, positioning and alignment of the anatomical structure and equipment, and evaluation of images for proper demonstration of advanced anatomy and related pathology. Learning Outcomes: The student will master the manipulation of equipment; and evaluate images for proper demonstration of anatomy and pathology. (WECM = RADR 2431)

2232. Advanced Medical Imaging 2(2-0)

Prerequisite: RADS 2123.

An introduction to the use of computers in medical imaging and a survey of specialized imaging modalities. Learning Outcomes: The student will formulate techniques to optimize image quality, minimize patient exposure, and preserve equipment; apply methods of image quality assurance; and adapt technical variables to changing condition. (WECM = RADR 2233)

2315. Clinical III 5 semester hours

Prerequisite: RADS 2215.

A method of instruction providing detailed education, training and work-based experience and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation and placement is the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary. Learning Outcomes: As outlined in the learning plan, the student will apply the theory, concepts, and skills involving specialized materials, equipment, procedures, regulation, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the particular occupation and the business/industry; demonstrate legal ethical behavior, safety practices, interpersonal and teamwork skills, communicating in the applicable language of the occupation and the business or industry. (WECM = RADR 2561)

2332. Radiologic Technology Seminar 2(2-0)

Prerequisites: RADS 2711 and 2912.

This is a capstone course focusing on the synthesis of professional knowledge, skills, and attitudes in preparation for professional employment and lifelong learning. Learning Outcomes: The student will synthesize professional knowledge, skills, and attitudes; demonstrate entry level competencies for professional employment; and demonstrate skills for lifelong learning. (WECM = RADR 2235)

2711. Radiographic Pathology 1(1-0)

Prerequisite: RADS 2224.

An overview of the disease process and common diseases and their appearance on medical images. Learning Outcomes: The student will classify types of diseases; explain the pathogenesis of common diseases; and identify the appearance of common diseases on medical images. (WECM = RADR 2117)

2912. Special Topics 2(2-0)

Prerequisite: RADS 2224.

Topics address recently identified current events, skills, knowledge, and/or attitudes

and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Learning Outcomes: The student will discuss the organization and structure of the modern day radiology department; explore the impact of emerging trends on the structure of the imaging department; and participate in problem solving and critical thinking activities. (WECM = RADR 1291)

2923. Special Problems (formerly 2423) 3(3-0)

Prerequisite: Consent of department chair.

This course includes directed studies in selected topics with emphasis on interests and needs of students. May be repeated once for credit.

3023. Advanced Medical Imaging Science 3(3-0)

Prerequisite: College level math.

This course includes a study of advanced physical principles of diagnostic radiology. Topics include x-ray generation, x-ray circuits, rectification, interactions, attenuation, filtration, beam restriction, and basic concepts related to digital imaging.

3203. Pathophysiology 3(3-0)

This course investigates general pathology and organ system pathology. It includes a brief review of normal structure and function, followed by more in-depth descriptions of specific pathologic processes. Students will use textbooks and Internet resources to learn the basic characteristics, etiology, pathogenesis, clinical features, diagnostic tools including medical imaging procedures, prognoses, and therapies for each of the specific pathologies. Virtual case study presentations are incorporated into this course.

3213. Advanced Clinical Practice Skills 3(3-0)

This course focuses on the current healthcare delivery environment including patient assessment, monitoring, infection control, and management. It includes working with multicultural patients, managing problem patients, and patient education. Additional topics include an overview of considerations when working in an increasingly digital imaging environment.

3233. Patient Interactions 3(3-0)

Prerequisite: Admission to the Radiologist Assistant Program and co-requisite with 3213.

This course helps the radiologist assistant develop more advanced and independent patient care skills. It includes direct patient care such as management of tubes and lines, advanced pharmacology interactions, and overall image observation skills. It also includes identifying appropriate imaging modalities for various clinical pathways, information management including clinical reporting, and auditing systems.

3253. RA Procedures I 3(3-0)

Prerequisite: Admissions to the Radiologist Assistant Program.

This course prepares the radiologist assistant for clinical procedures involving the chest and noncontrast studies of the abdomen.

3276. Clinical Preceptorship I 6(6-0)

Prerequisite: Admission to the Radiologist Assistant Program.

This clinical course will focus on chest and noncontrast abdomen imaging procedures. In addition to scheduled in-class activities, the student will observe and participate in radiographic procedures and imaging under the direct supervision of his/her preceptor radiologist at least twenty-four (24) clinical hours per week.

3313. Radiation Therapy 3(3-0)

This course provides an overview of the clinical practice of radiation therapy. Discussions of radiobiology, treatment modalities, basic radiotherapy physics, and malignant disease processes are provided.

3413. Cardiovascular and Interventional Procedures 3(3-0)

This course includes a survey of cardiovascular and interventional radiologic procedures with an emphasis on the anatomy demonstrated, equipment used as well as the role and responsibilities of the radiographer. Included is a general discussion of the applications of a variety of imaging modalities.

3503. Research 3(3-0)

This course is an introduction to methods and techniques of research in the radiologic sciences. Topics include basic terminology of research, qualitative and quantitative methods, basic research designs, and data analysis techniques.

3553. RA Procedures II 3(3-0)

Prerequisites: RADS 3253, 3233, and 3276.

This course prepares the radiologist assistant for clinical procedures involving the osseous system including the extremities, spine, skull, and facial bones.

3576. Clinical Preceptorship II 6(6-0)

Prerequisites: RADS 3276, 3233, and 3253.

The clinical course will focus on the osseous system imaging procedure including extremities, spine, skull, and facial bones. In addition to scheduled in-class activities, the students will observe and participate in radiographic procedures and imaging under the direct supervision of his/her preceptor radiologist at least twenty-four (24) clinical hours per week.

3773. Radiobiology 3(3-0)

Theories and principles of the interactions of ionizing radiation with living systems are the focus of this course. Radiation effects on biologic organisms and factors affecting biological responses are explored and applied to daily practice. Topics include acute and long term effects of ionizing radiation exposure. The student will explore applications in diagnostic and therapeutic settings.

3803. Introduction to Nuclear Medicine Physics 3(3-0)

This course provides overview of nuclear medicine, with an emphasis on diagnostic radionuclide techniques within the context of medical imaging. The course will focus mainly on nuclear medicine procedures and how those procedures relate to the total context of diagnostic imaging.

4053. RA Procedures III 3(3-0)

Prerequisites: RADS 3553 and 3576.

This course prepares the radiologist assistant for clinical procedures involving patient preparation, fluoroscopy, and filming for gastrointestinal and genitourinary systems.

4076. Clinical Preceptorship III 6(6-0)

Prerequisites: RADS 3553 and 3576.

This clinical course will focus on imaging procedures of the gastrointestinal system and the genitourinary system including patient preparation, fluoroscopy, and filming. In addition to scheduled in-class activities, the student will observe and participate in radiographic procedures and imaging under direct supervision of his/her preceptor radiologist at least twenty-four (24) clinical hours per week.

4123. Statistics for the Health Sciences 3(3-0)

The focus of this course is to provide a statistics course specifically for health science majors using techniques and data structures relevant to clinical investigations. General topics include choosing correct procedures and using statistics to understand clinical data. Specific topics include but are not limited to study design, central tendency and variability, probability, repeated measures analysis of variance, data association and prediction, and evaluating diagnostic procedures.

4253. RA Procedures IV 3(3-0)

Prerequisites: RADS 4053 and 4076.

This course prepares the radiologist assistant for clinical procedures involving patient preparation, fluoroscopy, and filming for selective invasive procedures.

4276. Clinical Preceptorship IV 6(6-0)

Prerequisites: RADS 4053 and 4076.

This clinical course will focus on imaging procedures involving selective invasive procedures including patient preparation, fluoroscopy and filming. In addition to scheduled in-class activities, the student will observe and participate in radiographic procedures and imaging under the direct supervision of his/her preceptor radiologist at least twenty-four (24) clinical hours per week.

4433. Practicum 3 semester hours

Prerequisite: Consent of program adviser.

This course includes intensive clinical assignments for students within a special interest area related to radiologic sciences.

4513. Administration and Supervision of Diagnostic Imaging 3(3-0)

A study of general principles of supervision and administration of radiology departments that includes such topics as management techniques, in-service training, human relations, as well as identification of administrative and supervisory problems and solutions.

4523. PACS in Radiology 3(3-0)

This course investigates the use of picture archival and communications systems and its impact on healthcare. Topics include comparison of computer-based records to traditional film records, PACS impact on teleradiology, as well as the acquisition of a system, medical-legal, productivity, image compression, and image storage and retrieval issues.

4553. RA Procedure V 3(3-0)

Prerequisites: RADS 4253 and 4276.

This course prepares the radiologist assistant for clinical procedures involving selective imaging modalities.

4576. Clinical Preceptorship V 6(6-0)

Prerequisites: RADS 4253 and 4276.

This clinical course will focus on imaging procedures involving selected modalities. In addition to scheduled in-class activities, the student will observe and participate in radiographic procedures and imaging under the direct supervision of his/her preceptor radiologist at least twenty-four (24) clinical hours per week.

4623. Radiographic Quality Control 3(3-0)

This course presents basic theories and principles related to the safe utilization of diagnostic radiographic equipment in a clinical setting. Theories and principles responsible for the production of quality radiographs with minimal patient exposure and production costs is a focus of the course. The student applies the theories and principles of safe radiation exposure by utilizing various strategies including projects and introductory laboratory experiments.

4633. Continuous Quality Improvement in Diagnostic Imaging 3(3-0)

This course is a study of the principles and methodologies of quality improvement. Comparison with traditional quality assurance are included as well as implementation standards to satisfy JCAHO. Students perform mind-set, departmental, and system evaluation, and use problem-solving techniques and tools to generate solutions to quality issues.

4643. Health Law in Medical Imaging 3(3-0)

This course is an introductory study of laws affecting medical imaging. Topics include administrative law, professional malpractice, patient rights, risk management, labor law, contract law, and ethical considerations.

4713. Medical Ultrasound 3(3-0)

A study of the physical and technical principles of medical ultrasound, that includes properties of ultrasound, transducers, modes of application, cross sectional anatomy, and techniques of medical diagnostic ultrasound applications.

4723. Principles of Computed Tomography 3(3-0)

This course explores the basic physical and technical principles of CT scanning. Computer technology, system components, image characteristics and quality control methods are introduced. Access to a CT scanner or instructor consent required.

4733. Sectional Anatomy 3(3-0)

This course is a study of human anatomy as viewed in sectional planes. Students will compare planar anatomy to sectional anatomy and recognize anatomical structures as seen in computed tomography and magnetic resonance imaging. Studies will include the cranium, brain, chest, abdomen, spine and pelvis.

4743. Magnetic Resonance Imaging 3(3-0)

This course explores the basic physical and technical principles of MRI scanning. Related clinical applications, system components, image characteristics, quality control methods, limitations, and future developments are introduced.

4753. Mammography 3(3-0)

The purpose of this course is to provide the technologist with guidelines for performing quality mammography examinations. Content includes the historical background of breast cancer and technical evolution of mammography, essentials of the "Imaging Chain", patient education, and introduction to quality assurance, troubleshooting, instrumentation and positioning.

4763. Mammographic Quality Practice 3(3-0)

This course introduces the student to the regulations established under the Mammography Quality Standards Acts of 1992 (MQSA), fully implemented in 1999. The focus of the course is based on MQSA principles and quality control procedures.

4773. Magnetic Resonance Imaging Applications 3(3-0)

This course provides a functional understanding of the basic MRI parameters and how they are used to image specific parts of the body in the axial, coronal, and sagittal planes. The focus of the course will be on MR sequences and presentation of anatomy and pathology.

4783. Computed Tomography Applications 3(3-0)

Prerequisites: RADS 4723 and 4733.

This course focuses on the use of computed tomography as an imaging tool from the technologist's perspective. Topics include a review of patient, contrast media and adverse reactions, and imaging protocols for the head, neck, chest abdomen, pelvis, and spine. CT-guided interventional techniques will also be discussed. Access to a CT scanner or instructor consent required.

4813. Teaching Strategies in Radiologic Sciences 3(3-0)

This course enhances skills in teaching radiologic sciences by providing instruction in curriculum development, methods of instruction, and psychology of learning. Students learn how to develop performance objectives, organize a lesson plan, and effectively present a lesson.

4823. Student Teaching 3 semester hours

This course includes teaching activities under the supervision of an experienced educator in an accredited program of radiologic sciences.

4833. Evaluation Methods in Radiologic Sciences 3(3-0)

Prerequisite: RADS 4813.

This course provides instruction in test and measurement, analysis of tests results, and program evaluation based on accreditation standards.

4903. Selected Topics 3(3-0)

This course includes directed projects and intensive study of selected topics in radiologic sciences. May be repeated once for credit.

