

Course Delivery and Scheduling

Participating in courses challenges a student beyond listening well, taking good notes, and preparing for examinations. Exploration and experimentation pursued individually and in small groups, under the guidance of the instructor, allow students to work as a team on a specific project or research with faculty assistance and direction. In other courses students may progress at their own rate, often assisted by computer or other technologies. Some courses are conducted in a specialized physical setting such as a practice lab, hospital, school agency or corporate setting under the guidance of the faculty member.

The faculty at DSU uses current technology to communicate information, to share ideas and to measure a student's learning against the World Wide Web, the Internet, video tapes and printed materials. Students have access to faculty via electronic mail, by phone or in person during office hours as well as traditional lecture/lab formats.

Academic Skills (Pre-General Education)

ENGL 031-032-033 BASIC WRITING. An introduction to basic writing skills needed for successful academic writing. The minimum amount of credit required will be based on testing. Students who require 1 credit of academic skills register for ENGL 031. Students who require 2 credits of academic skills register for ENGL 032. Students who require 3 credits of academic skills register for ENGL 033. **1-3**

LART 010 ACADEMIC SKILLS. A survey of the attributes of successful students. Emphasis on notetaking, time management, mastering text book material, reviewing for tests, vocabulary, and using memory to advantage. This course may not be counted as an elective in any program. **1-3**

LART 110 LANGUAGE ARTS. Building reading speed and developing better comprehension, vocabulary, and general study skills. Each time the course is offered, there will be a specific indication of its focus (such as "Reading" or "Study Skills"). **1-3**

MATH 021 BASIC ALGEBRA. This course prepares students for college level mathematics. Topics generally include: basic properties of real numbers, exponents and radicals, rectangular coordinate geometry, solutions to linear and quadratic equations, inequalities, polynomials and factoring. Students may also be introduced to functions and systems of equations. Note: This is remedial level course and no credit for MATH 021 will be granted for graduation. Prerequisite: Appropriate Mathematics Placement. **3**

MATH 101 INTERMEDIATE ALGEBRA. Basic properties of real numbers, linear equations and inequalities, quadratic equations, systems of

equations, polynomials and factoring, rational expressions and equations, and radical expressions and equations, and an introduction to functions such as polynomial, exponential and logarithmic functions. Credit for MATH 101 will not be granted to anyone who has previously received credit for MATH 102. Students completing MATH 101 in the spring 2006 term or later must earn a grade of 'C' or better to meet the prerequisite for MATH 102. Prerequisite: Appropriate Mathematics Placement. **3**

READ 041 READING. This course provides students with reading strategies necessary for making the transition to collegiate level reading. The course will present students with multiple strategies to promote comprehension skills, develop vocabulary, and enhance metacognition to become strategic readers. This course will be required for students with an ACT score in Reading at 17 or below (or a comparable COMPASS score). **3**

Accounting

ACCT 205 INTRODUCTION TO ACCOUNTING FOR NOT-FOR-PROFIT MANAGEMENT. An introduction to the basic financial and accounting principles related to not-for-profit entities. **3**

ACCT 210 PRINCIPLES OF ACCOUNTING I. A study of fundamental accounting principles and procedures such as journalizing, posting, preparation of financial statements, and other selected topics. Accounting is emphasized as a service activity designed to provide the information about economic entities that is necessary for making sound decisions. Prerequisite: Sophomore or above standing or consent of instructor. **3**

ACCT 211 PRINCIPLES OF ACCOUNTING

II. A continuation of ACCT 210 with emphasis on partnership and corporate structures, management decision-making, cost control, and other selected topics. Prerequisite: ACCT 210. 3

ACCT 291 INDEPENDENT STUDY. A student independently studies an accounting topic with help from instructor. 1-4

ACCT 305 ANALYSIS OF FINANCIAL

STATEMENTS. The skeptical analysis of corporate financial statements including ratio, vertical, and horizontal analyses, interpretation of disclosure statements, consideration of the impact of inflation and taxes and accounting assumptions, market impact of accounting choices, earning quality and earning management, mergers and acquisitions, accounting-based trading strategies, restatement and forecasting of financial statements, and accounting and auditing ethics and standards. Prerequisite: ACCT 211 3

ACCT 310 INTERMEDIATE ACCOUNTING

I. Involves the intensive study of financial accounting standards, both in theory and practice, as they relate to the preparation and analysis of financial statements. Accounting problems and their impact on the financial statements are addressed in regard to current assets, fixed assets, intangible assets, liabilities, and other selected topics. Prerequisite: ACCT 211. 3

ACCT 311 INTERMEDIATE ACCOUNTING

II. Provides an intensive study of accounting standards, both in theory and practice, as they relate to the preparation and analysis of financial statements. Accounting problems and their impact on the financial statements are addressed in regard to liabilities, investments, stockholders' equity, leases, pensions, tax allocation and other selected topics. Prerequisite: ACCT 310 or consent of instructor. 3

ACCT 320 COST ACCOUNTING. The study of principles and techniques for accumulating, reporting, and analyzing cost information for decision-making and external reporting. The use of cost accounting systems for planning and controlling cost responsibility centers is emphasized. Consideration is given to the appropriate use of various cost accounting methods such as activity-based costing, target costing, and just-in-time management techniques in service and manufacturing industries. Prerequisite: ACCT 211. 3

ACCT 360 ACCOUNTING SYSTEMS.

Provides an understanding of the patterns of flow of accounting information in business, principles of

internal control, and the use of computers in current and future accounting systems. Topics include concepts of accounting information systems, flowcharting and analysis of manual and computerized transaction cycles, decision support systems, electronic commerce, management reporting systems, control and audit of complex computerized information systems, and the development of accounting information systems. Prerequisite: ACCT 211. 3

ACCT/BADM 406 ACCOUNTING FOR

ENTREPRENEURS. Accounting concepts and practices for entrepreneurs/small business owners. Emphasis given to the use of accounting tools to solve small business problems. 3

ACCT 430 INCOME TAX ACCOUNTING.

Involves the study of federal income tax law as it affects individuals, as well as other selected topics. Prerequisite: ACCT 211. 3

ACCT 431 ADVANCED INCOME TAX

ACCOUNTING. A study of federal income tax law as it applies to partnerships, S corporations, C corporations, as well as other selected topics. Prerequisite: ACCT 430. 3

ACCT 450 AUDITING. Studies both theory and practice. Topics include audit planning, internal control, audit procedures, audit reports and opinions, materiality, audit risk, evidential matter, as required by Generally Accepted Auditing Standards (GAAS), professional ethics, legal responsibilities, and other selected topics. Prerequisites: ACCT 311. 3

ACCT 455 ETHICAL AND PROFESSIONAL

RESPONSIBILITIES OF CPA'S. This course is a study of the ethical implications of the decisions CPA's make in the course of providing assurance, tax, and consulting services, a review of AICPA Code of Professional Conduct including principles and rules of conduct, a review of Interpretations of the Rules of Conduct and Ethics Ruling, and a study of the legal environment CPA's operate including legal liability under the common and statutory law. 3

ACCT 470 NON-PROFIT ACCOUNTING.

Involves the study of fund accounting, including reports, records, and special problems encountered by nonprofit entities and the generally accepted accounting principles related to them. Nonprofit entities include municipalities and state governments, universities, hospitals, and voluntary health and welfare organizations. Prerequisite: ACCT 211. 3

ACCT 490 SEMINAR. Seminar of special interest in accounting. 3

ACCT 491 INDEPENDENT STUDY. A student independently studies an accounting topic with help from instructor. 1-4

ACCT 492 TOPICS. Topics of special interest in accounting. 1-4

ACCT 493 WORKSHOP. Workshop of special interest in accounting. 1-4

ACCT 494 INTERNSHIP. Practical experience in a successful accounting operation. Prior application required. 1-12

Air Force / Military Science

AIR 101 AEROSPACE STUDIES 100. Survey course that focuses on professional appearance, customs and courtesies, officership/core values, basic communication, officer opportunities/benefits, and Air Force installations. A weekly Leadership Lab consisting of Air Force customs and courtesies health and physical fitness and drill and ceremonies is also offered. 1

AIR 102 AEROSPACE STUDIES 100. Survey course that focuses on interpersonal communication, macro U.S. military history, Air Force organizations/chain of command, cadet/officer candidate/officer, oral communication and group leadership problems. A weekly Leadership Lab consisting of Air Force customs and courtesies, health and physical fitness, and drill and ceremonies is also offered. 1

AIR 201 AEROSPACE STUDIES 200. Focuses on factors contributing to the development of air power from balloons and dirigibles through 1947; the evolution of air power concepts, doctrine and use. A weekly Leadership Lab consisting of Air Force customs and courtesies, Air Force environment, drill and ceremonies and field training orientation is also offered. Prerequisite: AIR 101 or concurrently. 1

AIR 202 AEROSPACE STUDIES 202. Focuses on factors contributing to the development of air power from 1947 to present including Air Force relief missions and civic action programs in the late 1960's; the evolution of air power concepts, doctrine, and use. A weekly Leadership Lab consisting of Air Force customs and courtesies, Air Force environment, drill and ceremonies, and field training orientation is also offered. Prerequisite: AIR 102 or concurrently. 1

MSL 201 INDIVIDUAL LEADERSHIP SKILLS. Learn/apply ethics-based leadership skills that develop individual abilities and contribute to the building of effective teams of people. Develop skills in oral presentations, writing concisely, planning events, coordination of group efforts, advanced first aid, land navigation, and basic military tactics. Learn fundamentals of ROTC's leadership assessment program. 1-2

MSL 202 LEADERSHIP AND TEAMWORK. Introduction to individual and team aspects of military tactics in small unit operations. Includes use of radio communications, making safety assessments, movement techniques, planning for team safety/security, and methods of pre-execution checks. Practical exercises with upper-division ROTC students. Learn techniques for training others as an aspect of continued leadership development. 1-2

Art

ART 111 DRAWING I. Introduces various drawing concepts, media, and processes developing perceptual and technical skills related to accurate observing and drawing. Prerequisite: ART 121. 3

ART 121 DESIGN I - 2D. Emphasizes the organization of visual elements and principles while exploring creative thought processes through art theory, concepts, materials, and techniques. 3

ART 122 DESIGN II - COLOR. Introduction to color theory as it applies to basic 2D and 3D design principles. Prerequisite: ART 121. 3

ART 123 3-DIMENSIONAL DESIGN. 3-D visual problems solved the organization of design elements, utilizing three dimensional design languages revealed through its history, theory, aesthetics, and materials. Prerequisite: ART 121. 3

ART 212 DRAWING IV: MIXED MEDIA. Involves advanced exploration of composition through mixed/multi-media. 3

ART 213 FIGURE DRAWING. Drawing the human figure using live models. Prerequisite: ART 111. 3

ART 231 PAINTING I. Initial approach to painting, employing history, materials, techniques and processes in various media as students with concepts, objects or models. Prerequisite: ART 111, ART 122. 3

ART 251 CERAMICS I. Introduces ceramic art through its history and basic methods of form-

ing, decorating, glazing, and firing pottery forms, including glaze chemistry and kiln construction. **3**

ART 291 INDEPENDENT STUDY. A student independently studies an art topic with help from instructor. **1-4**

ART 292 TOPICS. Topics of special interest in Art. **1-4**

ART 340 SCULPTURE TECHNIQUES. Surveys sculpture studio practices, encouraging individual exploration of creative concepts, as students develop skills in the use of equipment, design concepts and safety practices for creating three-dimensional sculpture. Prerequisite: ART 121 and ART 111. **2-3**

ART 351 CERAMICS II. Continues Ceramics I as students explore clay through individually creative application of concepts, techniques and glazing and firing methods. Prerequisite: ART 251 **3**

ART 491 INDEPENDENT STUDY. Independent study of art topics. **1-12**

ART 492 TOPICS. Topics of special interest in Art. **1-9**

ART 498 UNDERGRADUATE RESEARCH/SCHOLARSHIP. Special projects are designed to meet the students' personal background and needs. Hours are to be determined in conference with instructor. **1-3**

ARTD 185 INTRODUCTION TO ANIMATION. This course examines the basic principles of animation to develop an understanding of screen space and fundamental animation skills. Students will explore the area of creating convincing movement through good timing and spacing. Emphasis is placed on analysis of actions. Prerequisite: ART 111 and ART 121. **3**

ARTD 245 HISTORY OF GRAPHICS. This course covers the development of graphics from their origins to contemporary practices. Students will be introduced to the designers that had major impacts on graphics and their innovations. **3**

ARTD 282 2-DIMENSIONAL DESIGN ON COMPUTERS I. Introduction to and application of computer generated images. Prerequisite: ART 121 and CSC 105. **3**

ARTD 285 2-DIMENSIONAL DESIGN ON COMPUTERS II. Design, creation, and production of computer graphic images using vector (draw) graphics packages. Prerequisite: ART 121 and CSC 105. **3**

ARTD 306 ADVANCED GRAPHICS

APPLICATIONS: Study of specific graphics applications and packages. The applications will be identified for each section offered. May be repeated with differing content. Prerequisites: ART 121, ARTD 282, and ARTD 285 **1-4**

ARTD 336 DIGITAL PHOTOGRAPHY I.

An introduction to the photographic process and creation and manipulation of images. Prerequisite: CSC 105 and ART 121 or consent of instructor. ARTD 282 is strongly recommended prior to taking this class. **3**

ARTD 356 DIGITAL PAINTING. Study and practice in painting using digital processes. Prerequisites: ART 111, ART 122, ART 231, ARTD 282 and ARTD 285 **3**

ARTD 382 3-DIMENSIONAL DESIGN ON COMPUTERS I. Use of the computer to create three-dimensional images. Prerequisite: CSC 105, ART 121, ARTD 282. **3**

ARTD 385 3-DIMENSIONAL DESIGN ON COMPUTERS II. Use of the computers to animate three-dimensional images. Prerequisite: ARTD 382. **3**

ARTD 388 ENVIRONMENTAL DESIGN. This course introduces students to the principles of 3D environment design. Theatrical sets, architectural simulations, and level design will be explored. This course centers on the physical building of virtual worlds and the aesthetic needs associated with these worlds. Students create a variety of level types, including indoor and outdoor world levels. The course will emphasize critical thinking skills and strategies for good environmental design. Prerequisite: ARTD 385. **3**

ARTD 431 COMPUTER GRAPHIC EFFECTS I. The synthesis and extension of previously-learned computer graphic concepts with the infusion of additional multimedia or interactive effects to produce high-level digital media. Prerequisite: ARTD 282, ARTD 285, ARTD 382, and ARTD 385. **3**

ARTD 432 COMPUTER GRAPHIC EFFECTS II. Advanced multimedia or interactive graphic effects to produce professional-level digital media. Prerequisite: ARTD 431. **3**

ARTD 436 DIGITAL PHOTOGRAPHY II. Intermediate and advanced principles of creation and manipulation of digital images. Prerequisite: ARTD 336. **3**

- ARTD 440 ADVANCED 3-DIMENSIONAL DESIGN.** Use of computers to create advanced three-dimensional design, animation and visualization. Prerequisite: ARTD 385 **3**
- ARTD 460 DIGITAL EDITING.** Manipulation and editing of animated and full-motion images. Prerequisites: ARTD 282 and ARTD 385. **3**
- ARTD 492 TOPICS.** Topics of special interest in art design. **1-3**
- ARTD 498 UNDERGRADUATE/RESEARCH SCHOLARSHIP.** Research projects designed to integrate skills of art design. Prior application required. **1-3**
- ARTE 110 ART FUNDAMENTALS.** The introduction to the basic principles, processes, and aesthetics of art through involvement in various media. **2**
- ARTE 291 INDEPENDENT STUDY.** A student independently studies an art education topic with help from instructor. **1-4**
- ARTE 310 K-8 ART METHODS.** Students develop an understanding of the tools of inquiry of K-8 art; the ability to design, deliver, and evaluate a variety of instructional strategies and processes that incorporate learning resources, materials, technologies, and state and national curriculum standards appropriate to K-8 art; the ability to assess student learning in K-8 art; and to apply this knowledge, skills and attitudes to real life situations and experiences. Admission to Teacher Education. **2-3**
- ARTE 414 K-12 ART METHODS.** Students develop an understanding of the tools of inquiry of K-12 art; the ability to design, deliver, and evaluate a variety of instructional strategies and processes that incorporate learning resources, materials, technologies, and state and national curriculum standards appropriate to K-12 art; the ability to assess student learning in K-12 art; and to apply this knowledge, skills, and attitudes to real life situations and experiences. **2-3**
- ARTE 491 INDEPENDENT STUDY.** A student independently studies an art education topic with help from instructor. **1-4**
- ARTH 100 ART APPRECIATION.** Explores the nature of art in various aesthetic, formal, and psychological dimensions, involving analysis of art objects for understanding, enjoyment, and life enhancement. **3**
- ARTH 211 HISTORY OF WORLD ART I:** Art and architecture in the historical and contextual development. The role of visual arts, including crafts, drawing, painting, sculpture and architecture, in the historical and cultural development of world civilization from prehistory through the 14th century. **3**
- ARTH 212 HISTORY OF WORLD ART II:** Art and architecture in the historical and contextual development the role of visual art; including crafts, drawing, painting, sculpture, and architecture; in the historical and cultural development of world civilization from the renaissance through the 20th century. **3**
- ARTH 231 SURVEY OF ART, MUSIC, THEATRE.** An introduction to drama, music, painting, sculpture, and architecture. **1-3**
- ARTH 291 INDEPENDENT STUDY.** A student independently studies an art history topic with help from instructor. **1-4**
- ARTH 491 INDEPENDENT STUDY.** A student independently studies an art history topic with help from instructor. **1-9**
- ARTH 492 TOPICS.** Topics of special interest in Art History. **1-6**
- ARTH 498 UNDERGRADUATE RESEARCH/SCHOLARSHIP.** Research and study leading to the writing of a significant undergraduate thesis, an integrative experience based on the student's chief areas of academic study. **1-6**
- ARTM 305 COMPUTER APPLICATIONS IN THE ARTS.** Study and practice in a variety of specialized computer uses in fine arts. Prerequisite: CSC 105. **1-3**
- ARTM 395 PRACTICUM.** Practical experience in the area of Fine Arts Administration. **1-4**
- ARTM 450 ARTS MANAGEMENT.** Project-oriented small group applications of the concepts, principles, and practices specific to management in the arts. **3**
- ARTM 480 PRESENTATION OF ARTS EVENTS.** Practice in project organization and management leading to presentation of arts events such as music recitals, exhibitions of works of musical art, or theatre performances. Prerequisite: ARTM 450 or simultaneous enrollment or consent of instructor. **1-4**
- ARTM 494 INTERNSHIP.** Internship in fine arts administration. Prior application required. **1-12**