4913. Applied Research 3(3-0)

Prerequisite: RADS 3503.

This is a capstone course involving directed research culminating in a substantive paper based on the interest and needs of the student.

4923. Internship 3 semester hours

Prerequisites: 12 hours of advanced level radiologic science courses or consent of instructor.

This course enables students to gain experience in promotion of the radiologic sciences profession to staff technologists as well as the general public. Projects may include recruitment, public speaking and presentation techniques.

(READ) READING EDUCATION**3013. Child and Adolescent Literature** (formerly ENGL 3013) 3(3-0)

Exploration of children's and adolescent literature from a variety of literary genres representing various cultural groups.

4203. Developmental Reading 3(2-2)

Prerequisites: EDUC 3153 and 4106. Concurrent enrollment in READ 4213.

Literacy theory and developmental stages of literacy. Planning and organizing for literacy-centered instruction.

4213. Methods of Teaching Reading and the Language Arts 3(2-2)

Prerequisites: EDUC 3153 and 4106. Concurrent enrollment in READ 4203.

The integration of reading, listening, speaking, writing, viewing, visual representation, and thinking; planning and organizing for the integrated teaching of reading and language arts. Includes teaching reading and the language arts within the context of content areas.

4223. Diagnosis and Correction of Reading Difficulties 3(2-2)

Prerequisite: READ 4203 or 4273.

Teaching strategies for classroom teachers to use for the continuous diagnostic and prescriptive teaching of reading.

4253. Secondary Reading and Language Arts 3(3-0)

Prerequisite: EDUC 3153.

Methods for designing and implementing instruction that integrates all components of the English language arts (writing, reading, listening/speaking, viewing/representing).

4273. Content Reading 3(3-0)

Prerequisite: EDUC 3153 or concurrent enrollment.

Strategies and materials for assessing students' content reading needs; instructional techniques and modifications for engaging students in content subjects.

4913. Seminar in Reading

3(2-2)

Topic as announced. Major project and/or field study with group sharing and analysis.

(RESP) RESPIRATORY CARE**3403. Foundations of Patient Care**

3(3-0)

The focus of this lecture course is to introduce basic principles of patient care to the respiratory care student. Many of these principles apply to other health care disciplines. Topics include health care systems, patient and health provider safety, medical records, charting, ethical and legal implications, and components of a patient history and physical examination.

3413. Introduction to Respiratory Care

3(2-2)

Combined lecture and laboratory course focusing on basic procedures and techniques used by respiratory care practitioners. Emphasis is placed on correct set-up and application of the procedure and equipment. Topics include infection control, patient positioning, vital signs, breath sounds, chest assessment, oxygen therapy, aerosol drug delivery, and an introduction to pharmacology.

3423. Physics and Respiratory Care

3(3-0)

The focus of this lecture course is on application of basic principles of physics to the respiratory and cardiovascular systems. Emphasis is placed on the physics of fluids and gases. Topics include force, work, pressure, Bernoulli's theorem, Venturi tubes, flow patterns, viscosity, gas laws, diffusion, surface tension, gas solubility, and the equation of motion applied to the respiratory system.

3433. Cardiopulmonary Anatomy and Physiology

3(3-0)

The focus of this lecture course is on applied physiology of the respiratory and cardiovascular systems. Emphasis is placed on normal structure and function. Topics include mechanics of spontaneous breathing, pulmonary circulation, gas conduction and exchange, gas transport, cardiac output and its control, reninangiotensin-aldosterone system, basic ECG analysis, the cardiac cycle, and acid-base balance.

3443. Basic Respiratory Therapeutics

3(3-0)

Prerequisites: RESP 3403, 3413.

The focus of this lecture course is on the theoretical application of the basic therapeutic techniques used by respiratory care professionals. Topics include airway care, gas therapy, humidity and aerosol therapy, lung expansion therapy, chest physical therapy, and patterns of cardiopulmonary dysfunction.

3512. Therapeutic Procedures and Equipment

2(1-2)

Prerequisites: RESP 3403, 3413.

Combined lecture and laboratory class focusing on secretion removal, hyperinflation and an introduction to ventilatory support. Emphasis is placed on correct set-up and application of equipment and procedures. Topics include humidity and aerosol therapy, cough techniques, incentive spirometry, bedside pulmonary function testing, percussion and postural drainage, IPPB, manual resuscitation, arterial punctures, and venous access.

3523. Respiratory Pharmacology

3(3-0)

Prerequisites: RESP 3423, 3433.

The focus of this lecture course is a comprehensive review of the major medications used to promote bronchodilation and pulmonary hygiene, control airway inflammation, affect skeletal muscle tone and central nervous system activity, and support the failing cardiovascular system.

3543. Adult Critical Care 3(3-0)

Prerequisites: RESP 3423, 3433, 3443, 3512.

The focus of this lecture course is a thorough review of ventilatory support techniques. Emphasis is placed on adult applications; however, some neonatal and pediatric support techniques are covered. Topics include etiology of respiratory failure, physical implications of positive pressure ventilation, methods of providing support, prescribing machine settings and managing the patient-ventilator system, hemodynamic and gas exchange monitoring, weaning techniques, and non-invasive applications.

3552. Adult Critical Care Procedures and Equipment 2(1-2)

Prerequisites: RESP 3423, 3433, 3443, 3512.

Combined lecture and laboratory course focusing on techniques and procedures used to support the adult patient in respiratory failure. Emphasis is placed on correct set-up and application of procedures and equipment. Topics include intubation and airway care, full and partial ventilatory support modes, patient-ventilator system checks, triggering, flow patterns, expired gas monitoring, and diagnostic and monitoring uses of the ECG.

3553. Neonatal and Pediatric Respiratory Care 3(3-0)

Prerequisites: RESP 3423, 3433, 3443, 3512.

The focus of this lecture course is on the theoretical application of respiratory care to the pediatric and newborn patient. Topics include development of the pulmonary and cardiovascular systems, patient assessment, intrinsic lung diseases, congenital heart diseases, SIDS and apnea, applied pharmacotherapy, surfactant replacement therapy, and ventilatory support techniques.

3561. Neonatal Procedures and Equipment 1(0-2)

Prerequisites: RESP 3423, 3433, 3443, 3512.

Laboratory course focusing on techniques and procedures used to support the neonatal patient in respiratory failure. Emphasis is placed on correct set-up and application of the procedure and equipment. Topics include nasal CPAP, continuous flow IMV, neonatal intubation and airway care, ventilatory support, PEEP, inspiratory time and mean airway pressure therapy, vital signs, chest assessment, apgar scoring, and resuscitation of the newborn.

3563. Respiratory Pathophysiology (formerly 4463) 3(3-0)

Prerequisites: RESP 3523, 3543.

The focus of this lecture course is to review the etiology, pathology, pathophysiology, clinical features, and treatments for common pulmonary diseases. Disease topics include asthma, bronchitis, emphysema, cystic fibrosis, shock, pulmonary embolism, heart failure, smoke inhalation and burns, ARDS, chest trauma, atelectasis, neuromuscular disease, and pneumonia.

3712. Clinical Practicum I 2 semester hours

Prerequisites: RESP 3403, 3413.

All clinical courses require the student to integrate theory and laboratory training in the patient care setting. The focus of this clinical course is application of basic therapeutic techniques and procedures. Topics include medical records, charting, patient history and physical examination, infection control, patient positioning, vital signs, breath sounds, chest assessment, oxygen therapy, humidity and aerosol therapy, cough techniques, incentive spirometry, and percussion and postural drainage. Sixteen hours of clinical required each week.

3722. Clinical Practicum II 2 semester hours

Prerequisites: RESP 3443, 3512, 3712.

All clinical courses require the student to integrate theory and laboratory training in

the patient care setting. The focus of this clinical course is IPPB, manual resuscitation, arterial punctures and venous access, basic pulmonary function testing, pediatric respiratory care, and an introduction to adult critical care. Sixteen hours of clinical required each week.

4102. Clinical Patient Management 2(2-0)

Prerequisite: RESP 3563.

The focus of this lecture course is to train the student in the benefits and use of therapist-driven protocols. Topics include assessment skills and processing, SOAP charting, need for follow-up or reassessment, commonly used treatment protocols and diseases frequently treated with protocols. A case management format is used to simulate the clinical environment.

4123. Statistics for the Health Science 3(3-0)

Prerequisite: Senior respiratory care student.

The focus of this course is to provide a statistics course specifically for health science majors using techniques and data structures relevant to clinical investigations. General topics include choosing correct procedures and using statistics to understand clinical data. Specific topics include but are not limited to; study design, central tendency and variability, probability, repeated measures analysis of variance, data association and prediction, and evaluating diagnostic procedures.

4223. Education Theory and Practice 3(3-0)

Prerequisite: Senior respiratory care student.

The focus of this lecture course is to train the student in the basic processes of education. Emphasis is placed on classroom as well as a clinical instruction. Topics include learning styles, developing objectives, teaching methods, questioning and problem solving strategies, characteristics and roles of the clinical instructor, and use of appropriate evaluation instruments.

4403. Pulmonary Diagnostics 3(3-0)

Prerequisites: RESP 3423, 3433.

The focus of this lecture course is the study of standard methodologies used to diagnose and monitor patients with pulmonary disease. Emphasis is placed on technical aspects as well as disease presentation. Topics include measurement and analysis of lung volumes, ventilation, pulmonary mechanics, gas distribution, diffusion testing, exercise testing, quality assurance, and blood gas analysis.

4422. Rehabilitation and Health Promotion 2(2-0)

Prerequisite: Senior respiratory care student.

The focus of this lecture course is to educate the respiratory care student in the principles and practices used in pulmonary rehabilitation programs. Topics include organization and management, candidate assessment and selection, patient and family education, smoking intervention techniques, role of home and alternate care sites, and reimbursement for services.

4423. Research and Respiratory Care 3(3-0)

Prerequisite: Senior respiratory care student.

The focus of this lecture course is to instruct the respiratory care student in the role research plays in the practice of respiratory care. Quality improvement is used to emphasize the basic components of research. Topics include problem development, literature review, data analysis techniques and interpretation, institutional review boards, and communicating the results.

4432. Theoretical Applications 2(2-0)

Prerequisite: Senior respiratory care student.

The focus of this lecture class is to provide the student with an assessment of his/her educational strengths and weaknesses with respect to the practice of respiratory care. Topics include an assessment of the following examinations; written registry, clinical simulations, and if time permits, pulmonary function technology. Passing the Certified Respiratory Therapist (CRT) examination and mock written registry and clinical simulation examinations are required in this class.

4433. Cardiopulmonary Dynamics 3(3-0)
Prerequisites: RESP 3543, 3552.

The focus of this lecture course is to provide the student with a thorough understanding of cardiac electrophysiology and clinical hemodynamics. Emphasis is placed on rhythm recognition, and causes and treatments of common dysrhythmias. Other topics include advanced cardiac life support.

4443. Management of Health Care Services 3(3-0)
Prerequisite: Senior respiratory care student.

The focus of this lecture course is to introduce the student to managing health care services. Emphasis is placed on development of skills in leadership, communication, time management, problem solving, motivation, and other critical competencies. Topics include methods to achieve greater productivity, policy improvement, recruitment, selection, and training of new employees, as well as current issues facing the health care system.

4453. Advanced Health Assessment 3(3-0)
Prerequisite: Senior respiratory care student.

The focus of this lecture course is to provide the student with advanced physical assessment skills. The assessment of the major organ systems commonly affected by or associated with pulmonary diseases are explored. Topics include detailed assessment of the chest and lungs, heart and great vessels, skin, head and neck, nose and throat, and emergency and life threatening situations.

4652. Independent Study 2 semester hours
Prerequisite: Consent of chair.

The purpose of this course is to allow the student to pursue specific interest(s) within the field of respiratory care. Under faculty direction the student can participate in research, clinical experience, or other areas of directed study. May be repeated for credit when topics vary.

4653. Independent Study 3 semester hours
Prerequisite: Consent of chair.

The purpose of this course is to allow the student to pursue specific interest(s) within the field of respiratory care. Under faculty direction the student can participate in research, clinical experience, or other areas of directed study. May be repeated for credit when topics vary.

4663. Advanced Practice Problems 3 semester hours
Designed for advanced students to work in appropriate areas not otherwise available. May be repeated for credit when topics vary.

4711. Clinical Practicum III 1 semester hour
Prerequisites: RESP 3553, 3561, 3722.

All clinical courses require the student to integrate theory and laboratory training in the patient care setting. The focus of this clinical course is the application of therapies, techniques and procedures to the newborn patient. Topics include aerosol drug delivery, pulmonary hygiene, nasal CPAP, continuous flow IMV, neonatal intubation and airway care, ventilatory support, PEEP, inspiratory time and mean airway pressure therapy,

vital signs, chest assessment, apgar scoring, and resuscitation of the newborn. Eight hours of clinical required each week. Passing a mock CRT examination is required in this class.