Business Administration

BADM 220 BUSINESS STATISTICS. This course introduces students to basic statistical methods. Topics, with computer applications, include: descriptive statistics, probability, distributions, sampling, estimation and index numbers with emphasis on applications in business and economics. Prerequisite: MATH 102. **3**

BADM 291 INDEPENDENT STUDY. A student independently studies a business topic with help from the instructor. **1-4**

BADM 292 TOPICS. Topics or field of interests in Business Administration. **1-3**

BADM 293 WORKSHOP. Workshop in Business Administration. **1-3**

BADM 310 BUSINESS FINANCE. Business finance is an overview of financial theory including the time value of money, capital budgeting, capital structure theory, dividend policies, asset pricing, risk and return, the efficient markets hypothesis, bond and stock valuation, business performance evaluation and other financial topics. Prerequisite: ACCT 211. **3**

BADM 315 CREDIT AND COLLECTION. Fundamentals of credit, credit policies, cost of credit, credit management, collections, and customer selection. **3**

BADM 321 BUSINESS STATISTICS II. This course focuses on statistical inference and forecasting. Topics, with business applications, include hypothesis testing, analysis of variance, correlation, simple linear and multiples regression and time series analysis. Utilization of statistical software is emphasized. Prerequisite: BADM 220 or MATH 281. **3**

BADM 331 FINANCIAL TECHNOLOGY. This course studies the retrieval and analysis of publicly available financial data, develops advanced expertise in the use of spreadsheet financial analysis, forecasting, and model building. Prerequisites: BADM 310, BADM 321, and CSC 206 Adv App: Excel **3**

BADM 334 SMALL BUSINESS MANAGEMENT. This course applies business policies and procedures to the small business environment. As such, it is designed for students contemplating management or ownership of a small business. Topics include the nature of the entrepreneur, financing and ownership options, marketing,

government regulations, taxation, inventory control and other relevant business functions. Prerequisite: BADM 360 **3**

BADM 336 ENTREPRENEURSHIP I. This course is an introduction to the concepts, terminology, and process of new venture creation, operation and growth, as well as the introduction of entrepreneurial management practices into existing businesses. This course will assist in the identification of entrepreneurial opportunities and strategies and the role of personal factors (including creativity). Legal, ethical, and social responsibilities are emphasized. **3**

BADM 350 LEGAL ENVIRONMENT OF BUSINESS. This is a study of legal topics as they apply to the business environment. Topics include an introduction to the law, the U.S. Court System, legal process, government regulation, and criminal, tort, and contract issues. **3**

BADM 351 BUSINESS LAW. This course involves a thorough study of the law of contracts, sales, product liability, agency, corporations and other selected topics. Prerequisite: BADM 350. **3**

BADM 360 ORGANIZATION AND MANAGEMENT. This course is a study of management, including the planning, directing, controlling and coordinating of the various activities involved in operating a business enterprise. **3**

BADM 361 OFFICE MANAGEMENT. The management viewpoint in the study of the planning, controlling and actuating functions of the modern office. Prerequisite: ACCT 210. **3**

BADM 370 MARKETING. This course introduces the student to the basic concepts and practices of modern marketing. Topics include marketing and its linkages to business, consumer behavior, marketing research, strategy and planning, product and pricing decisions, distribution and promotion decisions, marketing management, and evaluation and control aspects for both consumer and industrial goods. **3**

BADM 371 MERCHANDISING. The process of selecting, buying and pricing merchandise for resale to the final consumer. Emphasis is on merchandising at the retail level. Prerequisite: BADM 370, ACCT 211. **3**

BADM 378 MARKETING FOR E-COMMERCE. Considers the theories and processes that guide the marketing of goods and services

electronically. Some of the course topics include the development of a web presence, cyber laws and reaching the intended market segment. Prerequisite: BADM 370. 3

BADM 405 INTERNATIONAL TRADE AND FINANCE. A study of current theory, policy, and practice in international trade and finance. Prerequisites: BADM 310, BADM 370, and ECON 202. 3

BADM/ACCT 406 ACCOUNTING FOR ENTREPRENEURS. Accounting concepts and practices for entrepreneurs/small business owners. Emphasis given to the use of accounting tools to solve small business problems. 3

BADM 411 INVESTMENTS. This course is a thorough study of the equity market including fundamental valuation techniques, asset allocation, the efficient markets hypothesis and its implications, portfolio theory, risk and return, the primary and secondary market mechanisms, security market indicators, and international investing. An overview of the bond market including bond valuation, duration and bond portfolio management, and an introduction to options, futures, and forward contracts are provided. The vital roles of computer technology and electronic trading are also explored. Prerequisite: BADM 310. 3

BADM 415 FINANCIAL INSTITUTIONS. This course is an analytical and descriptive survey of financial institutions from a global perspective. Financial institution risk management and the changing financial and regulatory environment are emphasized. Prerequisite: BADM 310. 3

BADM 416 COMMERCIAL BANK MANAGEMENT. This course is an in-depth study of banking institutions, with special emphasis on commercial banks and their connection to the Federal Reserve System and other financial institutions. A risk management perspective is adopted, and the fast changing global regulatory and financial environments are discussed. Prerequisite: BADM 310. 3

BADM 418 FINANCIAL FUTURES AND OPTIONS. This course is a study of futures, options and related derivative security markets. Theoretical analysis and practical issues and concerns are examined. Prerequisite: BADM 411. 3

BADM 419 INVESTMENT REAL ESTATE. This course is a study of direct and indirect investing in residential and commercial real estate including cash flow analysis and valuation, contracts, financing alternatives, mortgages and the

mortgage markets, real estate development, mortgage-backed securities, and real estate investment trusts. Prerequisite: BADM 310 3

BADM 420 PURCHASING AND SUPPLY CHAIN MANAGEMENT. Purchasing from the supply chain point of view - raw materials, supplies, services and equipment. Prerequisite: BADM 370, BADM 425. 3

BADM 425 PRODUCTION AND OPERATIONS MANAGEMENT. This course studies the basic tools of operations management with emphasis on decision-making models in production and planning. Such topics as decision theory, production planning and control, inventory control, materials requirement planning, project management, and quality control are covered. Prerequisite: BADM 220 or MATH 281. 3

BADM 426 INVENTORY CONTROL. Introduction to materials management, control of materials, physical stocks, maintenance of inventory record systems, MRP, forecasting, and current computer usages. Prerequisite: BADM 425. 3

BADM 427 LOGISTICS. The study of the movement of raw materials, inventory and finished product through the production and distribution system. Prerequisite: BADM 370, BADM 425. 3

BADM 428 MATERIAL HANDLING AND FACILITIES LAYOUT. The movement of materials within a business organization including layout of the selection and use of equipment. Prerequisite: BADM 425. 3

BADM 435 MANAGEMENT OF TECHNOLOGY AND INNOVATION. The understanding and management of the technological and innovative processes in business, industry and government. Prerequisite: BADM 360. 3

BADM 436 ENTREPRENEURSHIP. A study of idea generation and screening and the new business start-up process. Emphasis on resource management and business planning. Case studies and an entrepreneurial project are required activities. Prerequisites: ACCT 211, BADM 310, BADM 370. 3

BADM 438 ENTREPRENEURSHIP II. This course focuses on the process of screening an opportunity, drafting a personal entrepreneurial strategy, and understanding the business plan writing process. Building the entrepreneurial team and the acquisition and management of financial resources are emphasized along with venture growth, harvest strategies and valuation. 3

BADM 456 CYBERLAW. Cyberlaw is a study of the legal aspects of managing technology both in the workplace and cyberspace. The course will focus on issues relating to electronic commerce, technology, intellectual property, and the Internet. Social, legal, ethical, and political issues will be addressed with a global perspective. **3**

BADM 457 BUSINESS ETHICS. This course is a study of the ethical implications of managerial decisions. Topics covered include the responsibility of the organizations of the individual and society, the role of the individual within the organizations and ethical systems of American business. The course provides an examination and assessment of current American business practices. **3**

BADM 460 HUMAN RESOURCES MANAGEMENT. This course provides a survey of managerial practices with respect to the management of the human resource function and an introduction to the topic of human resource, management as an occupational choice. Major areas of inquiry include recruitment and selection, training and development, compensation and benefits administration and work force integration and maintenance. Prerequisite: BADM 360 **3**

BADM 464 ORGANIZATIONAL BEHAVIOR. This course involves a study of individual and groups. Traditional organizational theory and concepts are presented and study is given to motivation, group dynamics, and methods of coordination, change, and adaptation within an organization. Prerequisite: BADM 360. **3**

BADM 468 INTERNATIONAL MANAGEMENT. A study of the management required in an internationally-oriented firm with emphasis on policy formulating and planning. Also emphasized are relationships between business, cultural and political factors. Prerequisites: BADM 360 **3**

BADM 474 PERSONAL SELLING. This course is a study of the skills needed to develop and manage long-term relationships with customers and suppliers. Emphasis is placed on relationship selling, presentation, prospecting, handling objectives and closing techniques with consideration given to differences in the global marketplace. Prerequisite: BADM 370. **3**

BADM 475 CONSUMER BEHAVIOR. This course is a study of the various factors that influence consumers in their decisions relative to buying, using and disposing of goods, services and ideas. The course examines concepts and theories from the behavioral sciences and analyzes their application in developing marketing strategies. Prerequisites: BADM 370 **3**

BADM 476 MARKETING RESEARCH. This course provides an in-depth study of the primary methodologies of marketing research. Emphasis is placed on collecting, analyzing, interpreting and presenting information for the purpose of reducing uncertainty surrounding marketing and management decisions. Prerequisite: CSC 206 (SAS), BADM 370 and BADM 220 or MATH 281. **3**

BADM 481 PROMOTIONAL MANAGEMENT. This course is a concentrated study of marketing issues related to promotions and the creative aspects of the advertising/communication process. Topics covered include communication as an integral part of marketing, fundamental of communication, the marketing environment, and management of a promotional strategy. Planning, implementation, evaluation and control are discussed. Prerequisites: BADM 370. **3**

BADM 482 BUSINESS POLICY AND STRATEGY. This course is designed to develop an understanding of strategy formulation, implementation, and evaluation. It involves integrating all functional area of business, analyzing the environment in which the firm operates, and choosing strategies that enable the firm to meet its objectives. Prerequisites: BADM 310, BADM 350, BADM 360, BADM 370, senior standing. **3**

BADM 483 SMALL BUSINESS CONSULTING. This course is a consulting program whereby students, working under faculty guidance, assist businesses by researching and developing possible solutions to specific problems involved in business start-up expansion. **1-3**

BADM 489 BUSINESS PLAN WRITING AND COMPETITION. Students will write a business plan and present it to a panel of faculty and business community members. The top three business plan presenters will move on to a statewide competition. **1**

BADM 490 SEMINAR. Seminar in Business Administration. **3**

BADM 491 INDEPENDENT STUDY. A student independently studies a business topic with help from instructor. **1-4**

BADM 492 TOPICS. Topics of special interest in business. **1-4**

BADM 493 WORKSHOP. Workshop in Business Administration. **1-3**

BADM 494 INTERNSHIP. Practical experience in a successful business operation. Prior application required. **1-12**

Business Education

BED 291 INDEPENDENT STUDY. A student independently studies a business education topic with help from instructor. 1-4

BED 313 ORGANIZING AND COORDINATING COOPERATIVE EDUCATIONAL PROGRAMS. The development of an effective cooperative relationship between school based coordinator and the business/industrial sponsor; the selection, orientation and training of sponsors; reporting and record keeping; the evaluation and selection of students; and program evaluation. 3

BED 425 PHILOSOPHY OF VOCATIONAL HISTORY & EDUCATION. A historical study of educational leaders and how their philosophies influenced the development of contemporary vocational education. 3

BED 480 7-12 BUSINESS EDUCATION METHOD. Students develop an understanding of the tools of inquiry of business; the ability to design, deliver, and evaluate a variety of instructional strategies and processes that incorporate learning resources, materials, technologies, and state and national curriculum standards appropriate to business; the ability to assess student learning in business; and to apply these knowledge, skills, and attitudes to real life situations and experiences. 3

BED 491 INDEPENDENT STUDY. A student independently studies a business education topic with help from instructor. 1-4

Biology

BIOL 101 BIOLOGY SURVEY I. Study of the nature, diversity, and classification of life; ecology; cells and cell cycles, mendelian and modern genetics evolution and evolution theory. Intended for those not majoring in biology. 3

BIOL 103 BIOLOGY SURVEY II. Study of energetics, plant growth, development, and reproduction; animal structure and function. Intended for those not majoring in biology. Prerequisite: BIOL 101 or BIOL 151. 3

BIOL 145 INTRODUCTION TO SCIENTIFIC INQUIRY. An introduction to the history and philosophy of science including the scientific method. Contemporary issues will be studied emphasizing the interaction between science and society. 1

BIOL 151 GENERAL BIOLOGY I. The introductory course for those majoring in biology and microbiology. Presents the concepts of cell

biology, evolution, heredity, molecular genetics and ecology. 4

BIOL 165 GENERAL ZOOLOGY. A phylogenetic approach to the study of animal diversity emphasizing evolutionary relationships and structure and function of animal systems. Includes significant weekly laboratory exercises. Prerequisite: BIOL 101 or BIOL 151. 4

BIOL 201 GENERAL BOTANY. A phylogenetic approach to the study of plant diversity and evolutionary relationships emphasizing structure and function of plant systems. Prerequisite: BIOL 101 or BIOL 151. 4

BIOL 291 SPECIAL PROBLEMS. A student independently studies a biology topic with help from instructor. 1-4

BIOL 292 TOPICS. Topics of special interest in biology. 1-4

BIOL 301 PLANT SYSTEMATICS. Principles of phylogeny, classification, nomenclature, and evolution; demonstrations, field study and laboratory practice in collection, preserving and identifying plants. Prerequisite: BIOL 151 and BIOL 201 or consent of instructor. 4

BIOL 311 PRINCIPLES OF ECOLOGY. Basic principles of ecology including the sub-disciplines of physiological ecology, population ecology, community ecology, evolutionary ecology, and ecosystems ecology from both a theoretical and applied aspect. Prerequisite: BIOL 151. 4

BIOL 323 HUMAN ANATOMY AND PHYSIOLOGY. Study of the structure and function of the human body including interrelationships among body systems. Includes significant weekly laboratory exercises. Prerequisite: BIOL 151. 4

BIOL 325 PHYSIOLOGY. Basic cell physiology, neural, hormonal and neuroendocrine control system. Coordinated body functions. Prerequisite: BIOL 323 4

BIOL 331 MICROBIOLOGY. This will be a study of the morphology and physiology of representatives of various groups of microorganisms, with emphasis on bacteria. Prerequisite: BIOL 151 4

BIOL 343 CELL AND MOLECULAR BIOLOGY. Studies of structure, molecular composition, physiology, heredity and growth of cells form the contents of this course. Prerequisite: BIOL 151 4

BIOL 363 ORNITHOLOGY. Identification of bird species; life histories, ecology, habits, and special structural and physiological adaptations of various groups. Prerequisite: BIOL 151 **3**

BIOL 371 GENETICS. Principles governing the nature, transmission and function of hereditary material with application to plants, animals, humans, and microorganisms. Prerequisite: BIOL 151. **4**

BIOL 450 AQUATIC BIOLOGY. Field-based small group and individual investigations of the fresh water habitat and the organisms living therein. Ponds, lakes and streams are characterized. Concepts integrated in laboratory and computer exercises. Prerequisites: BIOL 101 or BIOL 151 and BIOL 311. **4**

BIOL 491 INDEPENDENT STUDY. A student independently studies a biology topic with help from instructor. **1-4**

BIOL 492 TOPICS. Advanced topics of special interest in biology. **1-5**

BIOL 498 UNDERGRADUATE RESEARCH/SCHOLARSHIP. An independent project involving integration of the student's total academic experience in science and technology. Prior application required. **1-6**

Center of Excellence

CEX 491 INDEPENDENT STUDY. A student independently studies a topic with help from instructor. **1-4**

CEX 494 INTERNSHIP. Practical experience in a computer information systems related position. Application of knowledge to enhance work place excellence using information technology. Preparation for information technology leadership positions. Prior application required. **1-8**

CEX 498 UNDERGRADUATE/RESEARCH SCHOLARSHIP. Application of robust research methodologies to address computer and information technology related problems and opportunities. A preparation for information technology leadership positions. Emphasizes identification of information technology problems, opportunities, and trends. Typically includes literature review, model development, statistical sampling, data gathering, hypothesis testing, and applications of new and existing concepts to formulate solutions. Requires the development of a written report and an oral presentation. Prior approval required. **1-6**