4722. Clinical Practicum IV

2 semester hours

Prerequisite: RESP 4711.

All clinical courses require the student to integrate theory and laboratory training in the patient care setting. The focus of this clinical course is the application of therapies, techniques and procedures used to support the adult patient in respiratory failure. Topics include aerosol drug delivery, pulmonary hygiene, airway mucosa care, patient-ventilator system checks, prescribing machine settings, and managing the patient-ventilator system. Sixteen hours of clinical required each week.

4732. Clinical Practicum V

2 semester hours

Prerequisite: RESP 4722.

All clinical courses require the student to integrate theory and laboratory training in the patient care setting. The focus of this clinical course is the application of therapies, techniques and procedures used to support the adult patient in respiratory failure. Topics include hemodynamic and gas exchange monitoring, weaning techniques and non-invasive applications, intubation and airway care, full and partial ventilatory support modes, cardiopulmonary resuscitation, and diagnostic and monitoring uses of the ECG. Sixteen hours of clinical required each week.

4803. Internship in Respiratory Care

3 semester hours

Prerequisites: Clinical I, II, and III, B average in lecture and laboratory major classes and permission of the chair.

To allow respiratory care students to participate in and experience the practice of respiratory care in geographic areas other than Wichita Falls. Field sites are chosen on the basis of the continuum of care supplied, willingness to accept students, and completion of a clinical affiliation agreement. Students are responsible for making initial contact with field site, transportation, room and board, and any other costs of the field site experience.

(SOCL) SOCIOLOGY

1133. Introductory Sociology (TCCNS = SOCL 1301)

3(3-0)

A general survey course introducing students to the field of sociology. Emphasis is on people as products of groups, social interaction, and social forces. Topics covered include marriage and family, deviance, social class, minority relations, and collective behavior with an effort toward helping students understand the social world and their roles in it. May be counted toward degree requirements for sociology or social work, but not both.

2233. Social Problems (TCCNS = SOCL 1306)

3(3-0)

Prerequisite: SOCL 1133 or consent of instructor.

Issues such as poverty, social class, race, family, and aging are examined to determine causes and possible solutions.

3023. Human Sexuality

3(3-0)

Prerequisite: SOCL 1133.

For course description see psychology section. May be taken for either psychology or sociology credit, but not for both.

3333. Criminology

3(3-0)

Prerequisite: SOCL 1133 or consent of instructor.

An in-depth study of crime in the United States with an emphasis on major types of crime and factors in causation.

3353. Total Institutions 3(3-0)

Prerequisites: SOCL 1133, 3333 or 3733 or consent of instructor.

A study of total institutions with a primary focus on contemporary American prisons. The historical development of total institutions and the major problems inherent in such institutions are examined in detail.

3403. Social Psychology 3(3-0)

Prerequisite: SOCL 1133.

For course description see psychology section. May be taken for either psychology or sociology credit, but not for both.

3433. The Family 3(3-0)

Prerequisite: SOCL 1133 or consent of instructor.

A broad conceptual analysis of the American family, with some cross-cultural comparisons. Specific areas covered include sexual norms, sex roles, gender issues, dating and courtship patterns, mate selection, family formation, marital adjustment, family dissolution as well as an analysis of major historical changes and trends.

3633. Research Methods 3(3-0)

Prerequisites: PSYC 3313, 9 hours of sociology, or consent of instructor.

An introduction to methods and techniques of sociological research; examination and application of quantitative and qualitative methods of data collection through selected research programs.

3733. Juvenile Delinquency 3(3-0)

Prerequisite: SOCL 1133 or consent of instructor. May also be taken for criminal justice credit.

Nature, extent, and causes of juvenile delinquency: youthful offenders and their career patterns, institutional controls and correctional programs.

3783. Population and World Cultures 3(3-0)

Prerequisites: SOCL 1133, 2233, or consent of instructor.

An examination of global population issues within the context of specific world cultures including the Middle East, the Pacific Rim, Asia, and Latin America.

3803. Medical Sociology 3(3-0)

Prerequisite: SOCL 1133 or consent of instructor.

Social factors and institutional settings for physical and mental health care; public needs and group medical services; women's health issues; social interaction in hospitalization and institutions of rehabilitation.

4001, 4003. Special Projects 1, 3 semester hours

Prerequisites: 9 hours of sociology including SOCL 1133 and consent of instructor.

Intensive study for the advanced student within a special area in the field of sociology. May be repeated for credit for a different area of study.

4133. Racial and Ethnic Relations 3(3-0)

Prerequisites: SOCL 1133, 2233, or consent of instructor.

Critical analysis of some of the major issues on race in U.S. society (and across the world). Emphasis is placed on the theory of racial and ethnic adaptation patterns. We will develop a historical understanding and apply it to contemporary U.S. race relations. What does it mean to be Black, White, Latino, Asian, or mixed? What do these categories mean?

4153. Sociological Theory 3(3-0)

Prerequisites: 9 hours of sociology or consent of instructor.

A survey and analysis of development of sociological theory from the time of Comte

to the present. Particular schools and major paradigms are evaluated, and recent confluences in social anthropology, sociology, and social psychology are noted.

4353. The Sociology of Death and Dying 3(3-0)

Prerequisites: 9 hours of sociology or consent of instructor.

An analysis of the social context of death and dying in American society. The impact of death on children, the family, and survivors is examined. Additional emphasis on the role of hospice as well as legal, moral, and medical ethics are included.

4413. Deviance 3(3-0)

Prerequisites: SOCL1133, 2233 or consent of instructor.

Understanding the occurrence of and reaction to deviant behavior in society. This course is a detailed review of the various forms of behavior which are often considered "deviant" in western society using various theoretical explanations. Some topics include: white collar and corporate crime, drug addiction, alcoholism, suicide, and sexual deviance.

4543. Aging 3(3-0)

Prerequisites: 9 hours of sociology or consent of instructor.

The emergence of aging as a problem in industrial societies. Analysis of specific problems and programs relating to older persons in American society.

4633. The Sociology of Family Violence 3(3-0)

Prerequisites: 9 hours of sociology or consent of instructor.

An examination of the various forms of family violence including child, sibling, courtship, marital, and elder abuse. Specific theoretical models explaining family violence will be examined along with the societal characteristics associated with violent situations and the various therapeutic approaches and current treatment programs available.

4733. Selected Topics in Sociology 3(3-0)

Prerequisites: 9 hours of sociology or consent of instructor.

Intensive study and coverage of selected topics in sociology. May be repeated for credit when topics vary.

4773. Internship in Sociology 3(3-0)

Prerequisites: 9 hours of sociology, majors or minors in sociology, or consent of instructor.

Field experience in selected agencies. May be repeated one time.

4803. Applied Sociology 3(3-0)

Prerequisites: 9 hours of sociology or consent of instructor.

This course is designed to incorporate previous course work within the discipline to facilitate a student's ability to apply sociology and sociological concepts to problem solving in the world of business and professional organizations. Students who are considering a career of professional development can explore the problem-solving skills necessary to the understanding of how issues that confront staff development such as race, social class, gender, and family impact the work environment.

4883, 4893. British Culture and Society 3(3-0)

Prerequisites: 3 hours of sociology and consent of instructor.

This class is part of MSU's study abroad program offered during the second summer term. This class compares major institutions within Great Britain and the United States. Institutional issues surrounding the family, government, religion, poverty, education, and sport will provide the context by which students can examine modern living in the U. K. as well as the U.S.

(SOST) SOCIAL STUDIES**3003. Concepts of Social Studies**

3(3-0)

This course explores critical concepts and themes that have charted the course of human development. Emphasis shall be given to the major political, social, economic, religious, geographic, scientific, and cultural forces, which have shaped civilizations around the globe.

(SOWK) SOCIAL WORK

*** Only social work students may take courses marked with an asterisk.**

2423. Introduction to Social Work

3(3-0)

Prerequisite: SOCL 1133 or PSYC 1103.

This course is an introduction to the social work profession and is designed to assist students in clarifying and selecting social work as a major. It is required for all (but not limited to) social work majors and provides an overview of the profession's history, philosophy, values, ethics, knowledge base, skills, and areas of service. Generalist and social systems perspectives are emphasized as conceptual frameworks for practice. In addition, the course considers the institution of social welfare in contemporary American society, emphasizing human diversity and discusses policy and practice relevant to special populations. A 20-hour volunteer placement in a social service agency is required.

3233. Parenting: Family and Community

3(3-0)

Theories regarding raising mentally healthy children within a family environment. Policies and laws related to child abuse and neglect and foster care and adoptions. Distance education only.

3313. Social Work Statistics

3(3-0)

Prerequisites: PSYC 1103, MATH 1003.

Introduction to descriptive and inferential statistics. Topics include data distributions, descriptive statistics, sampling distributions, interval estimation, one- and two-sample significant difference tests, one-way analysis of variance, correlation, and regression.

3453. Child Welfare Policy and Practice (formerly 2853)

3(3-0)

This course addresses the needs and problems (including abuse and neglect) of children and their families and considers possible solutions to these problems. Policies and practice issues are explored as they pertain to child welfare in diverse populations. The course is intended for students from a variety of disciplines.

***3533. Practice I**

3(3-0)

Prerequisite: SOWK 2423.

This course examines the theoretical base for generalist social work practice, the structure of the social work process, and the skills of assessment and intervention with emphasis on social work with individuals and families. Content includes women and minorities as well as ethnocultural factors.

***3544. Human Behavior and the Social Environment I**
(formerly 2544)

4 semester hours

Prerequisite: SOWK 2423 or concurrently with adviser's consent.

This course is a study of child development, beginning before conception and ending with early adolescence. Theories are presented on physical development, cognitive and social development, and emotional development. The many influences on child development within the context of family and their environment include the effects of diversity, oppression, discrimination, and social and economic injustice, and spirituality. A 40-hour practicum is required, 10-hours each in four different agencies.

***3554. Human Behavior and the Social Environment II** 4 semester hours
(formerly 2554)

Prerequisite: SOWK 3544.

This course focuses on the life-span from adolescence through death. It builds on the knowledge of the life cycle from conception through adolescence, the basic understanding of terminology and processes regarding the social and psychological nature of humans, and on the understanding of social work values learned in Human Behavior and the Social Environment I. It provides a framework for understanding the individual, group, organizational, institutional, and cultural contexts which influence human behavior. A 40-hour practicum is required, 10-hours each in four different agencies.

***3643. Social Work Research** 3(3-0)

Prerequisites: 6 hours of social work and SOWK 3313 or consent of instructor.

This course is designed to familiarize the student with basic terminology of research, basic research design, methods for evaluating practice and social programs through qualitative and quantitative methods. It is also designed for the student to be able to read and analyze research reports, to relate research to issues in professional practice, to gain experience in performing both cognitive and practical tasks in research, and to increase awareness of potential biases in research, particularly in issues involving women and minorities.

***3833. Practice II** 3(3-0)

Prerequisite: SOWK 3533.

This course is designed to give students an understanding of group processes and to improve their skills as group members and leaders. The course provides an integration of group theory, research, and applied methods into the generalist practice model.

***3943. Social Welfare Policy** 3(3-0)

This course introduces substantive issues of social welfare policy in the United States. It presents an historical overview of major policies as responses to social problems, and it explores the role of social work in policy development, implementation, and analysis. Emphasis is placed upon the ways in which policy informs practice at micro, mezzo, and macro systemic levels and upon the importance of policy in work with special populations.

***3953. Human Diversity** 3(3-0)

This course provides content about differences and similarities in the experiences, needs, and beliefs of people. It provides theoretical content regarding differential assessment and intervention skills which will enable practitioners to serve diverse populations including minorities, multicultural, race, and ethnic groups, as well as socially and economically oppressed groups and populations-at-risk.

4113. Aging 3(3-0)

The goal of this course is to promote a fuller understanding of the aging process as a normal, human, and social fact of life. This course will examine stereotypes and images that modern society often views older people. These stereotypes and images will be contrasted with demographics and basic information concerning aging. We will examine the issues that older people face and society's response to these issues.

***4201, 4202, 4203. Special Projects** 1-3 semester hours

Prerequisites: 9 hours of social work.

Intensive study for the advanced student within a special area in the field of social work.

***4213. Practice III** 3(3-0)

Prerequisites: SOWK 3833, 3943.

This course is designed to give social work majors the opportunity to learn basic theory and techniques related to social work practice in macrosystems. Specifically, the focus will be on theory and techniques related to administration, planning, evaluation, and community organization.