Chemistry

CHEM 112 GENERAL CHEMISTRY I. An introduction to the basic principles of chemistry for students needing an extensive background in chemistry (including chemistry majors, science majors, and pre-professional students). Completion of a high school course in chemistry is recommended. **4**

CHEM 114 GENERAL CHEMISTRY II. A continuation of CHEM 112. An introduction to the basic principles of chemistry for students needing an extensive background in chemistry. Prerequisite: CHEM 112, MATH 102 **4**

CHEM 291 INDEPENDENT STUDY IN CHEMISTRY. A student independently studies a chemistry topic with help from instructor. **1-3**

CHEM 292 TOPICS. Topics of special interest in chemistry. **1-4**

CHEM 326 ORGANIC CHEMISTRY I. A systematic treatment of the chemistry of carbon compounds, including nomenclature, structure-reactivity relationships, reaction mechanisms, synthesis, and spectroscopy. Prerequisite: CHEM 114. **4**

CHEM 328 ORGANIC CHEMISTRY II. A continuation of CHEM 326. A systematic treatment of the chemistry of carbon compounds, including nomenclature, structure-reactivity relationships, reaction mechanisms, synthesis, and spectroscopy. Prerequisite: CHEM 326. **4**

CHEM 332 ANALYTICAL CHEMISTRY. Fundamental concepts and principles of quantitative chemical analysis including quantitative chemical equilibrium calculations and error analysis applied to the evaluation of experimental measurements and data. Prerequisites: CHEM 114. **4**

CHEM 452 INORGANIC CHEMISTRY. Theoretical and periodic aspects of inorganic chemistry. Prerequisite: CHEM 114. **3**

CHEM 460 BIOCHEMISTRY. A one-semester course in biomolecules, metabolism, and transmission of genetic information. The structures, properties, and biochemical functions of mono- and polysaccharides, lipids, amino acids, proteins and nucleic acids are introduced. Metabolic pathways and cycles for the catabolism and anabolism of sugars, triglycerides, steroids, amino acids, proteins, and polynucleotides are detailed. Energetics, the potential fates of chemical intermediates, and information storage and transmission are studied. Prerequisite: CHEM 326. **3**

CHEM 491 INDEPENDENT STUDY. A student independently studies a chemistry topic with help from instructor. **1-9**

CHEM 492 TOPICS. Advanced special topics in chemistry. **1-4**

CHEM 498 UNDERGRADUATE RESEARCH/SCHOLARSHIP. An independent project involving integration of the student's total academic experience in science and technology. Prior approval required. **1-6**

Computer Information Systems

CIS/HON 130 VISUAL BASIC PROGRAMMING. Fundamentals of programming using Visual Basic. Focus on problem solving, visual design, and programming concepts. Topics include sequence, selection, repetition, procedures, and functions. Honors Section Prerequisite: ACT score of 24 or above or 3.2 cumulative GPA. **3**

CIS 251 BUSINESS APPLICATIONS PROGRAMMING. Emphasis on logical design and structured programming techniques. Writing, debugging and testing business programs. Prerequisites: CIS 130. **3**

CIS 275 WEB APPLICATION PROGRAMMING I. An introduction to the languages used to develop and operate e-commerce sites with focus on client-side technologies. Topics include but are not limited to programming practices, HTML, extensible markup language (XML), and JavaScript. Prerequisite: Completion of any two of the following courses: CIS 130, CIS 251, CSC 150, CSC 250. **3**

CIS 277 OS INTERFACES AND UTILITIES. Concepts and techniques of interfacing programs with an operation system using Job Control Language. Use of storage devices using vendor supplied utilities. Prerequisite: CIS 330 (concurrent enrollment CIS 331) **3**

CIS 291 INDEPENDENT STUDY. A student independently studies a computer information systems topic with help from instructor. **1-5**

CIS 292 TOPICS. Topic or field of special interest in information systems. **1-5**

CIS 310 APPLICATIONS PROGRAMMING IN RPG. Concepts and terminology of RPG programming language are studied with emphasis in business applications. Prerequisite: CIS 251. **3**

CIS 320/ENGL 357 NON-NUMERIC COMPUTING. An introduction to non-numeric computing used for the analysis of text and the processing of natural language. Each time the course is offered there will be a specific indication of its focus - for example "Programming for the Web." Prerequisite: CSC 105. **3**

CIS 325 MANAGEMENT INFORMATION SYSTEMS. Introduction to the application of information technology in organizations, roles of managers and staff professionals in developing and using information systems with current and future technology. **3**

CIS 328 OPERATING ENVIRONMENTS. This course examines the role of the operating system in computer operations. Current operating environments including Windows NT, Unix, and similar operating environments are studied from a theoretical and hands-on perspective. Prerequisite: CIS 350. **3**

CIS 330 COBOL I. Introduction to structured COBOL programming: input, output, and reformatting; arithmetic program design; report writing; intrinsic functions; conditional branching; condition-names; iteration; control breaks; program maintenance; validity checking; and interactive programming. Prerequisites: CIS 251 or CSC 250 or CSC 150. **3**

CIS 331 COBOL II. Advanced structured COBOL programming with arrays; table look-ups; subprograms; sequential file processing; sorting and merging; indexed file processing; text manipulations; debugging; and on-line applications. Prerequisite: CIS 330. **3**

CIS 332 STRUCTURED SYSTEMS ANALYSIS AND DESIGN. Skills in structured systems analysis techniques used to define information systems solutions to business problems by producing detailed systems specifications. Prerequisite: CSC 150 or CIS 130. **3**

CIS 340 ADVANCED JAVA PROGRAMMING. An in-depth exploration of the Java object-oriented language. Topics will include the development of applets, graphical user interfaces, and multi-threaded programs. Prerequisite: CSC 260. **3**

CIS 346 OBJECT ORIENTED PROGRAMMING. The study of object methodologies using a modern language such as C++ or Java. Advanced data structures, I/O and file management will be implemented using polymorphism, inheritance, overloading, and encapsulation. Prerequisite: CSC 300. **3**

CIS 350 COMPUTER HARDWARE, DATA COMMUNICATIONS AND NETWORKING.

An introduction to computer hardware, data communications, and networking fundamentals and theory. Computer design, components, voice and data communications and LAN design and operation issues are addressed in both lecture and hands-on formats. Emphasis is given to network design using the OSI model as well as network operations and setup issues. **3**

CIS 360 ADVANCED TELEPROCESSING. Course is designed for those who will code Advanced Communications functions for Virtual Telecommunication Access Method (ACF/VTAM), design and plan network models, manage telecommunication networks, and code SNA routing. Prerequisite: CIS 350. **3**

CIS 361 ADVANCED PROGRAMMING FOR BUSINESS APPLICATIONS. This course will emphasize advanced topics of business programming using contemporary development tools. Additional topics may include: objects, databases, multithreading, error trapping and web-based applications. Prerequisites: CIS 251. **3**

CIS 375 WEB APPLICATION PROGRAMMING II. An introduction to the languages used to develop and operate e-commerce sites with focus on server-side technologies. Topics include issues common to the development of e-commerce sites such as mixed technology environments, security, and internationalization. Prerequisite: CIS 275. **3**

CIS 377 ON-LINE APPLICATIONS. Design and development of on-line application programs. Emphasis on CICS facilities. CRT screen design, transaction debugging and response time considerations. Prerequisite: CIS 331. **3**

CIS 380 SOFTWARE SYSTEM TESTING. Software testing involves the operation of a system or application under controlled conditions and the evaluation of the results of these tests. Quality assurance (QA) includes the techniques and activities aimed at assuring that appropriate functionality has been implemented correctly in the software system or product. Aspects of QA include: validation (appropriate functionality, fit for use, "doing the right thing", verification (correct implementation, "doing things right"), assessment (data collection, analysis and modeling). During the semester the course will focus on the various aspects of software testing including white and black box testing, integration testing, functional testing, performance testing, usability testing, and security testing. Prerequisite: CIS 251 **3**

CIS 383 NETWORKING I. LAN topologies, media choices, protocols and transmission techniques are addressed. Overview of LAN planning and installation considerations. LAN hardware and software offerings and problem determination procedures are presented. Prerequisite: CIS 350. **3**

CIS 384 DECISION SUPPORT SYSTEMS. A study of the decision process, including the gathering, analysis and application of data. Decision Support Systems (DSS) represents a point of view on the role of the computer in the decision-making process. Decision support implies the use of computers to: assist managers in their decision making, support rather than replace managerial judgment, and improve the effectiveness of decision making rather than just its efficiency. The course covers the tools, techniques, and theory of DSS and how they can be used to improve the quality of management decisions. Prerequisite: Junior Standing. **3**

CIS 385 NETWORKING II. This class focuses on the technical networking essentials of the development, maintenance and use of e-commerce sites. Topics include coverage of network concepts and theory, intranets, extranets, server issues, enterprise computing, virtual hosting, and security considerations. Prerequisite: CIS 383 or CSC 260. **3**

CIS 388 COMPUTER FORENSICS FUNDAMENTALS. Identifying, preserving, extracting, and examining data from computers. Prerequisite: CSC 105 and CIS 130 or CSC 150. **3**

CIS 414 COMPUTER SECURITY FUNDAMENTALS. Provides students with a fundamental knowledge of computer security essentials in critical and diverse security areas, including security terminology, viruses, popular operating system vulnerabilities, Web browser vulnerabilities, security standards, and computer fraud. Prerequisite: CIS 385. **3**

CIS 416 NETWORK SECURITY. Internet security is the focus of this course. Students will learn the security risks inherent to the interconnection of physical networks and the corresponding countermeasures. Advanced topics include fundamentals of encryption, firewall operation, common tactics, countermeasures, popular Web server vulnerabilities, and data interception over public mediums. Prerequisite: CIS 414. **3**

CIS 418 COMPUTER SECURITY-INTRUSION CONTROL AND DETECTION. Provides students with hands-on and theoretical knowledge of network and computer systems intrusion concepts, including security terminology, virus operations, operating system and Web browser

vulnerabilities, firewall operation standards, and computer fraud. Prerequisite: CIS 414 **3**

CIS 422 COMPUTER SECURITY-CRYPTOGRAPHY AND INFORMATION ASSURANCE.

Provides students with hands-on and theoretical knowledge of information security. Topics include cryptography as well as current trends and topics in the information assurance and computer security field. Prerequisite: CIS 385. **3**

CIS 424 INTERNET AND ELECTRONIC COMMERCE.

Understanding the concepts and applications of electronic commerce through the Internet. The course will focus on electronic data interchange, Internet web pages for electronic commerce, scripting for client/server electronic commerce, security issues and database considerations. Prerequisites: CIS 332, completion of 6 credits in CSC or CIS, (except CSC 105) **3**

CIS 427 INFORMATION SYSTEMS PLANNING AND MGMT.

A study of financial, technical and strategic information systems planning processes. Emphasis will be placed on the relationship of information systems to the overall business planning. Prerequisite: CIS 332 or CIS 325. **3**

CIS 447 ARTIFICIAL INTELLIGENCE.

Concepts in Artificial Intelligence: programming in languages such as Prolog or LISP; knowledge representation; search algorithms. Prerequisite: CSC 250. **3**

CIS 457 DOCUMENT IMAGE PROCESSING SYSTEMS.

A course exploring the aspects of document image systems. Issues such as analysis and design of document image systems, workflow, change management and implementation of document systems will be covered. Programming will be required. Prerequisite: CSC 250 or CIS 251 and CIS 332. **3**

CIS 476 MARKETING INFORMATION TECHNOLOGY.

An advanced course studying techniques and methods used to develop and market information-technology products and services. Marketing research, forecasting and market analysis will be covered as well as specific marketing techniques like consortiums, shareware and direct marketing. Prerequisites: BADM 370 and either CSC 150 or CIS 130. **3**

CIS 484 DATABASE MANAGEMENT SYSTEMS.

The study of formalized database design. This course will focus on relational model design and the use of SQL. Students will use a modern relational database to implement designs and learn the basics of data management. Prerequisite: CIS 332 **3**

CIS 487 DATABASE PROGRAMMING.

Provides hands-on experience with procedural extensions to SQL. Topics include data control languages, control structures, exception handling, stored procedures, triggers, cursors and cursor processing. Prerequisite: CIS 484. **3**

CIS 488 ADVANCED DATABASE ISSUES.

This course is designed to expand on the theoretical concepts developed in CIS 484. Emphasis will be placed on database theory and will cover such issues as distributed databases, concurrency control, security, and optimization. Specialized topics such as data-warehousing/mining will also be explored. Prerequisite: CIS 484. **3**

CIS 491 INDEPENDENT STUDY. Independent study of Computer Information Systems topics. **1-4**

CIS 492 TOPICS. Topic or field of special interest in information systems. **1-5**

CIS 494 INTERNSHIP. Internship experience in a computer related setting. Prior application required. **1-8**

CIS 498 UNDERGRADUATE RESEARCH/SCHOLARSHIP.

Research project designed to integrate the skills of Computer Information Systems. Prior application required. **1-6**

Computer Science

CSC/HON 105 INTRODUCTION TO COMPUTERS. Overview of computer applications with emphasis on word processing, spreadsheets, database, presentation tools and Internet-based applications. Honors Section Prerequisite: ACT score of 24 or above or 3.2 cumulative university GPA. **3**

CSC 150 COMPUTER SCIENCE I An introduction to computer programming. Focus on problem solving, algorithm development, design, and programming concepts. Topics include sequence, selection, repetition, functions, and arrays. **3**

CSC 206 ADVANCED COMPUTER APPLICATIONS: The use of specific computer applications such as operating systems, word processing, spreadsheets, databases, graphics, integrated packages, communications packages and hardware topics. Prerequisite: CSC 105 and completion of 32 credit hours. (Repeatable) **1**

CSC 220 INTRODUCTION TO THE MACINTOSH. Introduction to the Macintosh computer system. Hands-on practice with wordprocessing, database, spreadsheet, graphics and integration. **2**

CSC 250 COMPUTER SCIENCE II.

Problem solving, algorithm design, standards of program style, debugging and testing. Extension of the control structures and data structures of the high-level language introduced in CSC 150. Elementary data structures and basic algorithms that include sorting and searching. Topics include more advanced treatment of functions, data types such as arrays and structures, and files. Prerequisite: CSC 150 **3**

CSC 260 OBJECT ORIENTED DESIGN.

This course emphasizes object-oriented programming methodologies. An object-oriented language will be used to illustrate these OO concepts. The Unified Modeling Language (UML) will be introduced. Prerequisite: CSC 250 or CIS 251. **3**

CSC 291 INDEPENDENT STUDY. A student independently studies a computer science topic with the help from instructor. **1-5**

CSC 292 TOPICS. Topic or field of special interest in computer science. **1-5**

CSC 300 DATA STRUCTURES. A systematic study of data structures and the accompanying algorithms used in computing problems; structure and use of storage; methods of representing data; techniques for implementing data structures; linear lists; stacks ; queues; trees and tree traversal; linked lists; and other structures. **3**

CSC 305 EDUCATIONAL INTEGRATED SOFTWARE. This course will teach the student about educational uses for major integrated software packages. Students will work with each module and integrate information and graphics between each. Students will learn how to integrate information and graphics from other software programs and platforms Prerequisite: CSC 105 or consent of instructor. **3**

CSC 314 ASSEMBLY LANGUAGE. A thorough introduction to assembly language programming and processor architecture. A study of low-level programming techniques, and the layout of a typical computer. The student will gain insight into the memory layout, registers, run-time stack, and global data segment of a running program. Prerequisite: CSC 250. **3**

CSC/MATH 316 DISCRETE MATHEMATICS. Selected topics from Boolean algebra, set theory, logic, functions and relations, difference equations, recurrence relations, application of algorithms, finite graphs, trees, paths and modeling. Prerequisites: MATH 125 or consent of instructor. **3**

CSC 317 COMPUTER ORGANIZATION & ARCHITECTURE. A course in computer organization with emphasis on the hierarchical structure of computer systems. Covers such topics as: components of computer systems and their configuration, design of basic digital circuits, the microprogram level, the conventional machine level, the operating system level, assembly language, addressing modes, interpreters/translators, computer arithmetic. Prerequisite: CSC 314. **3**

CSC/MATH 318 ADVANCED DISCRETE MATHEMATICS. An introduction to advanced discrete mathematics topics. Content to include topics such as proof techniques, graph theory, coding theory and cryptography with an emphasis on computer applications. Prerequisites: MATH/CSC 316 **3**

CSC 320 MULTIMEDIA DESIGN. Creation and development of educational and web materials using digital media. The course will focus on digital sound, animation, video and graphics using specialized software. Emerging trends will be discussed. Prerequisite: CSC 150 or CIS 130. **3**

CSC 326 PROGRAMMING FOR COMPUTER BASED INSTRUCTION. Planning, designing, coding and testing structure programs that can be used for computer based instruction. Students will write programs for tutorials, drills, educational games, simulations, on-line testing, and student recordkeeping. Prerequisites: CIS 130. **3**

CSC 329 BUSINESS PROGRAMMING IN BASIC. Planning, coding, and testing structured programs in BASIC that can be used for business applications. Sequential and random processing of records, menu screens, and other topics. Prerequisite: CIS 130. **3**

CSC 335 ASSEMBLER II. Continuation of CSC 314 with increased emphasis on coding in Assembler language. Prerequisite: CSC 314, CSC 317. **3**

CSC 336 AUTHORING SYSTEMS. Produce presentations and programs that use sound, video, graphics and animation by using authoring tools. Prerequisite: CSC 320 or consent of instructor. **3**

CSC 403 PROGRAMMING FOR GRAPHICAL USER INTERFACES. A course dealing with the issues of programming in a graphical user interface environment. In-depth programming will be done in a graphical operating system environment. Issues such as design of user interfaces, object-oriented programming and networking will be covered along with examples of other environments. Prerequisite: CSC 250. **3**

CSC 409 SYSTEM AND SECURITY PROGRAMMING. This course will examine programs and programming from the perspective of

systems-level operations and security issues. The course will address appropriate operating systems, utilities and tools; malware fundamentals; systems-level programming; and scripting. Understanding the essentials of programming from device drivers and assembly language through scripting languages for automating processes and gluing together other utility programs will be the course objective. Coursework will focus on understanding and reading ability for such programs and scripts; students will develop the ability to understand and modify such programs in order to tailor them to particular environments. Open Source tools will be a consistent theme throughout the course.