4223. Family Systems 3(3-0)

This course focuses on the family life cycle and family development. Different theories regarding improvement of family functioning are covered such as structural problem solving and communication. Solution focused Bowens intergenerational systems theory.

4233. Parenting 3(3-0)

Students will learn to assess parenting skills using standardized tests, interviews and observations. The major theories regarding how to rear a mentally healthy and socially skilled child will be taught. These will include behavioral, adlerian and psychoanalytic. Attention will be given to the skilled social workers needs in order to manage certain family/parenting problems such as anger, family violence, chemical abuse, Attention Deficit Hyperactivity disorder, divorced and blended family parenting.

***4236. Field Practicum and Seminar I** 6 semester hours

Prerequisites: SOWK 3533 and 3833, senior standing, and consent of instructor.

Integration of theory into generalist practice through placement in community social service agencies for at least 200 hours. Micro practice experience will be emphasized in this placement. Course includes a weekly seminar. Students must secure liability insurance for all field work practicums.

***4246. Field Practicum and Seminar II** 6 semester hours

Prerequisites: Successful completion of Field Practicum and Seminar I and SOWK 4213.

Continuation of Field Practicum I. 200 hours per semester plus weekly seminar. Macro experiences will be included in Field II placement to enlarge the generalist practice experiences acquired in SOWK 4236.

4313. Community Mental Health 3(3-0)

This course utilizes the social work generalist practice approach to mental health services in communities. There is a strong emphasis on client empowerment and reducing the stigma of mental illness in our society. This is accomplished by examining society's response to mental illness, and examining the impact of this response on people that are affected by mental illness including special populations and families. (May be taken in place of PSYC 3603).

4323. Introduction to Substance Abuse 3(3-0)

This course will present an overall perspective on alcohol and drugs to include use, historical background, and current knowledge. The course will cover licit and illicit drugs, over-the-counter drugs, treatment, and legal issues associated with these drugs.

4333. Clinical Effects of Substance Abuse 3(3-0)

This course will present the physiological, psychological, and sociological aspects of substance abuse. Content includes aspects of family systems to include ethnocultural factors and relationships.

4343. Treatment Modalities in Substance Abuse 3(3-0)

This course will address self-help as well as other treatment modalities including inpatient and outpatient treatment. It will also give instruction on the use of community resources as adjuncts to treatment.

4363. Family Systems and Substance Abuse 3(3-0)

This course will present the different perspectives on the families and significant others of substance abusers. It will also include ethnocultural factors as well as women's issues.

4413. Social Work in Human Resources 3(3-0)

This course addresses the role of social work, employee assistance and human counselors in the work place. The ways in which organizations assist troubled employees will be the major focus of the course. Organizational efforts to help troubled employees with family, mental health, alcohol, drug, financial, or other personal problems will be examined as to their effects on employee functioning and productivity. Laws affecting the civil rights of workers, including the Americans with Disabilities Act, the Rehabilitation Act, and Equal Employment Opportunity are covered.

4423. Selected Topics in Social Work 3(3-0)

Intensive study and coverage of selected topics in social work. May be repeated for credit when topics vary.

(SPAN) SPANISH**1134. Elementary Spanish I (TCCNS = SPAN 1411)** 4(4-0)

A beginning course in the development of fundamental speaking, listening, reading, and writing skills in the Spanish language and an introduction to Hispanic cultures. One hour of laboratory practice per week is required.

1234. Elementary Spanish II (TCCNS = SPAN 1412) 4(4-0)

Prerequisite: Spanish 1134.

Continuation of Spanish 1134. One hour of laboratory practice per week is required.

2133. Intermediate Spanish I (TCCNS = SPAN 2311) 3(3-0)

Prerequisite: Spanish 1234.

Continued development of language skills. Grammar review and study of Hispanic cultures. Weekly lab practice required.

2233. Intermediate Spanish II (TCCNS = SPAN 2312) 3(3-0)

Prerequisite: Spanish 2133.

Continuation of Spanish 2133. Weekly lab practice required.

3003. Introduction to Hispanic Literature 3(3-0)

Prerequisite: Spanish 2233.

Readings in prose and poetry in Spanish with emphasis on methods of analysis and understanding of literary movements. Application of techniques through written and oral communication in Spanish. Required of Spanish majors and minors.

3013. Spanish Civilization 3(3-0)

Prerequisite: Spanish 2233.

Study of the history, geography, and culture of Spain. Use of media in the target culture. Continued development of oral and written communication in Spanish.

3023. Spanish American Civilization 3(3-0)

Prerequisite: Spanish 2233.

Study of the history, geography, and culture of Spanish America. Continued development of oral and written communication in Spanish.

3133. Survey of Spanish Literature I 3(3-0)

Prerequisite: Spanish 3003.

A history and general survey of the literature of Spain from the Middle Ages through

the 17th century. Practice in critical analysis and language skills through class discussion, papers, and examinations.

3233. Survey of Spanish Literature II 3(3-0)

Prerequisite: Spanish 3003.

A history and general survey of the literature of Spain from the 18th century to the present. Practice in critical analysis and language skills through class discussion, papers, and examinations.

3333. Conversation and Composition 3(3-0)

Prerequisite: Spanish 2233.

Extended development of oral and written communication in Spanish. Intensive grammar review and vocabulary expansion for a variety of situations and topics. Required of Spanish majors and minors.

3533. Survey of Spanish American Literature I 3(3-0)

Prerequisite: Spanish 3003.

A history and general survey of the literature of Spanish America from Pre-Columbian times up to the 20th century. Practice in critical analysis and language skills through class discussion, papers, and examinations.

3633. Survey of Spanish American Literature II 3(3-0)

Prerequisite: Spanish 3003.

A history and general survey of the literature of Spanish America of the 20th century. Practice in critical analysis and language skills through class discussion, papers, and examinations.

4013. Topics in Hispanic Literature 3(3-0)

Prerequisite: Spanish 3003.

Concentrated study in a particular genre, sub-genre, or theme in Hispanic literature. Topics will vary and may include such subjects as Women's Studies, Golden Age Literature, Spanish or Spanish American Drama, Poetry, Novel, or Short Story. May be repeated for credit when topics vary.

4133. Advanced Oral Expression 3(3-0)

Prerequisite: Spanish 3333.

Further development of oral proficiency in formal and informal settings and study of phonetics. No student who has graduated from a secondary school in a Spanish-speaking country may enroll in this course.

4233. Advanced Grammar and Composition 3(3-0)

Prerequisite: Spanish 3333.

Further development of writing skills through intensive practice writing and re-writing. Includes grammar review and the study of writing and stylistics.

4433. Advanced Comprehensive Skills 3(3-0)

Prerequisites: 15 advanced hours of Spanish.

Consolidation of vocabulary and grammar through practice of language functions. Further development of listening and reading skills. Review of language structures, Hispanic culture, geography, history, and literature. Required of all students seeking teacher certification in Spanish.

4633. Selected Problems in Spanish Language, Literature, or Culture 3(3-0)

Prerequisites: 6 advanced hours of Spanish, senior standing, and consent of the instructor and chair.

Individual study in a topic selected by the student and the student's adviser. May be repeated once.

(SPCH) SPEECH COMMUNICATION**1133. Fundamentals of Speech Communication (TCCNS = SPCH 1315) 3(3-0)**

Development of skills in speech communication. Preparation and delivery of speeches. Study of nonverbal communication, psychological motivation, and one-to-one communication.

1233. Voice and Diction (TCCNS = SPCH 1342/DRAM 2336) 3(3-0)

Examination of the structure of the vocal apparatus. Analysis of the sound system of the English language. Work on the speaking voice and on General American pronunciation. Emphasis on the International Phonetic Alphabet and on oral practice.

2133. Oral Interpretation (TCCNS = SPCH 2341) 3(3-0)

Analysis of oral interpretation as an art. Consideration of the aim of the interpreter as finding the meanings in the literature and stirring those meanings in the minds of the listeners. Same as Theatre 2133.

3013. Argumentation and Debate 3(3-0)

Foundations of argumentative discourse. Emphasis on the construction and delivery of logical arguments and development of skills in critical thinking.

3023. Persuasion 3(3-0)

Prerequisite: SPCH 1133 or consent of the instructor.

Advanced study and analysis of persuasive principles with a special emphasis on practical application.

4133. Organizational Communication 3(3-0)

A study of communication patterns in a range of business and professional organizational environments. Dynamics of individual and group communication-information flow, attitude change, evaluations systems, socio-emotional climate, conflict resolution, and interviewing.

4143. Problems in Speech Communication 3 semester hours

Prerequisite: Consent of the chair.

Directed research in speech. May be repeated for credit when topics vary.

(SPED) SPECIAL EDUCATION**3313. Teaching Strategies for Cognitive Disorders 3(2-2)**

Strategies for teaching children and adolescents with mild disabilities. Emphasis on accessing the general education curriculum through universal inclusion strategies and through individualized interventions and modifications including use of technology. Focus on content area learning incorporating formative assessment and planning procedures.

3513. Behavior Management 3(3-0)

Managing group and individual behavior in classroom, school, home, and community environments in a range of special education contexts; use of technology as an organizational tool. Includes Applied Behavior Analysis.

3613. Exceptional Individuals 3(2-2)

A study of the etiology of and concepts relating to exceptional individuals. Field experience included.

4113. Foundations of Special Education 3(3-0)

Philosophical, historical, and legal foundations of special education. Introduction to roles and responsibilities of the special educator, and legal and ethical requirements of

the profession. Theoretical perspectives related to the nature and needs of persons with disabilities; involvement in disability advocacy.

4123. Assessment 3(3-0)

Introduction to measurement, assessment, and instruction, and statistics related to processes used with exceptional learners. Overview of norm-referenced assessment, interpretation, and the development of Individual Education Plans.

4313. Reading for Disabled Readers 3(3-0)

Structured, sequential, multisensory reading instruction for students with reading disabilities; focus on students with dyslexia and other reading-related learning disabilities.

4513. Teaching Strategies for Affective Disorders 3(3-0)

Strategies for changing behavior and teaching social skills curricula using data-based decision-making. Includes Functional Behavior Analysis, Behavior Intervention Plans, Positive Behavioral Supports, Choice Theory, the use of technology in improving students' behavior, and Nonviolent Crisis Intervention. Includes nature and needs of students with emotional/behavioral disorders, and legal issues related to the education of such students.

4523. Vocational/Transitional Education 3(2-2)

Transitional planning and research-supported strategies for teaching functional skills to adolescents who have behavioral, learning, mental and/or physical disabilities. Use of assistive technology across life domains and the use of technology in life skills education.

4533. Early Childhood Special Education 3(3-0)

Strategies for promoting the development of infants and young children with disabilities, with a focus on language and motor development. Development of Individualized Family Service Plans.

4903. Problem Course 3 semester hours

Prerequisite: Senior standing or approval of dean.

Designed for advanced students to work in appropriate areas not otherwise available. May be repeated for credit.

4913. Seminar in Special Education 3(2-2)

Topic as announced. Major project and/or field study with group sharing and analysis.

4923. Inclusion 3(2-2)

Modifications for curriculum and instruction, proactive behavioral intervention strategies, and laws governing the inclusion of students with disabilities in general education classrooms.

4973. Practicum in Special Education 3(1-4)

Prerequisites: Twelve semester hours of special education, consent of chair, and admission to the teacher education program.

Provides tutoring experiences for the student in one or more special education settings. May be repeated for credit with approval of chair.

(STAT) STATISTICS

3573. Probability and Statistics 3(3-0)

Prerequisite: MATH 1233 or 1533.

Descriptive analysis, probability, variability, confidence intervals, hypotheses testing, analysis of variance, correlation and regression, nonparametric statistics.

3583. Statistical Quality Control 3(3-0)

Prerequisite: STAT 3573.

Control charts, tolerance limits, acceptance sampling, reliability, and process capability.

3593. Design of Experiments 3(3-0)

Prerequisite: STAT 3573.

Basic ideas of experimental design, completely randomized design, randomized block design, Latin squares, factorial designs, confounding, factorial replication, and incomplete block designs.

(THEA) THEATRE

1413. Movement for Stage (TCCNS = DRAM 1322) 3(3-0)

The use of improvisational techniques to explore the coordination of physical and vocal expression. For theatre majors and minors only.

1503. Appreciation of Theatre (TCCNS = DRAM 1310) 3(3-0)

Analysis of the theatre experience, especially from the viewpoint of the spectators. Aesthetic principles involved in all phases of the theatrical art. The development of this art by mankind.

1513. Scene Construction (TCCNS = DRAM 1330) 3(2-2)

Constructing, finishing, and painting scenery and properties for stage, studio, and display.

1613. Performance Makeup (TCCNS = DRAM 1341) 3(3-0)

Principles of straight and character makeup for camera and live audience.

1713. Introduction to Theatrical Design 3(3-0)

Exploration of the principles of theatrical design and basic drawing skills as forms of artistic communication.

2121. Rehearsal and Production (TCCNS = DRAM 1120) 1 semester hour

Laboratory in theatre productions. Participation in the performance or production of at least two plays involving the successful completion of assigned tasks.

2122. Dance for the Theatre 2(1-2)

Prerequisite: Consent of Chair.

Basic instruction in tap, jazz, and modern. Instruction may be related to productions being prepared for public presentation.

2133. Oral Interpretation 3(3-0)

Analysis of oral interpretation as an art. Consideration of the aim of the interpreter as finding the meanings in the literature and stirring those meanings in the minds of the listeners. Same as SPCH 2133.

2533. Introduction to Acting (TCCNS = DRAM 1351) 3(2-2)

Open to non-majors. Study and application of the theories and techniques of the art of acting with emphasis on acting as a communicative process.

3121. Advanced Rehearsal and Production 1 semester hour

Prerequisite: THEA 2121.

Developmental experiences in performance or production beyond THEA 2121 associated with the semester's productions. May be repeated for credit.

3123. Advanced Movement 3(3-0)

Exploration of advanced techniques in stage movement.

3423. Script Analysis 3(3-0)

The skills and techniques of script analysis. The analyzing and practical application of the production and performance values in a playscript. May be repeated once for credit.

3433. Principles of Directing 3(2-2)

Prerequisites: THEA 2533 and 3543, or consent of the instructor.

Fundamental principles and aesthetics of directing. Criteria and procedures in selection, casting, rehearsal, and production. Practice in directing scenes.

3463. Scene Design 3(2-2)

Prerequisites: THEA 1513, 1713 and 3483 or consent of instructor.

Study and practice in scenic design principles.

3473. Performance Lighting 3(2-2)

Study and practice in lighting theories. Principles of electricity as applied to theatre, broadcast, and concert lighting.

3483. Theatre Graphics 3(2-2)

Prerequisite: THEA 1513 or consent of instructor.

Principles of and practices in drafting and drawing for the performing arts. Application of standard graphic language in scenic design and technical production.

3513. Selected Studies in Theatre 3(3-0)

Topics will vary and may include such subjects as supplementary playreading and analysis, advanced work with voice and dialects, sound design, and special performance studies. May be repeated for credit when topics vary.

3543. Advanced Acting 3(2-2)

Prerequisite: THEA 2533 or consent of the instructor.

Advanced study and application of the theories and techniques of acting with emphasis on characterization, role analysis, and ensemble playing.

4143. Problems in Theatre 3 semester hours

Prerequisite: Consent of the college dean.

Directed research in theatre. May be repeated for credit when topics vary.

4213. Voice for the Theatre and Stage Dialects 3(3-0)

Prerequisite: SPCH 1233 or consent of the instructor.

The course begins with exercises in phonetics, vocal expressiveness, and vocal clarity. Students proceed to a study of 4-5 major stage dialects aimed at integrating the learning of dialects with the use of effective vocal technique.

4393. British Theatre: Performance 3(3-0)

As part of the British Studies Program, this course involves experiencing professional British theatre productions, then critiquing them from the standpoint of performance. Instruction will be bolstered by professional actors and directors invited to class to discuss their work or conduct workshops. The course will also include trips to British theatre museums and collections.

4423. Creative Dramatics 3(2-2)

The use of story dramatization, role playing, and improvisation for the purpose of developing critical thinking, creativity, and social communication skills in the child. It is designed for prospective teachers of all disciplines.

4433. Theatre History I 3(3-0)

History and theory of playwriting, directing, acting, and production from the beginnings through the eighteenth century.

4443. Theatre History II

3(3-0)

History and theory of playwriting, directing, acting, and production in the nineteenth and twentieth centuries. Special study of the contemporary theatre.

4463. Construction of Stage Costumes

3(2-2)

Techniques in the making of stage costumes, drafting, and adapting of patterns for period and modern clothes for the stage.

4473. Design of Stage Costumes

3(2-2)

Prerequisites: THEA 1713 and 4463 or consent of the instructor.

Design of costumes for stage.

4483. Direction of Plays (formerly 3443)

3(2-2)

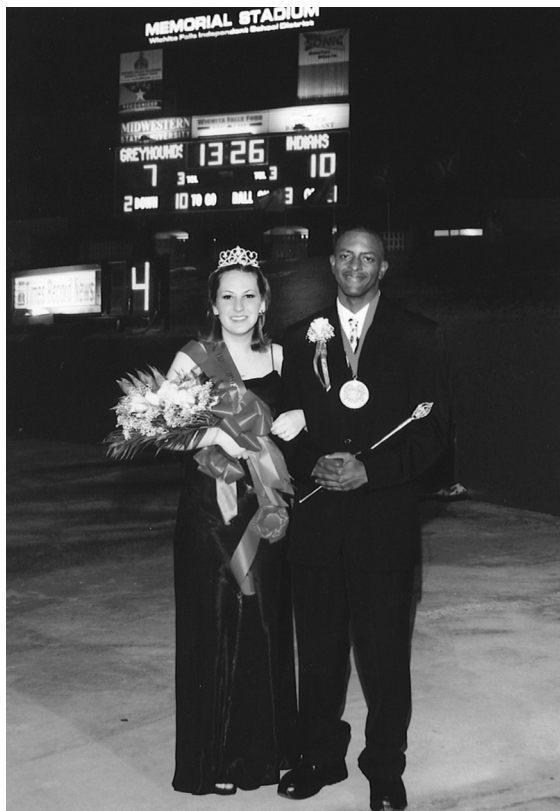
Prerequisites: THEA 2533, 3433, 3543 or consent of the instructor.

Conceptualization, direction, and production of a one-act play for presentation before an audience. Includes responsibility for all performance, design, technical, and promotional aspects of the production.

4493. British Theatre: Production

3(3-0)

As part of the British Studies Program, this course involves experiencing professional British theatre productions, then critiquing them from the standpoint of design. Instruction will be bolstered by professional designers, stage managers, and technicians invited to class to discuss their work or conduct workshops. The course will also include trips to British theatre museums and collections.





**CONTINUING
EDUCATION**

CONTINUING EDUCATION

Pam Morgan, Director (Hardin Hall 226)

Continuing Education is a community-oriented service provided through non-credit, personal enrichment courses, seminars, conferences, and workshops designed to meet your needs and educational requirements.

Continuing Education works with businesses, industries, and agencies to develop in-house programs; to develop, coordinate, and implement conferences, seminars, and institutes or other special programs; co-sponsor programs with interested groups, agencies, or professional organizations and develop community enrichment events. Programming may be flexible and scheduled to fit the particular goal to be attained.

The University reserves the right to substitute speakers or instructors if unavoidable circumstances make it necessary.

Certificates and Continuing Education Units for Professional Development

Formal recognition is awarded for the completion of Continuing Education professional or skill programs through the issuance of Continuing Education Units (CEU) and a certificate. A CEU is a nationally recognized, standard unit of measurement awarded for every ten contact hours of participation in an organized Continuing Education experience, under responsible sponsorship, capable direction, and qualified instruction. The programs were reviewed by the International Association for Continuing Education and Training on September 22, 1994, and received approval to award Continuing Education Units as an "Authorized CEU Sponsor."

Registration and Tuition Policies

Schedules for fall, spring, and summer classes are printed regularly and will be mailed upon request. Schedules include general information, course descriptions, and tuition fees for each course. Pre-registrations are required. Tuition payment for all classes, seminars, institutes, and workshops is due and payable upon registration. Payment by Visa, MasterCard, or Discover is available. Also, we will be glad to bill your company.

Enrollment for MSU Continuing Education courses is accepted by mail, by telephone, by e-mail, by fax, or in person. To enroll by mail, send name, address, and check (payable to Midwestern State University) to Continuing Education, Midwestern State University, Wichita Falls, Texas 76308. To enroll by telephone, call (940) 397-4307 or (940) 397-4785. To enroll by fax, fill out the information needed and fax to (940) 397-4042. Please note the course or courses for which you are registering. To enroll in person, come to the 2nd floor of Hardin Hall on the MSU campus.

Telephone calls, faxes, and e-mails are considered tentative registration pending receipt of check, money order, Visa, MasterCard, or Discover. For classes that have a limited number of persons, registrations accompanied by checks, money orders, or VISA/MasterCard/Discover approval take precedence.

To enroll by e-mail, log onto the Extended Education web page at <http://distance.mwsu.edu>, which contains a registration form.

Refunds

If a course fails to materialize, a full refund will be made to the enrollee. The

University reserves the right to discontinue any classes for which enrollment is not sufficient to justify the offering. Enrollees requesting a refund must call the office.

A \$10 administration fee will be charged if an enrollee drops a class for any reason after registering but before the first class meeting.

A 50% refund will be made if withdrawal occurs before the second meeting of a class for all courses except for studio art courses. For studio art classes, withdrawal will be allowed until the third meeting of classes.

No refund will be made after the second meeting of a class (third meeting, studio art) unless specific problems occur and the director approves the refund.

Classes that have a \$10.00 tuition fee or less are not subject to any refund.

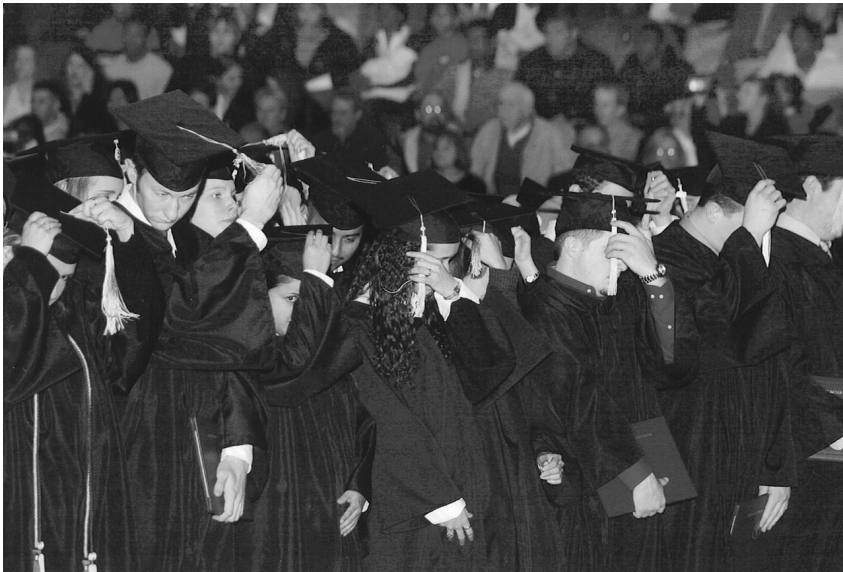
Seminars and workshops have a different refund policy.

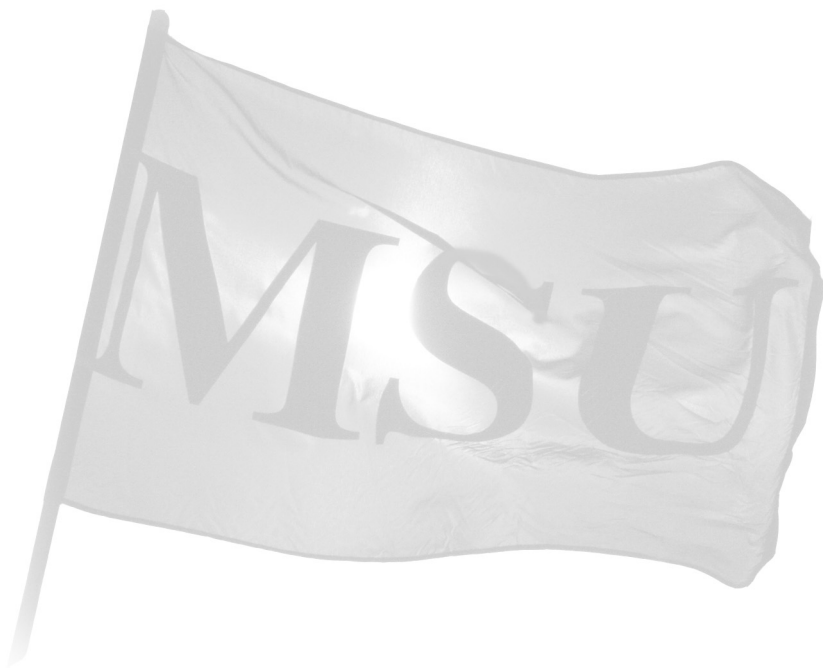
Important Information on Parking

Ample space in non-reserved parking is available on campus. HOWEVER, state regulations require all cars parking on campus to be registered. This may be done by going to the University Police Office and paying a \$4.00 parking fee (hours: Monday - Tuesday, 7:00 a.m. - 7:00 p.m.; Wednesday - Friday, 7:00 a.m. - 5:00 p.m.) If you do not wish to park on campus, there is space on Taft directly in front of Hardin Hall or on the streets east of Taft.