Prerequisite: CSC 150 and CSC 250 or an equivalent sequence 3

CSC 410 PARALLEL COMPUTING. The fundamental ideas and issues involved in programming and using parallel computers. A survey of modern architectures and operating systems. Parallel programming applications in business, economic modeling, and science. Prerequisites: CSC 300. 3

CSC 433 COMPUTER GRAPHICS. Graphical programming concepts. Display media and device characteristics. Point, line, and circle plotting. Coordinate systems and transformations. Polygon clipping and filing. Spline methods, hidden surface elimination, and shading. Prerequisites: CSC 300. 3

CSC 455 COMPUTER VISION. Applies computer methodologies to process two-dimensional images. Examines topics in image preprocessing, knowledge representation, pattern recognition and motion understanding. Prerequisites: CSC 250, MATH 315. 3

CSC 456 OPERATING SYSTEMS. A study of the functions and structures associated with operating systems with respect to process management, memory management, auxiliary storage management, and processor management. Topics include concurrent and distributed computing, deadlock, real and virtual memory, job and processor scheduling, security and protection. Prerequisites: CSC 300. 3

CSC 460 SCIENTIFIC VISUALIZATIONS. Topics in the visualization of scientific concepts. The graphical capabilities of the computer will be used to visualize difficult and abstract constructions in mathematics and science. Prerequisites: CSC 433, or consent of instructor. 3

CSC 461 PROGRAMMING LANGUAGES. This course consists of two parts. The first part introduces how programming languages are designed, including an introduction to the concepts of parsing and compiling. Issues related to implementation such as type checking, binding, and

memory management are discussed. Secondly, the course will survey the spectrum of programming languages, paradigms, including traditional imperative, object oriented, functional, and logic languages. Prerequisites: CSC 300. 3

CSC 466 LANGUAGE PROCESSING. A study of computer language processing through the activities of language design, specification, and translation. Computer language processing tools (compiler construction tools) will be used to demonstrate many of the concepts. The scanning, parsing, semantic analysis and code generation phases of compilation will be studied. Theoretical concepts including grammars and automata will be introduced. Programming projects will be required. Prerequisite: CSC 300 and CSC 461. 3

CSC 470 SOFTWARE ENGINEERING. An introduction to the software engineering process, including lifecycles phases, problem analysis, specification, project estimation and resource estimation, design, implementation, testing/maintenance, and project management. In particular, software validation and verification as well as scheduling and schedule assessment techniques will be discussed. Prerequisite: CSC 300 3

CSC 482 ALGORITHMS AND OPTIMIZATION. This course will study computer algorithms, their performance, and techniques for optimizing algorithm implementations. A variety of algorithms including search, sorting, and graph algorithms will be examined. Tools and methods for analyzing and measuring both theoretical and practical performance will be studied. Techniques for improving the performance of implementations of the algorithms will be examined. Prerequisites: CSC 300 and MATH 316. 3

CSC 483 MACHINE LEARNING FUNDAMENTALS. This course will study computer algorithms that automatically improve with experience. Applications range from discovering general rules in data sets to intelligent information filtering of search systems that adapt users' interests. Topics may include: decision trees, artificial neural networks. Bayesian learning, genetic algorithms, support vector systems, and case-based learning. Prerequisite: CSC 300 and MATH 315 or instructor approval. 3

CSC 486 DATA MINING METHODS. This course is the study of analytic processes which explore data (especially very large data sets) for consistent patterns of systematic or relationships, along with the study of methods for preparing data for analysis and validating the results of such analysis. The course will focus on processes, techniques, and algorithms for data mining, rather than

applications. Data mining phases will be studied, including: data preparation, initial exploration, model building, model validation, and deployment. Prerequisite: CSC 300 and MATH 281 or MATH 381 or Instructor Approved. 3

CSC 491 INDEPENDENT STUDY. A student independently studies a computer science topic with help from instructor. 1-4

CSC 492 TOPICS. Advanced study course for senior students in computer science or information systems, with emphasis on major developments in the field. Major project or term paper required with presentations. 1-5

CSC 494 INTERNSHIP. Internship experience in a computer related position. Prior application required. 1-8

CSC 498 UNDERGRADUATE/RESEARCH SCHOLARSHIP. Project used to integrate the skills of the specializations of the Computer Science Program. Prior application required. 1-6

Digital Arts and Design

DAD 110 INTRODUCTION TO DIGITAL ARTS AND DESIGN. This course is an introduction to new media and technology's role in the creation of visual and performing arts. 3

DAD 215 TEAM BUILDING/CREATIVE PROBLEM SOLVING. This course examines and practices cooperative, collaborative and creative group problem solving. Prerequisites: SPCM 101 or SPCM 215 or SPCM 222 3

DAD 291 INDEPENDENT STUDY. A student independently studies a digital arts and design topic with help from instructor. 1-3

DAD 292 TOPICS. Topics of special interest in digital arts and design. 1-3

DAD 375 STORYBOARDING. Principles of visual storytelling for a variety of digital arts contexts. ART 111 is strongly recommended prior to taking this course. Prerequisites: ART 121, DAD 110 and sophomore standing. 3

DAD 491 INDEPENDENT STUDY. A student independently studies a digital arts and design topic with help from instructor. 1-3

DAD 492 TOPICS. Advanced topics of special interest in digital arts and design. 1-3

DAD 494 INTERNSHIP. Practical experience in a successful digital arts and design position. 1-3

DAD 498 UNDERGRADUATE RESEARCH/SCHOLARSHIP. Special projects are designed to meet the students' personal background and needs. 1-3

Earth Science

ESCI 208 INTRODUCTION TO EARTH & SPACE SCIENCE. An introduction to the principles of geology, astronomy and cosmology. Integrated lab discussion. 2

ESCI/ELED 303 EARTH AND PHYSICAL SCIENCE FOR ELEMENTARY TEACHERS. A non-methods course that presents major concepts and theories is astronomy, geology, meteorology, chemistry, and physics. Scientific concepts and theories for elementary teachers working with K-8 students. 3-4

Economics

ECON 201 PRINCIPLES OF MICROECONOMICS. Principles of microeconomics studies basic economic concepts as they relate to consumer, worker, and business decisions. Emphasis is given to satisfaction maximizing behavior by individuals and profit maximizations by firms. Market structures are thoroughly analyzed regarding their effect on price, output, and competitiveness. Prerequisite: MATH 102. 3

ECON 202 PRINCIPLES OF MACROECONOMICS. Principles of macroeconomics considers the economy as a whole, how its sectors interact, and how monetary and fiscal policy can influence output, inflation, interest rates, unemployment, poverty, debt, and other factors. Prerequisite: MATH 102. 3

ECON 291 INDEPENDENT STUDY. A student independently studies an economics topic with help from instructor. 1-4

ECON 490 SEMINAR. Seminar in Economics. 1-3

ECON 491 INDEPENDENT STUDY. A student independently studies an economics topic with help from instructor. 1-4

ECON 492 TOPICS. Advanced topics in economics. 1-4

ECON 494 INTERNSHIP. Practical experience in economic related position. Prior application required. 1-6

Education

ED 281 EDUCATIONAL TRAVEL. Travel to specific cities, states, countries, and/or regions and study of their historical, social, economic, and/or cultural aspects. **1-3**

ED 291 INDEPENDENT STUDY. A student independently studies an education topic with help from instructor. **1-4**

ED 292 TOPICS. Topic of special interest in education. **1-4**

ED 295 PRACTICUM. Individual participation in kindergarten, elementary, junior high, or secondary classrooms. Emphasis on observation, lesson development, and record keeping, may include direct work with students. **1-3**

ED/MLED 360 ADOLESCENT LEARNER. Current research and practices in the physical, social, emotional, intellectual, and moral characteristics and development of the middle level learner within familial, social and cultural context. Includes a practicum in a formally organized middle school or junior high. Admission to Teacher Education. **4**

ED 450 EDUCATIONAL TECHNOLOGY. An overview of the technology available to school systems. Included are computers, telecommunications, satellites, networking, large-screen video, and data bases. Admission to Teacher Education. **1**

ED 462 COMPUTER ASSISTED SCHOOL MANAGEMENT. Using the computer for budgets, recordkeeping, scheduling, grading, and evaluation. Review software and develop original programs. Admission to Teacher Education. **3**

ED 471 CLASSROOM MANAGEMENT. A review of the general principles of classroom management with an emphasis of accommodating individual teachers and learners. Prerequisite: Admission to Teacher Education program. **2**

ED/MLED 480 MIDDLE LEVEL METHODS. Students develop the ability to design, deliver, and evaluate a variety of instructional strategies and processes that incorporate learning resources, materials, technologies, and state and national curriculum standards appropriate to the developmental characteristics of middle level learners; the ability to assess student learning in middle level; concepts of middle level education; and to apply these knowledge, skills, and attitudes to real life situations and experiences. Admission to Teacher Education. **4**

ED 488 K-12 STUDENT TEACHING. Supervised placement in a K-12 classroom in the major area of emphasis. Students assume full responsibility for planning, instruction, evaluation and classroom management during their experience. Approval for Student Teaching. Student teaching fee assessed. **6-10**

ED 491 INDEPENDENT STUDY. A student independently studies an education topic with help from instructor. **1-4**

ED 492 TOPICS IN EDUCATION. Topic of special interest in education. **1-2**

ED 495 PRACTICUM. Applied, monitored and supervised, field-based learning experience for which the student may or may not be paid. Students gain practical experience; they follow a negotiated and or directed plan of study. A higher level of supervision is provided by the instructor in these courses than is the case with field experience courses. **3**

ED 496 FIELD EXPERIENCE. Applied, monitored and supervised, field-based learning experience for which the student may or may not be paid. Students gain practical experience; they follow a negotiated and or directed plan of study established between the student, instructor and field experience supervisor. Due to the presence of a field experience supervisor, a lower level of supervision is provided by the instructor in these courses than is the case in an internship or practicum course. **1-3**

Education Foundations

EDFN 120 LOGO. An introduction to computer programming with the LOGO language. Students will gain practical experience programming graphics, music, interactive-text and math processing, and will be exposed to classroom materials appropriate for elementary students. **1**

EDFN 338 FOUNDATIONS OF AMERICAN EDUCATION. A survey of the goals, history, organization, and philosophy of pre-K – 12 American education, with emphasis on teaching as a profession; contemporary issues and practices, legal and ethical responsibilities, and attributes of effective teachers. **1-2**

EDFN 365 COMPUTER-BASED TECHNOLOGY & LEARNING. Prepares students to integrate computers into the curriculum by exploring the evolving uses and expectations of technology as a teaching and learning tool. Course objectives based on ISTE standards. Admission to Teacher Education. **2-3**

EDFN 366 TEACHING USING VIDEO CONFERENCING. An introduction to distance teaching methods, including designing lessons, best practices, and classroom management for distance education classrooms. Emphasis is on videoconferencing classrooms and online learning. Admission to Teacher Education. **1**

EDFN 465 MULTIMEDIA & WEB DEVELOPMENT IN EDUCATION. The course addresses the evaluation and utilization of multimedia and hypermedia in educational settings in light of instructional design and cognitive science. Admission to Teacher Education. **2-3**

EDFN / SOC 475 HUMAN RELATIONS. Focuses on characteristics, contributions, and strengths of a pluralistic society; various cultural perspectives and specific information about cultures; the dehumanizing impact of biases and negative stereotypes; and the human relations approach to teaching. Admission to Teacher Education. **3**

Educational Research

EDER 415 EDUCATIONAL ASSESSMENTS. A study of educational measurements covering both the elementary and secondary fields. **2**

Educational Psychology

EPSY 291 INDEPENDENT STUDY. A student independently studies an educational psychology topic with help from instructor. **1-3**

EPSY 302 EDUCATIONAL PSYCHOLOGY. A comprehensive study of the fundamental psychological facts, principles and theories that apply to the nature of the learner and the learning process. Includes a Level I field experience. **2-3**

EPSY 327 CHILD GROWTH & DEVELOPMENT. A study of the physical, language, cognitive, and social/emotional growth and development of the child from birth to young adult in the contexts of family, school, peer and community. Includes a Level II field experience. **3**

EPSY 330 HUMAN GROWTH & DEVELOPMENT. An overview of human physiological, psychological and social changes occurring from birth throughout adolescence with emphasis on the developmental characteristics of elementary, middle, and secondary level learners. Includes a Level II field experience. Prerequisite: PSYC 101, Admission to Teacher Education. **3**

EPSY / PSYC 422 PSYCHOLOGY OF ADOLESCENCE. The student will learn to understand the major influences on adolescent development and behavior including biological, cultural, educational, peer, and family influences. Emphasis will also be placed on methodology necessary to aid adolescents in their development process. Includes a Level II field experience. **2-3**

EPSY 491 INDEPENDENT STUDY. A student independently studies an educational psychology topic with help from instructor. **1-4**

Elementary Education

Level III field experiences require full day clinically supervised teaching and learning activities in public school classrooms for a two-to-three week period. Level III field experience fee assessed.

ELED 291 INDEPENDENT STUDY. A student independently studies an elementary education topic with help from instructor. **1-4**

ELED / ESCI 303 EARTH AND PHYSICAL SCIENCE FOR ELEMENTARY TEACHERS. A non-methods course that presents major concepts and theories in astronomy, geology, meteorology, chemistry, and physics. Scientific concepts and theories for elementary teachers working with K-8 students. **3-4**

ELED 320 K-8 SCIENCE METHODS. Students develop an understanding of the tools of inquiry of K-8 science; the ability to design, deliver, and evaluate a variety of instructional strategies and processes that incorporate learning resources, materials, technologies, and state and national curriculum standards appropriate to K-8 science; the ability to assess student learning in K-8 science; and to apply these knowledge, skills, and attitudes to real life situations and experiences. Admission to Teacher Education. Includes a Level III field experience. **2-3**

ELED 330 K-8 MATH METHODS. Students develop an understanding of the tools of inquiry of K-8 math; the ability to design, deliver, and evaluate a variety of instructional strategies and processes that incorporate learning resources, materials, technologies, and state and national curriculum standards appropriate to K-8 math; the ability to assess student learning in K-8 math; and to apply these knowledge, skills, and attitudes to real life situations and experiences. Includes a Level III experience. Prerequisites: Admission to Teacher Education. **3**

ELED 333 ADVANCED INTEGRATIVE MATH FOR ELEMENTARY AND MIDDLE GRADES. Special emphasis on integration with science, intensive computer integration, adaptation for diverse populations, and research-based practices. Students will work with children in various K-8 settings. Includes a Level III field experience. Admission to Teacher Education. Prerequisites: MATH 341, and ELED 330. 2

ELED 354 EMERGENT LITERACY DEVELOPMENT. Objectives, materials, and procedures for teaching language stimulation and pre-reading at the pre-school and kindergarten levels. Students will be expected to work with children. 3

ELED 360 K-8 SOCIAL STUDIES METHODS. Students develop an understanding of the tools of inquiry of K-8 social studies; the ability to design, deliver, and evaluate a variety of instructional strategies and processes that incorporate learning resources, materials, technologies, and state and national curriculum standards appropriate to K-8 social studies; the ability to assess student learning in K-8 social studies; and to apply these knowledge, skills, and attitudes to real life situations and experiences. Includes a Level III field experience. Admission to Teacher Education. 2

ELED 412 KINDERGARTEN EDUCATION. An overview of the principles and philosophy of kindergarten education as it relates to curriculum planning and the development of activities and materials. Course utilizes NAEYC curriculum standards. Level III field experience fee assessed. 3

ELED 440 K-8 LANGUAGE ARTS METHODS. Students develop an understanding of the tools of inquiry of K-8 language arts, integrating reading, writing, speaking and listening; the ability to design, deliver, and evaluate a variety of instructional strategies and processes that incorporate learning resources, materials, technologies, and state and national curriculum standards appropriate to K-8 language arts; the ability to assess student learning in K-8 language arts; and to apply these knowledge, skills, and attitudes to real life situations and experiences. Includes a Level II field experience. Admission to Teacher Education. 2-3

ELED 450 K-8 READING METHODS. Students develop an understanding of the research and tools of inquiry of K-8 reading; the ability to design, deliver, and evaluate a variety of instructional strategies and processes that incorporate learning resources, materials, technologies, and state and national curriculum standards appropriate to K-8 reading; the ability to assess student learning in

K-8 reading; and to apply these knowledge, skills, and attitudes to real life situations and experiences. Admission to Teacher Education. Includes a Level II field experience. 2-3

ELED 453 DIAGNOSIS & CORRECTION OF READING. Emphasis on research in identification of reading problems, current trends, and utilizing prescriptive teaching for remediation. Students will profile a learner through observation, formal and informal tests, and instructional recommendations. Course utilizes state and national curriculum standards for reading. Includes a Level II field experience. Admission to Teacher Education. 3

ELED/SPED 454 GUIDED READING. Emphasis is on combining theory to practice in the areas of guided reading, writing, phonemic vocabulary and selected reading and research to support teaching strategies and assessment. This course includes a Level III field experience in a guided reading classroom. Admission to Teacher Education. Prerequisites: LIBM 205, ELED 440 and ELED 450. 3

ELED 488 K-8 STUDENT TEACHING. Students preparing for teaching in the elementary school will observe, participate, and teach under the supervision of the regular classroom teacher in an approved elementary school. An additional "Mandatory Fee" applies to this course. Admission to Teacher Education. 6-10

ELED 491 INDEPENDENT STUDY. A student independently studies an elementary education topic with help from instructor. 1-4

ELED 493 WORKSHOP. Workshop in Elementary education. 1-4

ELED 495 PRACTICUM. Supervised placement in a kindergarten classroom or certified early childhood program. (Three credits of practicum are required for Kindergarten endorsement.) 1-12

English and Linguistics

ENGL 031-032-033 BASIC ENGLISH SKILLS. An introduction to basic writing skills needed for successful academic writing. The minimum amount of credit required will be based on testing. Students who require 1 credit of academic skills register for ENGL 031. Students who required 2 credits of academic skills register for ENGL 032. Students who require 3 credits of academic skills register for ENGL 033. 1-3

ENGL 099 ENGLISH AS A SECOND LANGUAGE. Concentrated study in aspects of the English language and the culture of its speakers.