No matter what one's personal reasons may be, we wish to encourage involvement in life-long educational experiences. To paraphrase the Carnegie Commission on Higher Education: Education is a lifelong process—one never loses the ability to learn.







FACULTY DIRECTORY AND AWARDS

**University Faculty
Emeriti Faculty and Administration
Hardin Professors and Scholars
Faculty Award**

THE UNIVERSITY FACULTY

2004-2005

The date indicates year of original appointment.

ANDERSEN, PATRICIA, **Assistant Professor of Counseling and Special Education**, 2003

B.A., University of Denver; M.S., Shippensburg State University; Ed.D., Rutgers University

ARCHAMBO, LARRY, **Professor of Music**, 1988

B.M.E., Oral Roberts University; M.M., D.M.A., University of Kansas

ARNOULT, SHARON L., **Assistant Professor of History**, 2000

B.A., M.A., Ph.D., University of Texas

ASH, RICHARD M., **Professor of Art**, 1968

B.F.A., M.F.A., Wichita State University

BAILEY, BAMBI, **Assistant Professor of Education and Reading**, 2001

B.S., University of Montevallo; M.S., University of Houston-Clear Lake; Ph.D., Miami University

BARNETT, DANA S., **Assistant Professor of English**, 1988

B.S., M.A., Midwestern State University

BAUER, KATHLEEN E., **Assistant Professor of Accounting**, 1981

B.S., Northwestern State University of Louisiana; M.A., University of Alabama; CPA, Louisiana and Texas, CSEP

BELCHER, SANDRA, **Assistant Professor of Mathematics**, 1993

B.S., Midwestern State University; M.S., University of North Texas

BHUYAN, RAFIQU, **Assistant Professor of Finance**, 2003

M.C., University of Dhaka-Bangladesh; M.S., University of Illinois at Urbana-Champaign; Ph.D., Concordia University

BISBEE, CAROL E., **Assistant Professor of Social Work**, 1997

B.A., Midwestern State University; M.S.S.W., University of Texas-Arlington

BLACK, ALAN P., **Assistant Professor of Music**, 1987

B.A., Brigham Young University; M.A., Boise State University

BOLIN, CARLA, **Assistant Professor of Mass Communication**, 1985

B.A., M.A., Midwestern State University

BOWLES, BETTY C., **Assistant Professor of Nursing**, 1968-90; 2002

B.S., Incarnate Word College; M.S., Texas Woman's University

BREEN, ALLISON, **Reference Librarian and Instructor**, 1973

B.A., M.A., Midwestern State University; M.L.S., University of North Texas

BRINK, JAN W., **Associate Professor of the McCoy School of Engineering**, 1985

B.S., M.S., Texas Tech University; Ph.D., University of Texas-Arlington

BUGG, NADIA A., **Chair, Graduate Coordinator, and Professor of Radiologic Sciences**, 1994

B.S., University of Central Arkansas; M.A., Louisiana Tech University; Ph.D., Louisiana State University

BULTENA, CHARLES D., **Chair and Associate Professor of Management and Marketing**, 1996

B.B.A., M.B.A., Midwestern State University; Ph.D., University of North Texas

- BURGER, MARTHA A., **Assistant Professor of Educational Leadership and Technology**, 2001
B.A., Trinity University; M.S., Ed.D., University of Oklahoma
- BURKS, SHANNON K., **Instructor in Kinesiology and Head Women's Basketball Coach**, 1999
B.A., Evangel College; M.S., Henderson State University
- CAPPS, OSCAR EMERSON, **Dean of Graduate Studies and Associate Professor of Counseling and Special Education**, 1970
B.S.Ed., Northeastern State College; M.Ed., Ed.D., University of Arkansas
- CARLSTON, DAVID L., **Assistant Professor of Psychology**, 2004
B.S., Brigham Young University; M.S., Ph.D., Ohio University
- CARPENTER, STEWART B., **Graduate Coordinator and Professor of Computer Science**, 1978
B.A., M.C.S., Ph.D., Texas A&M University
- CATE, RODNEY L., **Chair and Professor of Chemistry**, 1978
B.S., Tarleton State University; Ph.D., Arizona State University
- CLARK, ROBERT E., **Associate Provost and Professor of Sociology**, 1973
B.A., M.A., Baylor University; Ph.D., University of Montana
- COE, MARY ANN, **Professor of Educational Leadership and Technology and West Foundation University Professor**, 1997
B.S., Holy Family College; M.Ed., Arcadia University; D.Ed., Pennsylvania State University
- COFFEY, SUE, **Serials Librarian and Instructor**, 1974
B.S., M.L.S., Texas Woman's University
- COLEMAN, NELDA, **Assistant Professor in Nursing**, 2003
B.S., M.S., Midwestern State University
- COLLINS, CAROL L., **Assistant Professor of Nursing**, 1993
B.S.N., Texas Christian University; M.S., Texas Woman's University
- COLLINS, MICHAEL L., **Professor of History**, 1985
B.A., M.A., Ph.D., Texas Christian University
- COMELLO, ROBERT J., **Assistant Professor of Radiologic Sciences**, 2002
B.S., East Stroudsburg University; A.A.S., M.S., College Misericordia; M.S., Lehigh University
- CONRAD, MELANIE, **Assistant Professor of Mass Communication**, 2003
B.A., University of Nebraska-Lincoln; M.A., Minnesota State University; Ph.D., Wayne State University
- COOK, WILLIAM B., **Chair and Associate Professor of Biology**, 1991
B.S., University of Washington; M.S., Central Washington University; Ph.D., University of Missouri
- CREWS, NORVAL D., **Assistant Professor of Music**, 1970
B.M., M.M.E., University of North Texas
- CROSS, BRYAN J., **Instructor in Kinesiology and Assistant Football Coach**, 2003
B.S., Campbellsville University
- CRUMP, MARTHA H., **Assistant Professor of Dental Hygiene**, 1986
A.A.S., Bee County College; B.S.D.H., M.E., Midwestern State University

- CUEVAS, JACQUELINE, **Associate Professor of Psychology**, 1984
B.A., Mundelein College; M.A., Ph.D., Southern Illinois University
- CURRAN, BARBARA, **Assistant Professor of Dental Hygiene**, 1998
B.S., Baylor University College of Dentistry; M.Ed., Midwestern State University
- CURRY, DAPHNEY, **Instructor in Education and Reading**, 2003
B.S., M.E., Midwestern State University
- CYS, JOHN M., **Catalog Librarian and Instructor**, 1995
B.A., M.S., University of Colorado; M.S.L.S., University of North Texas
- DAVIDS, MARK R., **Chair and Assistant Professor of Criminal Justice**, 2001
B.S., University of North Texas; M.A.J., Wichita State University; J.D., University of South Dakota
- DAVIS, FREDRIC C., **Associate Professor of Dental Hygiene**, 1990
B.S., D.M.D., University of Oregon; M.S., University of Iowa
- DAVIS, LARRY HILMAN, **Associate Professor of Art**, 1969
B.S., Weber State College; M.F.A., Utah State University
- DAVIS, LISA A., **Assistant Professor of Nursing**, 2001
A.D., Bacone College; B.A., University of Arkansas; M.P.H., M.S., University of Oklahoma; Ph.D., Texas Woman's University, RN
- DeBOIS, BARBARA J., **Chair and Assistant Professor of Dental Hygiene**, 1983
A.S.D.H., B.S.D.H., Midwestern State University; M.S., Texas Woman's University
- DIEHM, GARY E., **Instructor in Kinesiology and Head Athletic Trainer**, 2001
B.S., M.S., Eastern New Mexico University
- DIEKHOF, GEORGE M., **Chair, Graduate Coordinator, and Professor of Psychology**, 1977
B.A., Nebraska Wesleyan University; M.A., Ph.D., Texas Christian University
- DISTEL, MARY J., **Assistant Professor of Nursing**, 1996
B.S.N., University of Florida; M.S., Wright State University
- DONOVAN, JOANNE S., **Instructor in Foreign Languages**, 1988
B.A., State University of New York-Buffalo; M.A., Middlebury College
- DONOVAN, TIMOTHY P., **Professor of Computer Science**, 1987
B.S., Regis College; M.A., Oklahoma University; Ph.D., Colorado University; M.S., Shippensburg University
- DOVER, ERNEST A., **Interim Chair, Graduate Coordinator, and Associate Professor of Political Science**, 1985
B.A., Winston-Salem State University; M.A., Ph.D., Kent State University
- DOWD, JOHN F., **Program Coordinator and Associate Professor of Educational Leadership and Technology**, 1989
B.S., LeMoyne College; M.S., Ed.D., Syracuse University
- DUAN, XIANSHENG JASON, **Assistant Professor of Management and Marketing**, 1999
B.S., Wuhan University; M.B.A., Ph.D., University of Illinois
- ELDER, C. DOUGLAS, **Instructor in Kinesiology and Men's Soccer Coach**, 2000
B.S., Midwestern State University; M.A., University of Houston-Clear Lake
- ESTRADA, ANITA (Ann), **Chair, Graduate Coordinator, and Associate Professor of Education and Reading**, 1979
B.S., Howard Payne College; M.Ed., Ph.D., University of North Texas

- FANCHER, CHRIS A., **Instructor in Kinesiology and Assistant Football Coach**, 2002
B.S., University of Tulsa; M.S., Northeastern State University
- FARRIS, MARK K., **Professor of Mathematics**, 1992
B.A., Ph.D., Rice University
- FASHIMPAR, GARY A., **Professor of Social Work**, 1979
B.A., University of North Texas; M.S.S.W., Ph.D., University of Texas-Arlington
- FAULK, JERRY D., **Chair and Associate Professor of the McCoy School of Engineering**, 1990
B.S., Midwestern State University; Ph.D., Texas Christian University
- FIELDS, PETER J., **Assistant Professor of English**, 2002
B.A., M.A., Shippensburg University; Ph.D., University of Denver
- FISCHLI, RONALD D., **Dean of the Lamar D. Fain College of Fine Arts and Professor of Theatre**, 1990
B.S., M.S., Fort Hays Kansas State College; Ph.D., University of Missouri
- FLANDERS, JOANNE M., **Assistant Professor of Nursing**, 1989
B.S.N., Marian College; M.S., University of Oklahoma
- FLAVIN, MICHAEL J., **Associate Professor of Political Science**, 1969
B.S., M.A., St. Louis University; Ph.D., University of Arizona
- FLEMING, RICHARD G., **Chair and Associate Professor of Physics**, 1989
B.S., Midwestern State University; Ph.D., Texas Christian University
- FOSNAUGH, LINDA S., **Associate Professor of Mathematics**, 1994
B.A., Centenary College of Louisiana; M.A., Ph.D., University of Nebraska
- FOWLER, CARY S., **Instructor in Kinesiology and Assistant Football Coach**, 2001
B.S., Murray State University
- FRIESEN, DANIEL D., **Assistant Professor of Business Computer Information Systems**, 2000
B.S., M.B.A., McNeese State University; Ph.D., University of Texas-Arlington
- FRITZSCH, RALPH B., **Chair and Professor of Accounting**, 1984
B.S., United States Air Force Academy; M.A., Ohio State University; D.B.A., George Washington University; CPA, Arkansas
- FUERTES-MANJÓN, ROBERTO, **Associate Professor of Foreign Languages**, 1997
B.A., University of Salamanca (Spain); M.A., University of Northern Iowa; Ph.D., University of Georgia
- FUKASAWA, YOSHIKAZU, **Professor of Economics**, 1978
B.A., Fort Hays Kansas State University; M.A., Ph.D., Kansas State University
- FULTON, CANDICE E., **Instructor in Chemistry**, 1996
B.S., Midwestern State University; M.S., University of North Texas
- GALBRAITH, THOMAS W., **Chair and Associate Professor of English**, 1979
B.A., Ph.D., University of Washington
- GARCIA, ADALBERTO, **Chair and Associate Professor of Foreign Languages**, 1989
B.A., Harvard College; M.A., Ph.D., University of Texas-Austin
- GARRISON, DEBORAH, **Chair, Graduate Coordinator, and Associate Professor of the John and Nevils Wilson School of Nursing**, 2000
B.S., M.S., Ph.D., Texas Woman's University; RN