Designed for students who do not speak English as their native language. May be repeated with a change of subject matter for a maximum of 9 hours. ENGL 099 does not count toward graduation. **1-8**

ENGL/HON 101 COMPOSITION I. Practice in the skills, research, and documentation needed for effective academic writing. Analysis of a variety of academic and non-academic texts, rhetorical structures, critical thinking, and audience will be included. A library research component will be included. Honors Section Prerequisite: ACT score of 24 or above or 3.2 cumulative GPA. **3**

ENGL/HON 201 COMPOSITION II. Study of and practice in writing persuasive prose, with the aim to improve writing skills in all disciplines. A library research component will be included. Prerequisite: ENGL 101 or consent of instructor and a minimum of 28 credit hours completed. Honors Section Prerequisite: ACT score of 24 or above or 3.2 cumulative GPA. **3**

ENGL 208 DOCUMENTATION AND PRESENTATION. Principles of clear description and documentation of computer programs and systems, and methods of preparing oral presentations. Prerequisite: ENGL 101, CSC 105, ENGL 201 is strongly recommended. **3**

ENGL 210 INTRODUCTION TO LITERATURE. Readings in fiction, drama, and poetry to acquaint students with literature and aesthetic form. Prerequisite: ENGL 101 or consent of instructor. **3**

ENGL 211 WORLD LITERATURE I. Selected works of world literature in translation from ancient times through the Renaissance. Prerequisite: ENGL 101 or consent of instructor. **3**

ENGL 212 WORLD LITERATURE II. Selected works of world literature in translation since the Renaissance. ENGL 211 and 212 need not be taken in sequence. Prerequisite: ENGL 101 or consent of instructor. **3**

ENGL 221 BRITISH LITERATURE I. A chronological survey of British literature from Old English through the 18th Century. Prerequisite: ENGL 101. **3**

ENGL 222 BRITISH LITERATURE II. A chronological survey of British literature from the 19th century to the present. ENGL 221 and 222 need not be taken in sequence. Prerequisite: ENGL 101. **3**

ENGL 241 AMERICAN LITERATURE I.

Background to and survey of major works from the beginnings to the Civil War. ENGL 241 and 242 need not be taken in sequence. Prerequisite: ENGL 101. **3**

ENGL 242 AMERICAN LITERATURE II.

Background to and survey of major works from the Civil War to the present. ENGL 241 & 242 need not be taken in sequence. Prerequisite: ENGL 101. **3**

ENGL 268 LITERATURE. Introductory literature course focusing on one genre such as fiction, poetry, drama, etc. The genre will be identified each semester as, for example, "Literature: Fiction," or "Literature: Poetry," etc. May be repeated with different genre and content. Prerequisite: ENGL 101 or consent of instructor. **3**

ENGL 284 INTRODUCTION TO CRITICISM.

A writing intensive course in analyzing an interpreting literature for English majors and minors. Includes instruction in critical approaches to literature and research tools. Prerequisite: A grade of "C" or better in ENGL 101 or consent of instructor. **3**

ENGL 291 INDEPENDENT STUDY. A student independently studies an English topic with help from instructor. **1-3**

ENGL 292 TOPICS. Introductory study of an aspect of language or literature. This course does not meet general education requirements. **1-4**

ENGL 305 PROFESSIONAL, TECHNICAL & GRANT WRITING.

Professional and technical writing in such areas as grant research and proposals, progress and project reports, abstracts, technical articles and correspondence. Prerequisites: A grade of "C" or better in ENGL 101, or consent of instructor. **3**

ENGL 307 PRINCIPLES OF GRAMMAR.

An intensive review of the phonology, morphology, syntax, semantics, and usage of the English language in America. Prerequisite: A grade of "C" or better in ENGL 101. **3**

ENGL 309 COMPUTER-SUPPORTED COLLABORATIVE WRITING.

Principles and practices of successful team writing using a variety of computer applications. Prerequisite: CSC 105 and a grade of "C" or better in ENGL 101. **2**

- ENGL 333 PERIOD STUDY.** A study of the literature of one era or period. The period varies each time the course is offered. Prerequisite: A grade of “C” or better in ENGL 101 or consent of the instructor. **3**
- ENGL 343 SELECTED AUTHORS.** A study of the work of one or several major literary figures. Authors vary each time the course is offered. Prerequisite: A grade of “C” or better in ENGL 101 consent of the instructor. **1-3**
- ENGL 351 COMPUTERS, WRITING AND LITERATURE.** Current productivity and multimedia tools for integrating computer technology with writing and with literary and linguistic study to support English teaching and learning. Prerequisite: CSC 105. **3**
- ENGL 357/CIS 320 NON-NUMERIC COMPUTING.** An introduction to non-numeric computing used for the analysis of text and the processing of natural language. Each time the course is offered, there will be a specific indication of it’s focus - for example “Programming for the Web.” Prerequisite: CSC 105. **3**
- ENGL 363 LITERARY GENRES.** A concentrated study of a particular literary genre. May include historical development of a particular literary genre (poetry, drama the novel), or a more concentrated study of a genre in the twentieth century (modern drama, modern poetry, film as literature). May be repeated for different topics. Prerequisite: A grade of “C” or better in ENGL 101 or consent of the instructor. **3**
- ENGL 379 TECHNICAL COMMUNICATION.** Study of and practice in writing of a technical nature. Prerequisite: A grade of “C” or better in ENGL 101 and ENGL 201. **3**
- ENGL 383 CREATIVE WRITING I.** Study and practice in the techniques of writing fiction, poetry, and/or drama. Prerequisite: A grade of “C” or better in ENGL 101. **1-3**
- ENGL 384 LITERARY AND LINGUISTIC RESEARCH.** An introduction to analyzing language and interpreting literature for English majors and minors. Prerequisite: A grade of “C” or better in ENGL 101 or consent of instructor. **3**
- ENGL 395 PRACTICUM.** Individualized experience in creating or evaluating literary or composition projects. **1-6**
- ENGL 401 ADVANCED WRITING.** Practice and advanced study in the composition of technologically sophisticated texts for publication and web applications. Prerequisite: A grade of “C” or better in both ENGL 101 and ENGL 201. **3**
- ENGL 408 ADVANCED COMPUTER DOCUMENTATION.** Building on the principles of ENGL 208 (Documentation and Presentation), students in this course will learn the principles of writing computer documentation for a variety of professional audiences. Prerequisites: A grade of “C” or better in ENGL 101, ENGL 208 and at least one programming course. **3**
- ENGL/SEED 450 7-12 TEACHING READING IN THE CONTENT AREA.** Introduction to the teaching of basic reading skills in all content areas in K-12 and secondary education. Methods, materials, and research findings used in teaching discipline-specific reading. Prerequisite: Admission to Teacher Education. **1-3**
- ENGL 465 CORPORA ANALYSIS.** A projects-oriented study of computer processing and analysis of large texts and collections of texts. Prerequisite: A grade of “C” or better in ENGL 101. **3**
- ENGL 466 TEXT MARKUP AND PROCESSING.** An introduction to text markup using tags or entity references and the kinds of computer processing that can be performed with marked up text. Prerequisite: A grade of “C” or better in ENGL 101, CSC 105 or consent of instructor. **3**
- ENGL 467 COMPUTER TEXT ANALYSIS.** Applications of computers to writing and analysis of texts; Prerequisite: CSC 105 and a grade of “C” or better in ENGL 101. **3**
- ENGL 480 CONTEMPORARY RHETORIC.** A study of rhetoric based in classical rhetorical theory applied to contemporary rhetorical discussions. The course will emphasize the impact and applications of computer technology and current rhetorical theory and pedagogy. Prerequisite: A grade of “C” or better in ENGL 101, ENGL 201. **3**
- ENGL 484 LITERARY CRITICISM.** The theory and practice of various critical approaches to literature. Prerequisites: A grade of “C” or better in ENGL 101. **3**
- ENGL 490 SEMINAR.** Wholly electronic individual and small-group study and discussion of advanced concepts in language and literature. **1-4**
- ENGL 491 INDEPENDENT STUDY.** Independent study of some aspect of language or literature. Consent of instructor and dean required. **1-5**

ENGL 492 TOPICS. Advanced study of an aspect of language or literature. This course does not meet general education literature requirements.

1-4

ENGL 494 INTERNSHIP. Practical experience in writing or literary study. Prior application required.

1-12

ENGL 498 UNDERGRADUATE RESEARCH/SCHOLARSHIP. Research leading to the writing of a significant undergraduate thesis, or the production of a significant undergraduate project; an integrative experience based on the student's chief areas of academic study. Prior application required.

1-6

LING 403 INTRODUCTION TO LINGUISTICS. Survey of the following units in language study: phonology, morphology, syntax, semantics and language acquisition. Prerequisite: A grade of "C" or better in ENGL 101.

3

LING 443 A HISTORY OF THE ENGLISH LANGUAGE. A survey of the development of the English language from pre-history Indo-European to contemporary English. The course will stress the phonological, syntactical, semantic development and language acquisition. Prerequisite: A grade of "C" or better in ENGL 101, completion of ENGL 307 is recommended though not required.

3

Exercise Science

EXS/PE 180 FOUNDATIONS OF HPER. A survey of the historical background, sociological implications, philosophical basis and professional opportunities of physical education and exercise science.

2

EXS/PE 252 FUNDAMENTALS OF MOTOR LEARNING & DEVELOPMENT. Course content deals with characteristic motor development patterns in children with concentration on fundamental locomotor, non-locomotor, and manipulative skills and perceptual motor development and practical applications of research and knowledge to physical education classroom teaching.

2

EXS 291 INDEPENDENT STUDY. Course content deals with characteristic motor development patterns in children with concentration on fundamental locomotor, non-locomotor, and manipulative skills and perceptual-motor development and practical applications of research and knowledge of physical education classroom teaching.

1-4

EXS 300 INTRO TO RESEARCH. A study focused on the development of skills related to research, writing and presentation.

3

EXS 335 PROGRAM DESIGN AND ADMINISTRATION. The emphasis will be on developmental aspects of program design and implementation and operational administrative matters including public relations, personnel management, budget and finance, and equipment and facilities planning. Prerequisites: EXS 180.

3

EXS/PE 350 EXERCISE PHYSIOLOGY. Study of physiological responses and adaptations to exercise related to human performance limitations, training effects, and health-related benefits. Prerequisites: BIOL 323

3

EXS/PE 353 KINESIOLOGY. An understanding of human performance as it is affected by kinesiological, anatomical, and mechanical factors. Prerequisite: BIOL 323.

2-3

EXS 356 INJURY REHABILITATION. The rehabilitation techniques commonly used to regain and maintain wellness following an injury. The course would include exercise techniques, modalities used in rehabilitation, and how to maintain strength and wellness in the injured area following rehabilitation. Prerequisite: PE 354.

2

EXS/PE 376 TECHNOLOGY INTEGRATION Software packages and applications used in physical education and exercise science are researched.

3

EXS 395 PRACTICUM. Practical instruction and supervised observation of students in a fitness center environment to include health/fitness testing and exercise prescription. Prerequisite: PE 350.

1-3

EXS/PE 400 EXERCISE TESTING AND PRESCRIPTION. This course is designed to provide the student with the knowledge, skills, and abilities to assess different areas of physical fitness and prescribe individual exercise programs based on these objective measures.

3

EXS 401 FITNESS FOR SPECIAL POPULATIONS. A study of health and fitness programs and adapted physical activities for special populations including, but not limited to elderly, obese, diabetic, asthmatic and cardiac rehabilitation patients. Prerequisites: EXS 350

3

EXS 405 METHODS OF TRAINING. This course emphasizes the scientific application of the metabolic energy system to methods of training.

3

EXS 420 FACILITY RISK MANAGEMENT. This course emphasizes the current legal dimensions of the development of risk management programs in exercise science and sport.

3

EXS/PE 452 MOTOR LEARNING AND DEVELOPMENT. The application of principles of learning in the psychomotor domain. Included will be a review of the physiological basis of skill behavior, state of the performer, and didactic strategies in motor learning and skill performance. **3**

EXS 453 HEALTH ASPECTS OF AGING. An exploration of the aging process and an explanation of health factors affecting the elderly. Emphasis is given to the changes in the following areas of health: physical, mental, social, emotional and sexual. **3**

EXS/PE 454 BIOMECHANICS. This course emphasizes the mechanical principles of human movement (including muscular and skeletal principles) during physical education, wellness, and sport. **3**

EXS 491 INDEPENDENT STUDY. Independent study of some aspect of exercise science **1-4**

EXS 492 TOPICS. Advanced courses offered on topics. Prerequisites: PE 350 **1-3**

EXS 494 INTERNSHIP. Practical experience in the area of Exercise Science. Prior application required. Prerequisites: EXS 395 **1-12**

General Studies

GS 100 UNIVERSITY EXPERIENCE. The primary purpose of this course is to help students transition successfully to the university. The focus of the course will be to familiarize students with campus resources and to facilitate their engagement in the university experience. Through group discussions with a faculty mentor, students will develop critical thinking and social interaction skills to prepare them for the academic environment. Students will become active participants in the university community. Course content will include access to university resources, college policies, role of the academic advisor, student support services, and university academic requirements. **1**

Geography

GEOG 101 INTRODUCTION TO GEOGRAPHY. The course presents a broad, introductory overview of geographic concepts, themes, and elements designed to help students better understand and analyze the world from a geographic perspective. It provides a background to earth's physical and human elements and systems. It also emphasizes the unique quality of world regions, and the spatial interaction of people. Elements, and regions, as well as major global and regional problems and prospects. **3**

GEOG 291 INDEPENDENT STUDY. A student independently studies a geography topic with help from instructor. **1-4**

GEOG 312 GEOGRAPHY FOR ELEMENTARY TEACHERS. A survey of the elements of physical and cultural geography useful to elementary teachers. **1-3**

GEOG 491 INDEPENDENT STUDY. A student independently studies a geography topic with help from instructor. **1-4**

Health

HLTH 102 FOUNDATIONS OF PHYSICAL FITNESS. Activity course emphasizing cardiovascular fitness and skills of that particular activity. Prerequisite: Students must have the physical capabilities to be able to perform the normal activities in this course. Students with physical disabilities may use approved accommodations by the ADA Academic Coordinator to perform the normal activities of the course. **1**

HLTH 110 HEALTH CONCEPTS. This course is designed to provide the student with knowledge and comprehension of basic health concepts and theories as they relate to a variety of health and wellness topics. **3**

HLTH 201 ATOD PREVENTION EDUCATION. Concepts and analysis of vital issue related to drug use, misuse and abuse. Educational principles related to teaching about drug education and counseling considerations in these problem areas are addressed. **2**

HLTH 251 FIRST AID AND CPR. First Aid instruction meeting the requirements of the American Red Cross responding to emergencies standard First Aid course is given. Safety in everyday living is emphasized, with special consideration given to the kindergarten and elementary school levels. **1**

HLTH 291 INDEPENDENT STUDY. A student independently studies a health topic with help from instructor. **1-4**

HLTH 292 TOPICS. Introductory special topics. **1-4**

HLTH 320 COMMUNITY HEALTH. This course presents the structural organization, functional roles, and political foundations of public and private health agencies relative to community health. The roles and responsibilities of community health educators and professional associations/career opportunities receive particular attention. Prerequisite: WEL 100. **3**

HLTH 370 STRESS MANAGEMENT. The course is designed to help students deal with stressful situations in their lives. Successful management of stress has been shown to positively affect the performance of daily tasks and reduce the risks of many diseases. Students will learn management techniques and have the opportunity to act as peer counselors. **3**

HLTH 420 K-12 METHODS OF HEALTH INSTRUCTION. Curriculum content at elementary and secondary levels. Methods of presentation including direct, correlated, and integrated health instruction. Organization of health and safety education. Admission to Teacher Education. **2-3**

HLTH 422 NUTRITION. This course investigates the science of food relative to human performance, nutrition, and health education. Areas of emphasis include nutrient chemistry, function, and interactions; energy consumption and metabolism; and resources for nutrition education. **3**