- GARRISON, STEVE R., **Assistant Professor of Political Science**, 2002
B.A., M.A., Ph.D., University of Kansas
- GIDDINGS, GREG W., **Instructor in English**, 1996
B.B.A., M.A., Midwestern State University
- GLEAN, RANDY A., **Director of International Student Services and Assistant Professor of Political Science**, 1997
B.A., Midwestern State University; M.A., Ph.D., Washington University
- GOLDBERG, GARY, **Professor of Art**, 1983
B.F.A., Arizona State University; M.F.A., University of Nebraska
- GORE, M. C., **Program Coordinator and Associate Professor of Counseling and Special Education**, 1993
B.S.Ed., M.S.Ed., Eastern New Mexico University; Ed.D., University of Arkansas
- GORHAM, JAMES, **Assistant Professor of Mass Communication**, 1998
B.A., Concordia College; M.A., University of Memphis
- GREEN, REBECCA L., **Instructor in English**, 2002
B.S., M.A., Midwestern State University
- GREENING, SHERRI, **Instructor in Business Computer Information Systems**, 2003
B.S., University of Houston-Clear Lake; M.M., Northwestern University
- GRIFFIN, JENNIFER, **Instructor in Kinesiology and Assistant Women's Basketball Coach**, 2000
B.S., M.S., Midwestern State University
- GRIFFIN, TERRY W., **Instructor in Computer Science**, 2001
B.A.A.S, M.S., Midwestern State University
- GUTHRIE, PAUL C., **Associate Professor of Psychology**, 1991
B.A., University of Texas-Dallas; M.A., Midwestern State University; Ph.D., University of Arkansas
- HAFF, G. GREGORY, **Chair, Graduate Coordinator, and Assistant Professor of Kinesiology**, 2002
B.S., East Stroudsburg University, M.S., Appalachian State University; Ph.D., University of Kansas
- HALLFORD, RANDAL, **Assistant Professor of Chemistry**, 2003
B.S., East Central University; M.S., Pittsburg State University; Ph.D., Oklahoma State University
- HALVERSON, RANETTE, **Chair and Professor of Computer Science**, 1980
B.S., M.S., Midwestern State University; Ph.D., University of North Texas
- HANSEN, CHRISTOPHER A., **Assistant Professor of Chemistry**, 2000
B.S., Midwestern State University; M.S., Ph.D., Washington State University
- HARMEL, ROBERT M., JR., **Professor of Economics**, 1970-79; 1989
B.S., Texas Tech University; M.S., Ph.D., Iowa State University
- HARTZLER, STANLEY J., **Associate Professor of Education and Reading**, 2001
B.S., Western Illinois University; Ph.D., University of Texas-Austin
- HARVEY, MARTHA M., **Interim Dean of the College of Business Administration and Professor of Business Administration**, 1982
B.A., Sweet Briar College; M.S., Midwestern State University; Ph.D., University of North Texas

- HENDERSON, CHRISTOPHER, **Electronic Access Media Librarian and Instructor**, 2002
B.S., University of Central Florida; M.R.E., Southwestern Baptist Theological Seminary; M.I.S., University of North Texas
- HENDRICKSON, KENNETH E., JR., **Chair, Graduate Coordinator, and Professor of History - Hardin Foundation Distinguished Professor of American History**, 1970
B.A., M.A., State University of South Dakota; Ph.D., University of Oklahoma
- HENSCHER, DONALD F., JR., **Professor of Theatre**, 1970
B.S., Dickinson State College; M.A., Colorado State University
- HENSCHER, SALLY M., **Instructor in English**, 2000
B.A., M.A., Midwestern State University
- HENSON, SUSAN, **Assistant Professor of English**, 1987
B.A., Augustana College; M.A., Midwestern State University
- HEWITT, HARRY P., **Professor of History**, 1967
B.S., M.A., Ph.D., University of Utah
- HINDS, WILLIAM E., **Professor of Mathematics**, 1975
B.A., University of Texas-Austin; M.A., University of Texas-Arlington; Ph.D., Oklahoma State University
- HIRAIDE, SUGURU, **Assistant Professor of Art**, 2003
B.F.A., West Virginia University; M.F.A., California State University
- HOFFMAN, THOMAS P., **Associate Professor of English**, 1968
B.S.Ed., M.A., Ball State University; Ph.D., University of Oklahoma
- HOGGARD, JAMES M., **Perkins-Prothro Distinguished Professor of English**, 1966
B.A., Southern Methodist University; M.A., University of Kansas
- HOGGARD, LYNN, **Professor of English and Foreign Languages**, 1986
B.A., Centenary College; M.A., University of Michigan; Ph.D., University of Southern California
- HOLLABAUGH, LINDA L., **Associate Professor of Foreign Languages**, 1989
B.A., M.A., Ph.D., Texas Tech University
- HORNER, NORMAN V., **Dean of the College of Science and Mathematics and Professor of Biology**, 1967
B.S., M.S., University of North Texas; Ph.D., Oklahoma State University
- HOUGH, RONALD, **Professor of Music**, 1971
B.A., B.M., Wheaton College; M.M., Southwestern Baptist Theological Seminary; D.M.A., University of Illinois
- JANSEN, LAUREN A., **Assistant Professor of Nursing**, 2002
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**Dr. Friederike Wiedemann, Provost
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Dr. Evans Lansing Smith, Hardin Professor 2003**

HARDIN PROFESSORS

Beginning with the academic year 1961-62, the Hardin Foundation for Wichita County established an annual award for a member of the Midwestern State University faculty whose teaching and research of the preceding twelve months had brought distinction to the faculty member and the institution. The award is currently \$3,500.

WALTER W. DALQUEST	1961-1962
FLOYD F. EWING	1962-1963
CICERO H. BERNARD	1963-1964
WALTER L. WEHNER	1964-1965
JOSEPH SATIN	1965-1966
JOHN W. MEUX	1966-1967
JOSEPH E. ROSE	1967-1968
E. KENT HUGHES	1968-1969
F. ROBERT MADERA	1969-1970
NEIL B. HOLLIMAN	1970-1971
JESSE W. ROGERS	1971-1972
T. BARLOW HILL	1972-1973
K. E. HENDRICKSON, JR.	1973-1974
ELDON H. SUND	1974-1975
NORMAN V. HORNER	1975-1976
JAMES M. HOGGARD	1976-1977
RICKEY J. WILLIAMS	1977-1978
RICHARD M. ASH, III	1978-1979
ROBERT D. BECKER	1979-1980
JEFFERSON H. CAMPBELL	1980-1981
ROBERT E. CLARK	1981-1982
BAIRD W. WHITLOCK	1982-1983
YOSHI FUKASAWA	1983-1984
RODNEY LEE CATE	1984-1985
EMILY E. LABEFF	1985-1986
R. STEVEN TIPPS	1986-1987
DONALD F. HENSCHER, JR.	1987-1988
CHARLES D. MCCULLOUGH	1988-1989
FREDERICK STANGL, JR.	1989-1990
ELIZABETH A. YAROSZ	1990-1991
GEORGE M. DIEKHOF	1991-1992
HARRY P. HEWITT	1992-1993
HARRY M. BROWN and	1993-1994
LOUIS J. RODRIGUEZ	
MICHAEL L. LAND	1994-1995
RUTH E. MORROW	1995-1996
LYNN HOGGARD	1996-1997
RANETTE HALVERSON	1997-1998
MARTHA M. HARVEY	1998-1999
NELSON L. PASSOS	1999-2000
ROY P. PATIN, JR.	2000-2001
NADIA A. BUGG	2001-2002
EVANS LANSING SMITH	2002-2003

HARDIN SCHOLARS

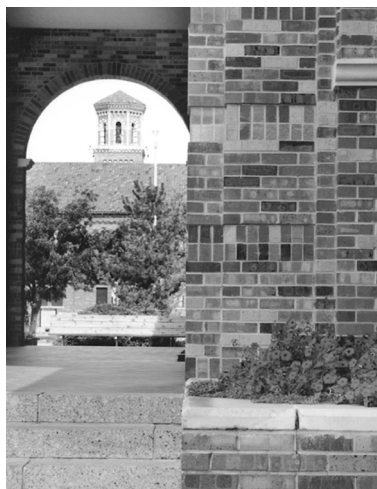
In 1961-62 the Hardin Foundation established an annual award of \$1,500 (currently \$2,500) for a student whose scholastic achievements and participation in University activities during the preceding year had brought distinction to the student and Midwestern State University.

JOHNNY WALBRICK	1961-1962
JANICE ELAINE LAIDLEY	1962-1963
HARVEY MARTZ	1963-1964
FRANCES DARLENE REIMERS	1964-1965
JUDY WATTS	1965-1966
JOHN EVERETT RHOADS	1966-1967
KENNETH SIBER	1967-1968
LINDAL NEWBY	1968-1969
PEGGY SPRING	1969-1970
DAVID M. JONES and STEPHEN K. MOOREHEAD	1970-1971
JEANNA BETH MOORE	1971-1972
JOSEPH S. HOOD, JR. and REBECCA HAWKINS POND	1972-1973
DONNA GRIMSLEY EARP	1973-1974
JOHN T. HEATH	1974-1975
CHARLOTTE ANN WEBB	1975-1976
MICHAEL S. FINDLEY	1976-1977
SHARON KAY LIPPE	1977-1978
DARYL LIN LEICK	1978-1979
JERRY DEAN MCGEE	1979-1980
AJAI CADAMBI and VICTOR M. BOYER	1980-1981
MATTHEW R. MUTH	1981-1982
KAY LYNN BAUMAN	1982-1983
JOHN M. YOUNG	1983-1984
LYDIA BARTON	1984-1985
GREGORY POGUE	1985-1986
PETER D. KOPLYAY and ALISHA HAIGOOD	1986-1987
WILLIAM JAMES EARNEST	1987-1988
RICHARD KEITH HUGHLETT	1988-1989
ALANNA ALBRECHT	1989-1990
PHILLIP EDWARD CHAPA	1990-1991
STACIE BEAUCHAMP and JENNY SALAN	1991-1992
MELISSA METIVIER	1992-1993
JENNIFER JEN'NAN GHAZAL	1993-1994
CORBY B. WALKER	1994-1995
CODY RAY COLE	1995-1996
LEILA ANNE PLUMMER	1996-1997
DEBBIE LOU JONES BYRNE	1997-1998
ROBERT PRESTON LIGHT	1998-1999
DANIKA NIKOLE TAYLOR	1999-2000
JEREMY PAUL COFFELT	2000-2001
JENNIFER LYN BEREND	2001-2002
JORGE ANTONIO PARAMO	2002-2003
RUTHI SHERRILL BURNS	2003-2004

FACULTY AWARD

The Faculty Award is an award given by the faculty of Midwestern State University to a full-time faculty member for teaching excellence and service to the University.

1977	Arthur F. Beyer
1978	Harlan J. Steph
1979	Robert E. Clark
1980	F. Robert Madera
1981	Billy C. Brackeen
1982	O. Emerson Capps
1983	Norman V. Horner
1984	William E. Hinds
1985	Emily E. LaBeff
1986	Nancy A. Scott
1987	John W. Meux
1988	Michael J. Flavin
1989	Sherry Gillespie
1990	Donald Maxwell
1991	Charles D. Ramser
1992	Ranette Halverson
1993	Frederick B. Stangl, Jr.
1994	Jefferson H. Campbell
1995	Robert G. Welch
1996	Richard P. Simpson
1997	Diane M. Spiller
1998	Martha M. Harvey
1999	John V. Grimes
2000	Henry Van Geem
2001	Stewart B. Carpenter
2002	Sandra J. Church
2003	Michaelle Kitchen
2004	Nelson L. Passos