HLTH 491 INDEPENDENT STUDY. Independent study of some aspect of health. **1-4**

HLTH 492 TOPICS. Advanced special topics in health. **1-4**

Health Information Management

HIM 130 BASIC MEDICAL TERMINOLOGY. Introduction to medical terms. Particular emphasis on word construction. **2**

HIM 131 MEDICAL TERMINOLOGY/TRANSCRIPTION. Study of terminology used in health care; word construction, analysis, spelling, pronunciation. Introduction to and application of word processing concepts and transcription of medical reports. Concepts integrated into laboratory and computer experience. Prerequisite: CSC 105, HIM 130 and HIM 150. **3**

HIM 150 INTRODUCTION TO HEALTH INFORMATION MANAGEMENT. Introduction to health record practice, state and national medical record associations, numbering and filing systems, health record content, origin of clinical information, record retention policies and procedures, qualitative and quantitative analysis of health records. Concepts integrated into computer and laboratory experiences. Prerequisite: Concurrent enrollment in CSC 105. **3**

HIM 160 HEALTH CARE CODING SYSTEMS. Nomenclature and classification systems, diagnostic related groups and data abstracting

techniques using automated and manual systems. Emphasis is placed on ICD-9-CM coding in an inpatient setting. Concepts integrated into laboratory and computer experience. Prerequisite: HIM 130, BIOL 323 and HIM 260. **3**

HIM 170 LEGAL ASPECTS OF HEALTH INFORMATION MANAGEMENT. Study of the principles of law as applied to the health field, with particular reference to medical record practice. Prerequisite: HIM 150. **3**

HIM 250 ALTERNATIVE SITE HEALTH INFORMATION MANAGEMENT. An introduction to the management, retrieval and retention of health records in settings other than hospitals. The course will also cover reimbursement, licensing and accreditation issues and include investigation of applicable computer information systems. Concepts incorporated into laboratory and computer experience. Prerequisite: HIM 150. **2**

HIM 252 BASIC FOUNDATIONS OF HEALTH DATA SYSTEMS. Definitions and formulas for computations of basic health care statistics. Prerequisite: HIM 150. **3**

HIM 255 MANAGEMENT OF HEALTH DATA. The study of medical staff roles and functions; hospital and medical staff committees and their roles and functions; an overview of regulations of health care resources, quality assurance, and introduction to management and supervision. Two one-hour lectures and one two-hour lab weekly. Prerequisite: HIM 150. **3**

HIM 260 FUNDAMENTALS OF HUMAN DISEASES. Introduction to etiology, symptomatology, clinical diagnosis and treatment of disease. Emphasis on pathogenesis with discussion of representative diseases in conjunction with each body system. An introduction to the study of drugs and drug therapy related to human diseases. It includes a study of the preparation, use and action of chemicals having an effect on biological functioning. Prerequisites: BIOL 323 and HIM 130. Concurrent enrollment in BIOL 323 is permitted. **5**

HIM 262 ADVANCED CODING & REIMBURSEMENT. Advanced study of nomenclatures and classifications. Introduction to CPT coding and coding practice will be addressed using manual and automated encoding systems. Reimbursement management and optimization issues will be investigated for both hospital and non-hospital entities. Emphasis will be placed on coding in the outpatient setting. Concepts integrated into laboratory and computer experience. Prerequisite: HIM 160. **4**

HIM 263 INTRODUCTORY PHARMACOLOGY. An introduction to the study of drugs and drug therapy as they relate to the medical record field. It includes a study of the preparation, use and action of chemicals having an effect on biological functioning. One one-hour lecture weekly. Prerequisite: HIM 130. **1**

HIM 265 MANAGEMENT OF QUALITY AND RELATED FUNCTIONS FOR HIM. The study of the principles of quality management and its component functions (institutional and medical staff monitoring and evaluation activities, risk management, utilization review and credentialing) as applied to acute care settings and within the health record department specifically as well as within other healthcare settings generally. The study of medical staff roles and functions; hospital and medical staff committees and their roles and functions; an overview of the regulations of health care resources; and the application of supervisory management principles in the health information management area. Concepts incorporated into laboratory and computer experience. Prerequisite: HIM 150 **4**

HIM 285 SUPERVISED PROFESSIONAL PRACTICE. Practical work experience in hospitals or related affiliation sites. This course is offered on a credit-no credit basis. Note: A charge for liability insurance will be assessed. Prerequisite: Successful completion (with a grade of at least a "C") in: HIM 130, HIM 150, and HIM 170 and permission of instructor. (repeatable) **2**

HIM 286 SUPERVISED PROFESSIONAL PRACTICE. Practical work experience in a non-traditional setting or related affiliation sites. This course is offered on a credit-no credit basis. Note: A charge for liability insurance will be assessed. Prerequisite: Successful completion (with a grade of at least a "C") in: HIM 160, HIM 250, HIM 252, HIM 260, HIM 262, HIM 265, and HIM 285, and permission of instructor. (repeatable) **1**

HIM 287 SUPERVISED PROFESSIONAL PRACTICE. Practical work experience in hospitals or a related affiliation sites. This course is offered on a credit-no credit basis. Note: A charge for liability insurance will be assessed. Prerequisite: Successful completion (with a grade of at least a "C") in HIM 160, HIM 252, HIM 260, HIM 262, HIM 265, and HIM 285, successful completion of CIS 325; and permission of instructor. (repeatable) **3**

HIM 291 INDEPENDENT STUDY. A student independently studies a health information topic with help from instructor. **1-3**

HIM 292 TOPICS. This course will focus on a current issue or problem in the healthcare industry. **1-4**

HIM 350 RESEARCH METHODS IN HEALTHCARE. An introduction to research methods in the healthcare industry that guides the student through the research process including developing problem statements, performing literature searches, evaluating and writing proposals and critiquing existing research articles. The course will also include an overview of existing statistical software applications used in research. Prerequisite: Junior Standing, BADM 220 (may be taken concurrently). **2**

HIM 360 MANAGEMENT OF HEALTH INFORMATION CENTERS I. Application of the management principles of planning and organizing to health information settings. Concepts integrated into laboratory and computer experience. Prerequisite: HIM 265 and BADM 360. **3**

HIM 361 MANAGEMENT OF HEALTH INFORMATION CENTERS II. Application of management principles of actuating, and controlling of health information settings. Concepts integrated into laboratory and computer experience. Prerequisite: HIM 360. **3**

HIM 443 CURRENT TRENDS IN HEALTH CARE DELIVERY. Current trends in health care delivery; recent research, theory, issues and developments in health records, changing roles of health care providers. Prerequisite: HIM 150 and HIM 250. **3**

HIM 444 ADVANCED HEALTH DATA SYSTEMS. Fundamental concepts of health information management practice in the age of electronic health records. Exploration of new skills required of HIM profession as the industry moves toward electronic health records, with an in-depth study of requirements for data collection and presentation of health data. Prerequisites: HIM 252, CSC 105, CSC 206 (Access) and CIS 325. **3**

HIM 450 RESEARCH IN HEALTH INFORMATION ADMINISTRATION. An introduction to research methods in the healthcare industry that guides the student through the research process including developing problem statements, performing literature searches, evaluating and writing proposals and critiquing existing research articles. The course will also include an overview of existing statistical software applications used in research. Research and presentation of an aspect of health information management will be included. Prerequisite: Completion of HIM 443, HIM 444, **3**

HIM 361 (may be taken concurrently) and BADM 220 (may be taken concurrently). 3

HIM 485 HEALTH INFORMATION ADMINISTRATION SUPERVISED PROFESSIONAL PRACTICE. Four weeks experience in health care facilities during which students apply knowledge previously gained in the classroom in carrying out management activities under the direct supervision of a qualified RHA. This course is offered on a credit no-credit basis. Note: A charge for liability insurance will be assessed. Prerequisite: Successful completion (a grade of at least a “C”) in HIM courses, acceptance into the Health Information Administration Program and permission of instructor. (Repeatable) 4

HIM 489 PROGRAM SUSTAINING. This course is used to track students who are in the HIM program, who are not currently taking a course from DSU. 0

HIM 491 INDEPENDENT STUDY. A student independently studies a health information topic with help from instructor. 1-4

HIM 492 TOPICS. This course will focus on a current issue or topic in the Healthcare industry. 1-3

History

HIST 121 WESTERN CIVILIZATION I. Surveys the evolution of western Civilization from its beginnings into the Reformation and religious wars. 3

HIST 122 WESTERN CIVILIZATION II. Surveys the development of western civilization from the Reformation era to the present. 3

HIST 151 UNITED STATES HISTORY I. Surveys the background and development of the United States from its colonial origins to the Civil War and Reconstruction. 3

HIST 152 UNITED STATES HISTORY II. Surveys development of the United States since the Civil War and Reconstruction. 3

HIST 256 WORLD HISTORY. Major features of the principal existing civilizations of the world, both Western and non-Western, as they were originally formed and as they have been altered during the past two to four centuries. Prerequisite: ENGL 101. 3

HIST 291 INDEPENDENT STUDY. A student independently studies a history topic with help from instructor. 1-3

HIST 312 HISTORY OF MODERN ASIA. Focuses on the history of modern Chinese and Japanese civilizations. 3

HIST/INED 411 SOUTH DAKOTA INDIAN STUDIES. A basic knowledge of Indian history with emphasis on the Lakota, Dakota and Nakota speaking peoples. Current cultural issues are presented including values, family structures, traditional religion, fine arts, legends, economics, governmental policies, treaties, acts and related areas. Focuses on teaching methods, content and materials to equip students to teach bi-culturally.. Prerequisite: three semester hours of American history. 3

HIST 444 HISTORY OF MODERN RUSSIA. A perspective of Russia under Peter I and his successors, of Russian expansion and its consequences. Nineteenth-century Imperial Russian politics, foreign policy, economy, efforts at social and political reform, art, music, science and literature. A review of the Bolshevik overthrow of the Czarist monarchy and seizure of power to better understand Communist Russia today. 3

HIST 491 INDEPENDENT STUDY. A student having demonstrated outstanding capability may study independently an area of special interest. 1-3

HIST 492 TOPICS. Study of specialized areas of history. Areas vary each time the course is offered. 1-4

Honors

HON/ENGL 101 COMPOSITION I. Practice in the skills, research, and documentation needed for effective academic writing. Analysis of a variety of academic and non-academic texts, rhetorical structures, critical thinking, and audience will be included. A library research component will be included. English Section Prerequisite: Appropriate student placement based on entry-level assessment or successful completion of ENGL 031 or ENGL 032 or ENGL 033; Honors Section Prerequisite: ACT score of 24 or above or 3.2 cumulative GPA

HON/CSC 105 INTRODUCTION TO COMPUTERS. Overview of computer functions with emphasis on word processing, spreadsheets, database, presentation tools and Internet-based applications. Honors Section Prerequisite: ACT score of 24 or above or 3.2 cumulative GPA 3

HON 111 COMPOSITION AND INTRODUCTION TO COMPUTERS. Equivalent to ENGL 101 plus incorporation of introduction to comput-

ers taught in CSC 105. HON 111 is equivalent to ENGL 101 and CSC 105 for purposes of determining eligibility for proficiencies examination. 5

HON 112 INTRODUCTION TO MUSIC AND INTRODUCTION TO COMPUTERS. Equivalent to MUS 100 plus incorporation of introduction to computers taught in CSC 105. HON 112 is equivalent to MUS 100 and CSC 105 for purposes of determining eligibility for proficiencies examination. 5

HON 114 PRINCIPLES OF PROGRAMMING AND COLLEGE ALGEBRA. Course integrates the use of computer programming with college algebra. Emphasis on the use of algebraic functions in structured programming, logical design and flowcharting. Is equivalent to CSC 150 and MATH 102 for purposes of determining eligibility for proficiencies examination. 4

HON 116 COMPOSITION, ORAL COMMUNICATION, AND COMPUTERS. Equivalent to ENGL 101, SPCM 101, plus incorporation of introduction to computers taught in CSC 105. HON 116 is equivalent to ENGL 101, SPCM 101 and CSC 105 for purposes of determining eligibility for proficiencies examination. 7

HON/CIS 130 VISUAL BASIC PROGRAMMING. Fundamentals of programming using Visual Basic. Focus on problem solving, visual design, and programming concepts. Topics include sequence, selection, repetition, procedures, and functions. Honors Section Prerequisite: ACT score of 24 or above or 3.2 cumulative GPA. 3

HON 155 BIOLOGICAL PRINCIPLES. Lecture includes an in-depth study of biological principles common to both plants and animals. Included are units and cellular structure and metabolism, cellular reproduction, energy flow, genetics evolution and ecology. Laboratory will include a series of individuals and group research projects. Limited to students in the Honors program. Three one-hour lectures and one three-hour laboratory each week. 4

HON/ENGL 201 COMPOSITION II. Using higher level analysis, research, and critical thinking, students will refine and practice the effective communication and documentation skills needed in academic and professional writing. A library research component is included. English Section Prerequisite: ENGL 101 and successful completion of at least 28 credit hours; Honors Section Prerequisite: ACT score of 24 or above or 3.2 cumulative GPA. 3

HON 231 LITERATURE AND AESTHETICS. This course combines the content of ENGL 218, Introduction to Literature, and ARTH 231 Survey. Prerequisite: Admission to Honors program. Is equivalent to ENGL 210, and ARTH 231 for purposes of determining eligibility for proficiencies examination. 4

HON/SOC 285 THE INFORMATION SOCIETY. Analysis of the present and future impact of computerized information on social relationships and fabric of society. Sociology Section Prerequisites: General education computer literacy requirement; Honors Section Prerequisite: ACT score of 24 or above or 3.2 cumulative GPA. 3

HON 291 INDEPENDENT STUDY. A student independently studies an honors topic with help from instructor. 1-4

HON 363 DRAMATIC LITERATURE AND THEATRE. This course combines the content of ENGL 363 Studies in Genre, and THEA 100 Introduction to Theatre. Prerequisite: Admission to Honors Program. Is equivalent to THEA 100 and ENGL 363 for purposes of determining eligibility for proficiencies examination. 4

HON 390 HONORS SEMINAR. An advanced seminar covering important academic areas. Areas vary each time the course is offered. 1-3

HON 491 HONORS INDEPENDENT STUDY. A student independently studies an honors topic with help from instructor. 1-6

HON 498 HONORS THESIS. Research and complete study in the student's major field of study leading to the writing of a significant undergraduate thesis. Prior application required. 1-6

Humanities/Computing for the Humanities

HUM 254 WORLD CIVILIZATIONS. Humanistic study of art, music, literature, architecture, business, and social practices of selected countries. 3

HUM 291 INDEPENDENT STUDY. A student independently studies a humanities topic with help from instructor. 1-4

HUM 491 INDEPENDENT STUDY. A student independently studies a humanities topic with help from the instructor. 1-4

CHUM 291 INDEPENDENT STUDY. A student independently studies a computing for the humanities topic with help from instructor. 1-4

CHUM 491 INDEPENDENT STUDY. A student independently studies a computing for the humanities topic with help from instructor. **1-3**

Indian Education

INED/HIST 411 SOUTH DAKOTA INDIAN STUDIES. A basic knowledge of Indian history with emphasis on the Lakota, Dakota and Nakota speaking peoples. Current cultural issues are presented including values, family structures, traditional religion, fine arts, legends, economics, governmental policies, treaties, acts and related areas. Focuses on teaching methods, content and materials to equip students to teach bi-culturally. **3**

Languages

French

FREN 101 INTRODUCTORY FRENCH I. Fundamentals of language structure and introduction to French culture enabling students to converse, read, and write simple French. Classwork may be supplemented with required aural/oral practice outside of class. No previous study of French required. **4**

FREN 102 INTRODUCTORY FRENCH II. Fundamentals of language structure and introduction to French culture enabling students to converse, read, and write simple French. Classwork may be supplemented with required aural/oral practice outside of class. Prerequisite: FREN 101 or consent of instructor. **4**

FREN 201 INTERMEDIATE FRENCH I. Goals of the introductory course continued. Emphasis on cultural and intellectual aspects of French life and literature. Classwork may be supplemented with required aural/oral practice outside of class. Prerequisite: FREN 102 or consent of instructor. **4**

FREN 202 INTERMEDIATE FRENCH II. Continues FREN 201. Laboratory required. Prerequisite: FREN 201 or consent of instructor. **4**

FREN 292 TOPICS. Topics of special interest in French. **1-4**

FREN 310 FRENCH LANGUAGE SKILLS. A video and computer-assisted, advanced-level course designed to strengthen and expand aural comprehension, conversation and composition within the context of contemporary French culture. Prerequisite: FREN 202 or consent of instructor. **3**

FREN 333 TOPICS IN FRANCOPHONE CULTURE. Overview of the historical events in Francophone civilizations as they relate to contemporary culture. Second semester emphasizes contemporary Francophone culture and civilization. Prerequisite: FREN 202 or consent of instructor. **3**

FREN 350 BUSINESS COMMUNICATIONS IN FRENCH. An introduction to the language of business and business practices in French-speaking countries. Included are commercial terminology, business forms, office correspondence and the common expressions used in a business setting. Prerequisite: FREN 202 or consent of instructor **3**

FREN 450 BUSINESS FRENCH II. An advanced course in the language of business in French-speaking countries. Graded readings in commerce and marketing, finance and accounting, and economics. Prerequisite: FREN 202 or consent of instructor. **3**

FREN 492 TOPICS. Topics of special interest in French. **1-4**

NOTE: Students with a high school background in French may elect to begin the minor with the second course, FREN 102. All students with a French minor must take 18 hours.

Lakota

AIS/LAKL 101 INTRODUCTORY LAKOTA I. An introduction to the Lakota language with emphasis on basic conversation, language structure, and vocabulary. **4**

AIS/LAKL 102 INTRODUCTORY LAKOTA II. A continued introduction to the Lakota language with emphasis on basic conversation, language structure, and vocabulary. Prerequisite: LAKL 101 or consent of instructor. **4**

AIS/LAKL 201 INTERMEDIATE LAKOTA I. A continuation of the first-year course, with emphasis on reading, composition, and vocabulary building. Prerequisite: LAKL 101 and LAKL 102 or consent of instructor. **3**

AIS/LAKL 202 INTERMEDIATE LAKOTA II. A continuation of intermediate Lakota with emphasis on reading, composition, vocabulary building and the oral tradition. Prerequisite: LAKL 101 and LAKL 102 or consent of instructor. **3**

Spanish

SPAN 101 INTRODUCTORY SPANISH I.

Introduces the fundamental elements of Spanish sentence structure and vocabulary. Promotes speaking, listening and writing within a cultural context. Classwork may be supplemented with required aural/oral practice outside of class. No previous study of Spanish required. **4**

SPAN 102 INTRODUCTORY SPANISH II.

Introduces the fundamental elements of Spanish sentence structure and vocabulary. Promotes speaking, listening and writing within a cultural context. Classwork may be supplemented with required aural/oral practice outside of class. Prerequisite: SPAN 101 or consent of instructor. **4**

SPAN 201 INTERMEDIATE SPANISH I.

Students use previously learned elements of fundamental Spanish to improve speaking, reading writing, and listening skills. Authentic materials promote the understanding of Hispanic culture. Prerequisite: SPAN 102 or consent of instructor. **3**

SPAN 202 INTERMEDIATE SPANISH II.

Continuation of 201 with more emphasis on using grammar structures in an interactive way. Further study of the Hispanic world. Prerequisite: SPAN 201 or consent of instructor. **3**

SPAN 292 TOPICS. Topics of special interest in Spanish. **1-4**

SPAN 311 INTEGRATED WRITING CONVERSATION & GRAMMAR I. Part of a two-course sequence of SPAN 311/312. May be taken out of order. Content based on grammar, conversation, composition, and translation. Prerequisite: SPAN 202 or consent of instructor. **2**

SPAN 312 INTEGRATED WRITING CONVERSATION & GRAMMAR II. Part of a two-course sequence of SPAN 311/312. May be taken out of order. Content based on grammar, conversation, composition, and translation. Prerequisites: SPAN 202 or consent of instructor **2**

SPAN 391 INDEPENDENT STUDY. Assigned readings in Spanish language, literature and/or civilization. Career goals of the student will be considered. Prerequisites: Consent of Instructor. May be repeated for a maximum of 6 credits. **1-3**

SPAN 492 TOPICS. Advanced topics of special interest in Spanish. **1-4**

NOTE: Students with a high school background in Spanish may elect to begin the minor with the sec-

ond course, SPAN 102. All students with a Spanish minor must take 18 hours.

Library Media

LIBM 205 CHILDREN'S LITERATURE. An introduction to children's literature with emphasis on historical types of literature; selection and evaluation of books according to levels, interests, special needs, and educational objectives. Level II field experience required. **2**

LIBM 339 SCHOOL LIBRARY MEDIA CENTERS. Current trends in systems and services of school library media centers focused on new technologies and their applications in the school setting. Prerequisites: Admission to Teacher Education, CSC 105 or consent of the instructor. **3**

LIBM 404 LITERATURE FOR YOUNG PEOPLE. The characteristics of the peer group, personal interests, occupational needs, citizen responsibilities and educational aims, relating to the principles of selecting fiction and nonfiction books to these aspects of their development will be explored. **2**

LIBM 441 INSTRUCTIONAL MEDIA. The selection, operation and utilization of instructional audio-visual materials, both commercial and locally-produced, to make instruction more effective. One hour of lecture and two hours of laboratory per week. **1**

LIBM 492 TOPICS. Topics in information needs, information seeking, information technology, information evaluation, and information use that are essential to lifelong learning in the disciplines studied at DSU. **1-4**

Mass Communication

MCOM 161 FUNDAMENTALS OF DESKTOP PUBLISHING. Fundamental design principles, techniques, and technology of electronic layout and production. Prerequisites: CSC 105. **3**

MCOM 210 BASIC NEWSWRITING. Introduces students to gathering, evaluating and writing new. Prerequisites: ENGL 101 **3**

MCOM 291 INDEPENDENT STUDY. A student independently studies a mass communications topic with help from instructor. Prerequisite: Permission of instructor. **1-3**

MCOM 292 TOPICS. Topics of special interest in mass communications. **1-3**

MCOM 348 WRITING FOR NETWORKED ENVIRONMENTS By exploring composition techniques afforded by multimedia production tools and networked digital environments, this course helps students develop technical, rhetorical and critical awarenesses necessary to the creation of sophisticated, nontraditional, hyper mediated texts. Special attention is given to issues of interactive reading, hypertextuality, and the global distribution of syndicated content, including questions of digital rights. Prerequisites: A grade of "C" or better in ENGL 101 and ENGL 201. **3**

MCOM 351 WEB PUBLISHING I. Basic and intermediate techniques for creating documents for the World Wide Web. Emphasis will be placed on the principles of design, using the most recent versions of hyper-text markup language and enhancements. Prior completion of ARTD 282 is strongly recommended. **3**

MCOM 352 WEB PUBLISHING II. A continuation of the principles presented in MCOM 351, students will learn more sophisticated techniques for creating documents for the World Wide Web. Emphasis will be placed on the principles of design, using the most recent versions of Hyper-text Markup Language and enhancements. Prerequisites: CSC 105, ART 121, MCOM 351; ARTD 282 is highly recommended. **3**

MCOM 353 WEB-BASED INTERACTIVITY. A detailed introduction to current web and/or multimedia authoring software with emphasis given to interactive design. **3**

MCOM 358 PRINCIPLES OF USABILITY TESTING. Introduces methods of gathering user requirements, designing usability tests for web sites, documents and other products of interest. Prerequisites: 28 credits **3**

MCOM 360 TECHNICAL PUBLISHING. A study and practice in the use of computer hardware and software used for writing, editing, printing, and publishing technical media. Prior completion of ART 121 is recommended. Prerequisite: CSC 105; MCOM 161 or ENGL 208 **3**

MCOM 362 DIGITAL TYPOGRAPHY. Study and practice of visual communication and commercial printing using digital design principles for type and related graphics. Prerequisite: ARTD 285. **3**

MCOM 368 EDITING FOR STRUCTURED ENVIRONMENTS. Systematic analysis of information rich environments for the development of strategies for information design and the management and publication of content. Emphasis on structured writing and standardized documenta-

tion. Prerequisite: Grade of "C" or better in ENGL 101 and ENGL 201. **3**

MCOM 389 PORTFOLIO AND PROFESSIONAL DEVELOPMENT. Planning, creation, and production of portfolios and other professional materials. **1-3**

MCOM 409 INFORMATION ARCHITECTURE. A study of the structure, organization, and presentation of written and graphic information based on form, content, and user analysis. **3**

MCOM 480 COMPUTER PUBLISHING LABORATORY. Advanced practice in the use of computers for electronic publishing, electronic design and layout, network distribution of texts, or other kinds of computer applications for publication. Prerequisite: MCOM 161 and ART 121. **1-6**

MCOM 489 PORTFOLIO PRODUCTION & DESIGN. Planning, creation, and production of portfolios for a variety of purposes. **1-3**

MCOM 491 INDEPENDENT STUDY. Independent study of some aspect of mass communication. **1-4**

MCOM 492 TOPICS. Topics of special interest in mass communications. **1-5**

MCOM 494 INTERNSHIP. Practical professional-level experience creating, designing, or developing mass communication materials. Prior application required. **1-12**

MCOM 495 PRACTICUM. Supervised practice in specified areas of mass communications and journalistic practice. Prior approval required. **1-4**

Mathematics

MATH 021 BASIC ALGEBRA. This course prepares students for college level mathematics. Topics generally include: basic properties of real numbers, exponents and radicals, rectangular coordinate geometry, solutions to linear and quadratic equations, inequalities, polynomials and factoring. Students may also be introduced to functions and systems of equations. Note: This is remedial level course and no credit for MATH 021 will be granted for graduation. Prerequisite: Appropriate Mathematics Placement. **3**

MATH 101 INTERMEDIATE ALGEBRA. Basic properties of real numbers, linear equations and inequalities, quadratic equations, systems of equations, polynomials and factoring, rational expressions and equations, and radical expressions and equations, and an introduction to functions such as

polynomial, exponential and logarithmic functions. Credit for MATH 101 will not be granted to anyone who has previously received credit for MATH 102. Prerequisite: Appropriate Mathematics Placement. Note: Students completing MATH 191 in the spring 2006 term or later must earn a grade of 'C' or better to meet the prerequisite for MATH 102.

3

MATH 102 COLLEGE ALGEBRA. Equations and inequalities; polynomial functions and graphs; exponents, radicals, binomial theorem, zeros of polynomials; systems of equations; exponential, logarithmic, and inverse functions, applications and graphs. Other topics selected from sequences, series, and complex numbers. Prerequisite: MATH 101 (with a grade of 'C' or better) or appropriate math placement.

3

MATH 103 CONTEMPORARY MATH. An introduction to the ideas and uses of mathematics with special emphasis on contemporary applications. Selected topics from functions and graphs, data analysis, discrete mathematics, geometry, probability and statistics. Development of the abilities to think logically, solve problems, use technology, communicate mathematical ideas, and research technical information. This course satisfies the general education mathematics requirement but does not serve as a prerequisite for courses requiring MATH 102 College Algebra. Prerequisite: MATH 101 or appropriate math placement.

3

MATH 104 FINITE MATHEMATICS. This course includes linear systems of equations, matrices, linear programming, mathematics of finance, probability, statistics and other topics. This course cannot be used as the prerequisite for courses requiring MATH 102. Prerequisite: MATH 101 or appropriate mathematics placement.

4

MATH 112 QUANTITATIVE METHODS. An introduction to applications of computer technology in the solution of mathematical problems involving mathematical modeling, statistics, data collection, data analysis and graphing. Prerequisite: MATH 102 or demonstration of required level of competency.

1

MATH 120 TRIGONOMETRY. Topics include: trigonometric functions, equations, and identities; inverse trigonometric functions; exponential and logarithmic functions, and applications of these functions. Prerequisite: MATH 102 or appropriate math placement or consent of instructor.

3

MATH 121 SURVEY OF CALCULUS. A survey of calculus including an intuitive approach to limits, continuity, differentiation, and integration

with an emphasis on applications of the derivative and the integral as well as topics from multivariable calculus. Prerequisite: MATH 102 or appropriate math placement.

4

MATH 123 CALCULUS I. The study of limits, continuity, derivatives, applications of the derivative, antiderivatives, and the definite and indefinite integral, and the fundamental theorem of calculus. Prerequisite: MATH 102 or MATH 120, or appropriate math placement.

4

MATH 125 CALCULUS II. A continuation of the study of calculus, including the study of sequences, series, polar coordinates, parametric equations, techniques of integration, applications of integration, indeterminate forms, and improper integrals. Prerequisite: MATH 123.

4

MATH 201 INTRODUCTION TO APPLIED MATHEMATICS. An introduction and overview of the basic skills, concepts, and applications encountered in more advanced mathematics courses. Topics to include recursion, elementary logic, matrix operations, linear programming, discrete probability, numerical methods, and applications. Prerequisite: MATH 102

3

MATH 225 CALCULUS III. A continuation of the study of calculus, including an introduction to vectors, vector calculus, partial derivatives, and multiple integrals. Prerequisite: MATH 125.

4

MATH 281 INTRODUCTION TO STATISTICS. A study of descriptive statistics including graphs, measures of central tendency and variability and an introduction to probability theory, sampling and techniques of statistical inference with an emphasis on statistical applications. Prerequisite: MATH 102 or MATH 121 or MATH 123.

3

MATH 291 INDEPENDENT STUDY. A student independently studies a mathematics topic with help from instructor.

1-5

MATH 292 TOPICS. Topics of special interest in mathematics.

1-5

MATH 315 LINEAR ALGEBRA. Course topics include: the theory and applications of systems of linear equations, matrices, determinants, vector spaces, linear transformations and applications. Prerequisite: MATH 225 or consent of instructor.

3

MATH/CSC 316 DISCRETE MATHEMATICS. Selected topics from Boolean algebra, set theory, logic, functions and relations, difference equations, recurrence relations, application of

algorithms, finite graphs, trees, paths and modeling.
Prerequisites: MATH 125 or consent of instructor.

3

MATH/CSC 318 ADVANCED DISCRETE MATHEMATICS. An introduction to advanced discrete mathematics topics. Content to include topics such as proof techniques, graph theory, coding theory, and cryptology with an emphasis on computer applications. Prerequisite: MATH/CSC 316

3

MATH 321 DIFFERENTIAL EQUATIONS. Selected topics from ordinary differential equations including development and applications of first order, higher order linear and systems of linear equations, general solutions and solutions to initial-value problems using matrices. Additional topics may include Laplace transforms and power series solutions. Prerequisite: MATH 125.

3

MATH 341 MATHEMATICAL CONCEPTS FOR TEACHERS I. An introduction to sets, numeration systems, arithmetic operations/algorithms, problem solving, and other topics. This course does not satisfy the mathematics general education requirement nor any mathematics area requirements other than those for a degree in elementary education. Prerequisite: MATH 102.

3

MATH 342 MATHEMATICAL CONCEPTS FOR TEACHERS II. An introduction to geometry concepts, measurement, problem solving, probability, statistics, and other topics. This course does not satisfy the mathematics general education requirement nor any mathematics area requirements other than those for a degree in elementary education. Prerequisite: MATH 102 or MATH 341.

3

MATH 361 MODERN GEOMETRY. In this course topics will be chosen from: axiomatic system, finite geometries, Euclidean plane geometry, transformational geometry, three dimensional geometry, and non-Euclidean geometries. Prerequisite: MATH 125 or consent of instructor.

3

MATH 381 INTRODUCTION TO PROBABILITY AND STATISTICS. Introduction to probability theory, discrete and continuous distributions, sampling distributions and the Central Limit Theorem with general principles for statistical inference and applications of random sampling to hypothesis testing, confidence limits, correlation, and regression. Prerequisites: MATH 125.

3

MATH 413 ABSTRACT ALGEBRA I. Introduction to the theory and applications of algebraic

structures including groups, rings, and fields.

Prerequisite: MATH 315 or MATH 316 or consent of instructor.

3

MATH 418 MATHEMATICAL MODELING. Creating and using mathematical models for solving real world problems. Prerequisite: MATH 125 or MATH 315.

3

MATH 471 NUMERICAL ANALYSIS I. Analysis of rounding errors, numerical solutions of nonlinear equations, numerical differentiation, numerical integration, interpolation and approximation, numerical methods for solving linear systems. Prerequisite: MATH 225

3

MATH 475 OPERATIONS RESEARCH. An introductory overview of the field of operations research including topics from linear programming, simplex method, network models, nonlinear programming, game theory, Markov Chains, introduction to dynamic programming, queuing theory and simulation. Prerequisite: MATH 315 or MATH 281 and MATH 125 or consent of instructor.

3

MATH 490 SEMINAR. Seminar in Mathematics topics

1

MATH 491 INDEPENDENT STUDY. A student independently studies a mathematics topic with help from instructor.

1-4

MATH 492 TOPICS. Advanced topics of special interest in mathematics.

1-6

MATH 493 WORKSHOP. Special, intense sessions in specific areas. Approximately 45 hours of work is required for each hour of credit. Workshops may vary in time range but typically use a compressed time period for delivery. They may include lectures, conferences, committee work, and group activity.

1-3

MATH 498 UNDERGRADUATE RESEARCH/SCHOLARSHIP. An independent project involving integration of the student's total academic experience in mathematics and technology. Prior application required.

1-6

Middle Level Education

MLED 300 SURVEY OF MIDDLE LEVEL EDUCATION. A survey of the history, goals, rationale, and philosophy of middle level education, with emphasis on how middle level schools best meet the needs of learners in a rapidly changing society. Methods and strategies for effective management, teaming, exploratories, block scheduling, multi-age grouping, and the advisor-advisee program will be examined.