COMMON COURSE NUMBERS

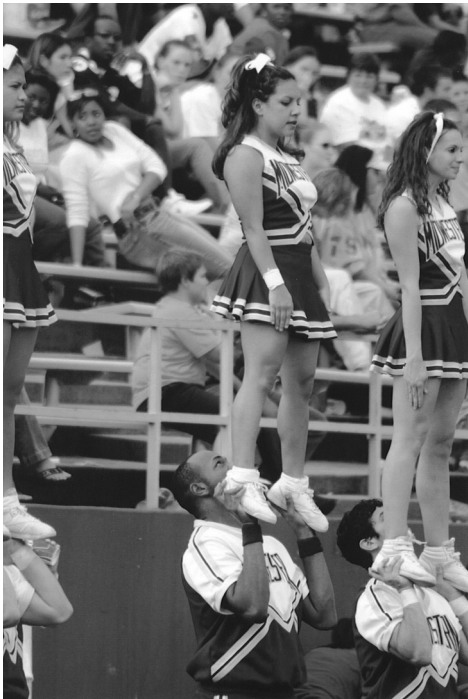
COMMON COURSE NUMBERS

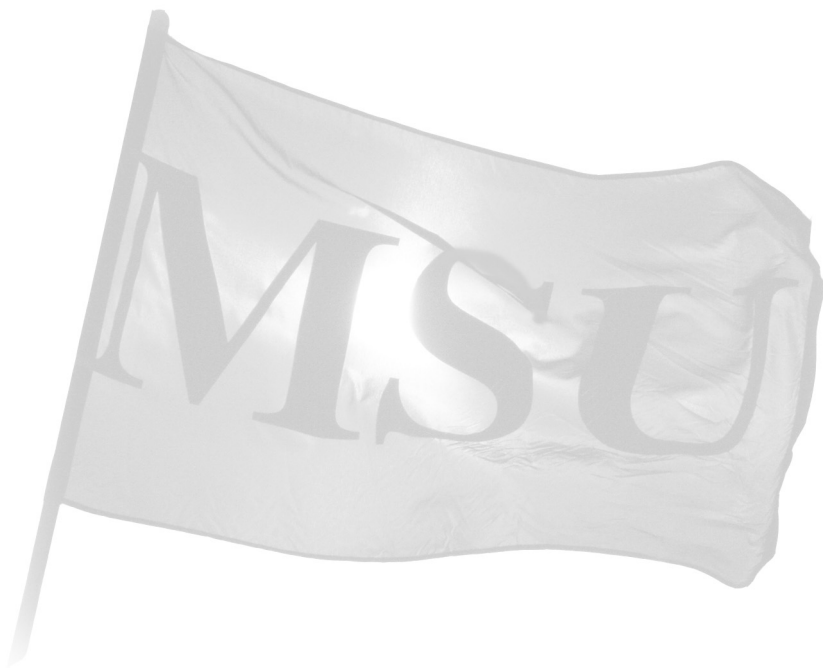
To facilitate the transfer of courses, Midwestern State University participates with other Texas schools in designating the common course number for the following courses:

COMMON COURSE NO.	MSU COURSE NO.	COMMON COURSE NO.	MSU COURSE NO.
ACCT 2301	ACCT 2143	ENGL 1301	ENGL 1113
ACCT 2302	ACCT 2243	ENGL 1302	ENGL 1123
ARTS 1301	ART 1413	ENGL 2322	ENGL 2813
ARTS 1311	ART 1113	ENGL 2323	ENGL 2823
ARTS 1312	ART 1123	ENGL 2327	ENGL 2613
ARTS 1316	ART 1313	ENGL 2328	ENGL 2623
ARTS 1317	ART 1323	ENGL 2332	ENGL 2413
ARTS 2316	ART 2313	ENGL 2333	ENGL 2423
ARTS 2317	ART 2323	FREN 1411	FREN 1134
ARTS 2326	ART 2523	FREN 1412	FREN 1234
ARTS 2327	ART 2823	FREN 2311	FREN 2823
ARTS 2333	ART 2153	FREN 2312	FREN 2233
ARTS 2346	ART 2613	GEOL 1304	GEOL 1233
ARTS 2347	ART 2623	GEOL 1403	GEOL 1134
ARTS 2356	ART 2013	GERM 1411	GERM 1134
BCIS 1301	BUAD 2153	GERM 1412	GERM 1234
BIOL 1322	BIOL 2333	GERM 2311	GERM 2133
BIOL 1411	BIOL 1544	GERM 2312	GERM 2233
BIOL 1413	BIOL 1144	GOVT 2301	POLS 1333
BIOL 2401	BIOL 1134	GOVT 2302	POLS 1433
BIOL 2402	BIOL 1234	HIST 1301	HIST 1133
BUSI 1301	BUAD 1033	HIST 1302	HIST 1233
BUSI 1307	FINC 1733	HIST 2311	HIST 1333
CHEM 1105	CHEM 1101	HIST 2312	HIST 1433
CHEM 1111	CHEM 1141	MATH 1314	MATH 1233
CHEM 1112	CHEM 1241	MATH 1316	MATH 1433
CHEM 1305	CHEM 1103	MATH 1332	MATH 1053
CHEM 1307	CHEM 1203	MATH 2413	MATH 1634
CHEM 1311	CHEM 1143	MATH 2414	MATH 1734
CHEM 1312	CHEM 1243	MATH 2415	MATH 2534
COMM 1307	JOUR 1233	MUSI 1157	MUSC 1931
COSC 1300	CMPS 1023	MUSI 1306	MUSC 1033
CRIJ 1301	CRJU 1113	MUSI 1310	MUSC 1033
CRIJ 2313	CRJU 2243	MUSI 1311	MUSC 1603
CRIJ 2323	CRJU 2213	MUSI 1312	MUSC 1613
CRIJ 2328	CRJU 2233	MUSI 2311	MUSC 2603
DRAM 1120	THEA 2121	MUSI 2312	MUSC 2613
DRAM 1310	THEA 1503	PHED 1164	KNES 1011
DRAM 1322	THEA 1413	PHED 1301	KNES 1053
DRAM 1330	THEA 1513	PHED 1304	ATRN 1203
DRAM 1341	THEA 1613	PHED 1306	KNES 2213
DRAM 1351	THEA 2533	PHED 1308	KNES 2353
DRAM 2336	SPCH 1233	PHIL 1301	PHIL 1033
ECON 1301	ECON 1333	PHIL 1316	BIBL 1133
ECON 2301	ECON 2333	PHIL 1317	BIBL 1233
ECON 2302	ECON 2433	PHIL 2303	PHIL 1533

PHIL	2306	PHIL	2033	SPAN	1411	SPAN	1134
PHIL	2316	PHIL	2233	SPAN	1412	SPAN	1234
PHYS	1401	PHYS	1144	SPAN	2311	SPAN	2133
PHYS	1402	PHYS	1244	SPAN	2312	SPAN	2233
PSYC	2301	PSYC	1103	SPCH	1315	SPCH	1133
SOCL	1301	SOCL	1133	SPCH	1342	SPCH	1233
SOCL	1306	SOCL	2233	SPCH	2341	SPCH	2133







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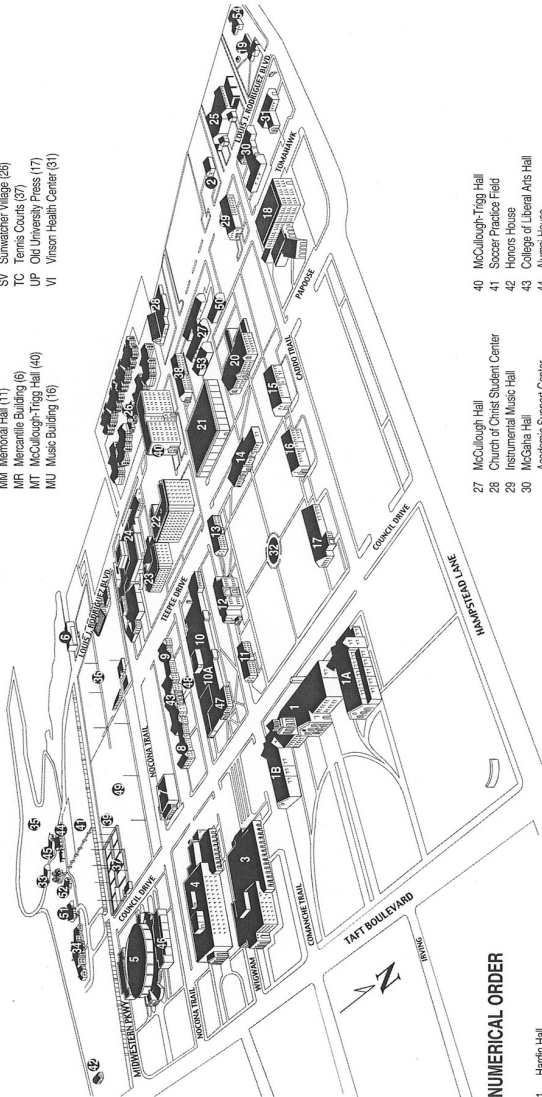
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MIDWESTERN STATE UNIVERSITY

ALPHABETICAL ORDER

- AA Alvin Auditorium (1A)
 AS Alvin House (4A)
 BC Bishop's Suite (25)
 BF Bolin Court (32)
 BH Bolin Hall (18)
 BI Biology House (54)
 BU Bolin Hall (4)
 BW Bea Wood Hall (9)
 CA Catholic Student Center (2)
 CE Church of Christ Student Center (28)
 CE Continuing Education (1)
 CP Central Plant (7)
 CR Carigan School 1693 Blundell
 CS Clark Student Center (10)
 CS Clark Student Center Altium (10A)
 CU Credit Union (17) [UP]
 DA Daniel Hall (21)
 FA Fair Frie Arts Center (24)
 FE Ferguson Hall (12)
 FE Fair Hall (13)
 FO Fowler Hall (20)
 FO Fair Hall (1)
 HA Hardin Hall (1)
 HA Hardin House (42)
 HN Hardin North (1A)
 HS Hardin South (15)
 IE Interactive Eng. Lang. Inst. (6)
 IF Intramural Field (38)
 IM Instrumental Music Hall (29)
 LA Kingsworth Hall (22)
 LA College of Liberal Arts Hall (43)
 LI Library-Auditor (9)
 MA Martin Hall (14)
 MC McCullough Hall (27)
 ME Music Education (15)
 MG McGee Hall (30)
 MN Macman Hall (38)
 MN Memorial Hall (11)
 MR Mercantile Building (6)
 MT McCullough-Trigg Hall (40)
 MU Music Building (16)
 OD O'Donohoe Hall (8)
 OE Outdoor Education Center (33)
 PH Pierce Hall (23)
 PD Police Department (19)
 Q Quadrangle (32)
 SB Small Bus. Dev. Center (30) [MG]
 SF Soccer Field (36)
 SH Shires House (34)
 SL Shires Lake Center (45)
 SL Shires Lake (50)
 SP Soccer Practice Field (41)
 SV Swatwiche Village (26)
 TC Tennis Courts (37)
 UP Old University Press (17)
 VI Vinson Health Center (51)



NUMERICAL ORDER

- 1 Hardin Hall
 1A Hardin North
 1B Alvin Auditorium
 2 Catholic Student Center
 3 Moffett Library
 4 Bolin Hall
 5 Ligon Hall
 6 Mercantile Building
 7 Central Plant
 8 O'Donohoe Hall
 9 Bea Wood Hall
 10 Clark Student Center
 10A Clark Student Center Altium
 11 Memorial Hall
 12 Ferguson Hall
 13 Fair Hall
 14 Martin Hall
 15 Music Education
 16 Music Building
 17 Old University Press
 18 Bridwell Hall
 19 Hempstead House
 20 Police Department
 21 Fowler Hall
 22 Daniel Hall
 23 Killingsworth Hall
 24 Pierce Hall
 25 Fair Frie Arts Center
 26 Bridwell Courts
 27 Swatwiche Village
 28 Church of Christ Student Center
 29 Instrumental Music Hall
 30 McGee Hall
 31 Academic Support Center
 32 Small Business Development Center
 33 Vinson Health Center
 34 Quadrangle
 35 Outdoor Education Center
 36 Bolin Fountain
 37 Shires House
 38 Shires Lake
 39 Soccer Field
 40 Tennis Courts
 41 Marchman Hall
 42 Intramural Field
 43 McCullough-Trigg Hall
 44 Soccer Practice Field
 45 Honors House
 46 College of Liberal Arts Hall
 47 Alumni House
 48 Sikes Lake Center
 49 Wellness Center
 50 Barnes and Noble Bookstore
 51 Swatwiche Plaza
 52 Paint Shop
 53 Guest House
 54 Carriage House
 55 Robotics Laboratory
 56 Biology House



MIDWESTERN STATE UNIVERSITY**INFORMATION REQUEST FORM**

Prospective students are encouraged to contact MSU Admissions. You may apply for admission online through the Admissions link on the university website: <http://www.mwsu.edu> or <http://www.applytexas.org>. If you wish to schedule a campus visit, contact our office to schedule your personal tour of Midwestern State University.

Beginning September 1, 2004, an application fee of \$25.00 will be required. Applications for admission will be processed upon receipt of the necessary fees.

Name _____ SSN _____

Address _____

City _____ State _____ Zip _____

Telephone _____ Date of Birth _____

E-mail: _____

Intended Major _____

Other Interests _____

School Now Attending _____

What year/semester do you plan to start at MSU? _____

Current Classification: High School ☐ FR ☐ SO ☐ JR ☐ SR
 College Transfer ☐ Junior College Transfer
 ☐ Senior College Transfer

Other requests: _____

Please return this form to:

Midwestern State University
Admissions Office
3410 Taft Boulevard
Wichita Falls, TX 76308-2099
Local: (940) 397-4334
Toll-free: 1-800-842-1922
E-mail: admissions@mwsu.edu

Midwestern State University's home page: <http://www.mwsu.edu>

NOTES