1

MLED/ED 360 ADOLESCENT LEARNER. Current research and practices in the physical, social, emotional, intellectual, and moral characteristics and development of the middle level learner within familial, social and cultural context. Includes a practicum in a formally organized middle school or junior high. Prerequisite: Admission to Teacher Education. **4**

MLED/ED 480 MIDDLE LEVEL METHODS. Students develop the ability to design, deliver, and evaluate a variety of instructional strategies and processes that incorporate learning resources, materials, technologies, and state and national curriculum standards appropriate to the developmental characteristics of middle level learners; the ability to assess student learning in middle level; concepts of middle level education; and to apply these knowledge, skills, and attitudes to real life situations and experiences. Prerequisite: Admission to Teacher Education **2-4**

Music

MUAP 152 APPLIED MUSIC - GENERAL. Students who would like to learn how to play the piano, organ, or learn how to play band instruments or guitar, or improve their singing abilities are encouraged to enroll. Students in elementary education especially find keyboard or guitar instruction useful in teaching after graduation. Instruction will be given at beginning levels or more advanced levels if the student is more advanced. Individual lessons or small classes will be used to develop students' musical talent and abilities. Lessons are arranged individually as they fit personal schedules. (Repeatable) **1**

MUAP 483 PUBLIC RECITAL. Study preparation and performance of a program of music selected with the cooperation and approval of the student's major applied music teachers. **0-2**

MUEN 100 CONCERT CHOIR. An ensemble performing accompanied and unaccompanied literature for mixed voices. Prerequisite: consent of instructor. **0-2**

MUEN 122 CONCERT BAND. A joint enterprise open to university students and interested area musicians. Includes rehearsals and performance of band literature culminating in a public performance. May be taken for credit or non-credit. **0-1**

MUS 100 MUSIC APPRECIATION. A non-technical discussion designed to increase the enjoyment and appreciation of music. Fulfills the music requirement in the general education program. **3**

MUS 110 BASIC MUSIC THEORY I. An integrated study and application of tonality, melody, harmony, texture and form, from basic notation through modulation. Includes singing, ear training and dictation. Introduction to composition and arranging, i.e.: instrument ranges, transposition, tessitura and preliminary score analysis. **2-4**

MUS 111 BASIC MUSIC THEORY II. An integrated study and application on tonality, melody, harmony, texture and form, from basic notation through modulation. Includes sight singing, ear training and dictation. Introduction to composition and arranging, i.e.: instrument ranges, transposition, tessitura and preliminary score analysis. Prerequisite: MUS 110. **2-4**

MUS 222 COMPUTERS AND MUSIC. A study of current computer productivity and multimedia tools for the analysis, teaching, and creation of music and integrating educational technology to support teaching and learning. Prerequisites: CSC 105. **1-3**

MUS 233 SURVEY OF MUSIC HISTORY AND LITERATURE. A survey of changes in musical styles of the Western cultures from the early Christian era up to the present time. Summaries of the most important composers and types of music literature written in these historical periods. **3**

MUS 241 VOICE PEDAGOGY. The techniques necessary to develop the singing voice and the materials available for class and private voice instruction. Prerequisite: Consent of instructor. **1**

MUS 242 STRING PEDAGOGY. Small group instruction of techniques necessary to develop playing ability on stringed instruments and the materials available for class & private instruction. **1**

MUS 244 BRASS PEDAGOGY. Small group instruction in the techniques necessary to develop performance in brass musical instruments and the literature and materials available for class and private instrumental instruction. **1**

MUS 245 WOODWINDS PEDAGOGY. Small group instruction in the techniques necessary to develop performance on woodwind musical instruments and the literature and materials available for class and private instrumental instruction. **2**

MUS 246 PERCUSSION PEDAGOGY. Small group instruction in the techniques necessary to develop performance on percussion musical instruments and the literature and materials available for class and private instrumental instruction. **1**

MUS 291 INDEPENDENT STUDY. A student independently studies a music topic with help from instructor. 1-4

MUS 292 TOPICS. Introductory special topics in music. 1-4

MUS 313 FORM AND ANALYSIS. Analysis of music in the student's major performance area. The course is normally completed under the direction of the student's major applied teacher. 2-3

MUS 353 K-8 MUSIC METHODS. Students develop an understanding of the tools of inquiry of K-8 music; the ability to design, deliver, and evaluate a variety of instructional strategies and processes that incorporate learning resources, materials, technologies, and state and national curriculum standards appropriate to K-8 music; the ability to assess student learning in K-8 music; and to apply these knowledge, skills, and attitudes to real life situations and experiences. Required of all elementary education majors. Admission to Teacher Education. 1-3

MUS 360 CONDUCTING. General conducting focuses on the basic fundamentals of instrumental and choral conducting. The techniques of interpretation, score reading, rehearsal techniques, and the art of developing basic conducting techniques are addressed in the course. Prerequisite: MUS 111 2-3

MUS 420 ORCHESTRATION AND ARRANGING. A study of instruments alone and in combinations. Orchestration and arranging for instrumental and vocal ensembles. Preparation of parts and participation in the conducting and performing of works. Prerequisite: MUS 211 or consent of instructor. 2-3

MUS 491 INDEPENDENT STUDY. Independent study of some aspect of music for which the student has substantial background. 1-4

MUS 492 TOPICS. Advanced special topics in music. 1-4

Not-For-Profit

NFP 310 FINANCIAL MANAGEMENT FOR NOT-FOR-PROFIT ORGANIZATIONS. Working capital management, cost-benefit analysis, capital budgeting, capital formation and structure; cash flow analysis, budget formulation, analysis, and planning; generation of earned income, management of portfolios, endowments, gifts, and grants; and tax planning. Prerequisite: ACCT 470 or ACCT 210 and CSC 105 or concurrent registration. 3

NFP 315 FUND RAISING. Designed to cover fund raising fundamentals: including funding sources, methodology and goal setting. Prerequisite: CSC 105 or concurrent registration. 3

NFP 360 ORGANIZATION AND MANAGEMENT OF NOT-FOR-PROFIT ORGANIZATIONS. Theories and concepts of organizations and management and their application to non-profit entities. Prerequisite: CSC 105 or concurrent registration. 3

NFP 370 MARKETING OF NOT-FOR-PROFIT ORGANIZATIONS. An overview of the marketing theories, strategies and tools most appropriate for not-for-profit organizations: visionary leadership, positioning, identifying and managing donor bases, planning and organizing the organization's marketing efforts. Uses case analysis and guest lectures by practitioners in the field. Prerequisite: CSC 105 or concurrent registration. 3

Office Education

OED 111 KEYBOARDING. Individual skills in keyboarding with letter production, manuscript writing, tabulated reports, and composition. In-basket exercises are used to develop decision-making processes. 1

OED 214 WORD PROCESSING. Application of word processing skills to realistic tasks. Machine transportation, and mailable copy are emphasized. 3

OED 245 RECORDS AND INFORMATION MANAGEMENT. Fundamentals essential to managing the records of business. Includes a study of filing systems, indexing procedures, special filing equipment, and filing in the electronic office. 3

OED 335 OFFICE SYSTEMS. This course provides an analysis and investigation of the role of the automated office in a business organization. Areas of technology for administrative and document production functions including word processing and records management will be covered. 3

OED 344 BUSINESS COMMUNICATIONS. The theory and practice of effective communication through written words in various types of business letters and reports. Correct English usage and clarity are emphasized. Prerequisite: CSC 105. 3

Philosophy

PHIL 100 INTRODUCTION TO PHILOSOPHY. Introduces competing philosophical views of reality, perception, learning, and values, emphasizing their relevance to the contemporary world. **3**

PHIL 200 INTRODUCTION TO LOGIC. Introduces the formal study of argumentation, including forms of logic, inductive and deductive reasoning, proofs, refutations, and fallacies. **3**

PHIL 291 INDEPENDENT STUDY. A student independently studies a philosophy topic with help from instructor. **1-4**

PHIL 491 INDEPENDENT STUDY. A student independently studies a philosophy topic with help from instructor. **1-4**

Physical Education

PE 170 FUNDAMENTAL MOVEMENT. A survey of the historical background, sociological implications, philosophical basis, and professional opportunities of HPERW professions. This course includes a review of the modern principles and related concepts which are applicable to physical activity. **1**

PE/EXS 180 FOUNDATIONS OF HPER. A survey of the historical background, sociological implications, and philosophical basis and professional opportunities of physical education and exercise science. **2**

PE 181 FUNDAMENTALS OF ELEMENTARY PHYSICAL EDUCATION. This course introduces scientific and pedagogical concepts underlying effective physical education teaching practices. Appropriate teaching sequence, progression, and technique will be taught with emphasis on lesson design and implementation. **2**

PE 200-208 PROFESSIONAL PREPARATION. Skills and techniques of various areas necessary in teaching motor skills concepts. Prerequisite: Students must have the physical capabilities to be able to perform the normal activities in this course. Students with physical disabilities may use approved accommodations by the ADA Academic coordinator to perform the normal activities of the course (In addition to current prerequisites, if any.) **1**

PE 200 PROFESSIONAL PREP.: FITNESS.

PE 201 PROFESSIONAL PREP.: GYMNASTICS.

PE 202 PROFESSIONAL PREP.: INDIVIDUAL AND DUAL ACTIVITIES.

PE 203 PROFESSIONAL PREP.: TEAM ACTIVITIES.

PE 204 PROFESSIONAL PREP.: RHY & DANCE.

PE 205 PROFESSIONAL PREP.: RECREATION ACTIVITIES.

PE 207 PROFESSIONAL PREP.: STRENGTH TRAINING.

PE 208 PROFESSIONAL PREP.: CAMPING ACTIVITIES.

PE/EXS 252 FUNDAMENTALS OF MOTOR LEARNING & DEVELOPMENT. Course content deals with characteristic motor development patterns in children with concentration on fundamental locomotor, non-locomotor, and manipulative skills and perceptual-motor development and practical applications of research and knowledge to physical education classroom teaching. **2-3**

PE 291 INDEPENDENT STUDY. A student independently studies a physical education topic with help from instructor. **1-4**

PE 292 TOPICS. Introductory special topics in physical education. **1-4**

PE 321 WATER SAFETY INSTRUCTION. Method of instruction and evaluation of water safety techniques. Successful students may earn American Red Cross water safety instructor certification. **1-2**

PE 322 LIFEGUARD INSTRUCTION. Certification as a lifeguard instruction will qualify an individual to teach basic water safety, emergency water safety and the lifeguard training course. Prerequisite: PE 320 or consent of instructor. **1**

PE 341 CURRICULUM DEVELOPMENT AND EVALUATION. Philosophy, theory, and application of current curriculum foundations in K-12 physical education, including curriculum theory, organization, design, and assessment. Prerequisites: PE 180. **2-3**

PE/EXS 350 EXERCISE PHYSIOLOGY. Study of physiological responses and adaptations to exercise related to human performance limitations, training effects, and health-related benefits. Prerequisite: BIOL 323. **2-3**

PE 352 ADAPTED PHYSICAL EDUCATION. Students are exposed to those impairments

addressed in IDEAS as they relate to physical education. Assessments, IEP development, and other elements necessary to successful inclusion are addressed. In addition, physical activities for special populations outside the school setting are also addressed. **2**

PE/EXS 353 KINESIOLOGY. An understanding of human performance as it is affected by anatomical or mechanical factors. Prerequisite: BIOL 323. **2-3**

PE 354 PREVENTION AND CARE OF ATHLETIC INJURIES. Course teaches general and emergency treatment of athletic injuries, competitive or noncompetitive. Emphasis is placed on practical preventive and rehabilitative exercises and taping/bandaging/wrapping. **2**

PE 360 K-8 PHYSICAL EDUCATION METHODS. In this course, students develop an understanding of the tools of inquiry of K-8 physical education; the ability to design, deliver, and evaluate a variety of instructional strategies and processes that incorporate learning resources, materials, technologies, and state and national curriculum standards appropriate to K-8 physical education; the ability to assess student learning in K-8 physical education; and to apply these knowledge, skills, and attitudes to real life situations and experiences. Students with physical disabilities may use approved accommodations by the ADA Academic Coordinator to perform the normal activities of the course. Admission to Teacher Education. **2**

PE 363 SKILLS CONCEPTS. Activity Placement Test required. The development of a basic understanding of selected activity skills and the knowledge necessary for performance error detection and correction are taught. Prerequisite: PE 180 and PE 181 **3**

PE/EXS 376 TECHNOLOGY INTEGRATION. Software packages and applications in physical education will be researched. Prerequisites: CSC 105 or consent of instructor. **3**

PE/EXS 400 EXERCISE TESTING AND PRESCRIPTION. This course is designed to provide the student with the knowledge, skills, and abilities to assess different areas of physical fitness and prescribe individualized exercise programs based on these objective measures. Prerequisite: PE 350. **3**

PE 440 ORGANIZATION AND ADMINISTRATION OF HEALTH, PHYSICAL EDUCATION AND ATHLETICS. Administrative policies and procedures of physical education and

athletes, including intramural and interscholastic activity and athletics. Consideration is given to programming, leadership, budget, facilities, public relations, and related matters. **2**

PE 451 TESTS AND MEASUREMENTS. This course will include use of various tests and instruments used for measuring progress in physical education and how statistical concepts apply to testing in physical education. Development of the knowledge and ability to utilize both formative and summative assessments for psychomotor, cognitive, and affective domains. Additionally, techniques to evaluate one's own teaching performance and make adjustments to enhance subsequent teaching and program effectiveness. Prerequisite: MATH 102, MATH 120, MATH 121, MATH 123, MATH 125 or MATH 281. **2**

PE/EXS 452 MOTOR LEARNING AND DEVELOPMENT. The application of principles of learning in the psychomotor domain. Included will be a review of the physiological basis of skill behavior, state of the performer, and didactic strategies in motor learning and skill performance. **3**

PE 453 SPORT PSYCHOLOGY. This course examines the effects of psychological factors, such as personality, motivation, group dynamics, psychomotor activity, and other psychological aspects of sports on participation and performance, as well as examining the effects of participation on the psychological make-up of the individual. **2-3**

PE/EXS 454 BIOMECHANICS. This course emphasizes the mechanical principles of human movement (including muscular and skeletal principles) during physical education, wellness, and sport. **2-3**

PE 469 COACHING BASEBALL AND SOFTBALL. Course studies the theory and practice of individual skill fundamentals, team strategies, organization, and management principles. The students conduct an intensive analysis of game strategies and will execute playing skills. Prerequisites: Students must have the physical capabilities to be able to perform the normal activities in this course. Students with physical disabilities may use approved accommodations by the ADA Academic Coordinator to perform the normal activities in this course. **1-2**

PE 470 COACHING BASKETBALL. Fundamental techniques and strategies with emphasis on offensive and defensive skills, developing and using player personnel for basketball. Prerequisite: Students must have the physical capabilities to be able to perform the normal activities in this course. Students with physical disabilities may use

approved accommodations by the ADA Academic Coordinator to perform the normal activities in this course. 1-2

PE 471 COACHING FOOTBALL. Fundamental techniques and strategies with emphasis on offensive and defensive skills, developing and using player personnel for football. Prerequisite: Students must have the physical capabilities to be able to perform the normal activities in this course. Students with physical disabilities may use approved accommodations by the ADA Academic Coordinator to perform the normal activities in this course. 1-2

PE 473 COACHING TRACK AND FIELD, CROSS COUNTRY. Study of the techniques of teaching fundamentals of track and field/cross country skills, scientific training methods, rules, and event techniques. Prerequisite: Students must have the physical capabilities to be able to perform the normal activities in this course. Students with physical disabilities may use approved accommodations by the ADA Academic Coordinator to perform the normal activities in this course. 1-2

PE 475 COACHING VOLLEYBALL. Fundamental techniques and strategy with emphasis on offensive and defensive skills, developing and using player personnel for volleyball. Prerequisite: Students must have the physical capabilities to be able to perform the normal activities in this course. Students with physical disabilities may use approved accommodations by the ADA Academic Coordinator to perform the normal activities in this course. 1-2

PE 491 INDEPENDENT STUDY. Independent study of some aspect of physical education. 1-4

PE 495 PRACTICUM. Supervised observation, lesson development, and direct work with athletes and coaches in a specific sport. Prior Application Required. 1-4

Physical Science

PHSI 291 INDEPENDENT STUDY. A student independently studies a physical science topic with help from instructor. 1-3

PHSI 292 TOPICS. Topics of special interest in Physical Science. 1-4

PHSI 330 INTRODUCTORY QUANTUM MECHANICS. Study of Special Relativity including Lorentz Transformation, Mass-Energy Relation, Heisenberg's uncertainty principle and Schroedinger's equation with applications to nuclear, atomic

and molecular structure. Prerequisite: MATH 321. 2

PHSI 343 INTRODUCTORY THERMODYNAMICS. Introduction to basic principles of thermodynamics, including the various states of matter, four basic laws of thermodynamics, electrochemistry and solution equilibria. Prerequisite: MATH 123 and CHEM 114 or PHYS 213. 2

PHSI 345 KINETICS AND EQUILIBRIUM. Introduction to kinetics and equilibrium. Emphasis on reaction mechanisms and reaction order. Includes directed laboratory experiences. Prerequisite: PHSI 343 and CHEM 114. 2

PHSI 411 INTRODUCTORY STATISTICAL MECHANICS. Introduction to ensemble behaviors of atoms, and an examination of how quantum behavior by individual atoms and molecules gives rise to the classical limit thermodynamics. Prerequisite PHSI 330 and PHSI 343. 2

PHSI 421 ADVANCED COMPUTATIONAL METHODS IN PHYSICAL SCIENCE. Lab-based review of modern computational methods, including molecular dynamics, Monte Carlo Simulation, Semi-empirical and ab initio calculations. Prerequisite: PHSI 411. 2

PHSI 491 INDEPENDENT STUDY. A student independently studies a physical science topic with help from instructor. 1-3

PHSI 492 TOPICS. Advanced topics of special interest in Physical Science. 1-4

PHSI 498 UNDERGRADUATE RESEARCH/SCHOLARSHIP. An independent project involving integration of the student's total academic experience in physical science. Prior Application Required. 1-6

Physics

PHYS 111 INTRODUCTION TO PHYSICS I. This is the first course in a two semester algebra-level sequence, covering fundamental concepts of physics. This sequence is appropriate for pre-professional majors requiring two semesters of physics. Topics include classical mechanics, thermodynamics, and waves. Prerequisite: MATH 102 or MATH 120 or MATH 121 or MATH 123 or MATH 281 or consent of instructor. 4

PHYS 113 INTRODUCTION TO PHYSICS II. This course is the second course in a two semester algebra-level sequence, covering fundamental concepts of physics. Topics include electricity and

magnetism, sound, light, optics, and some modern physics concepts. Prerequisites: PHYS 111. 4

PHYS 211 UNIVERSITY PHYSICS I. This is the first course in a two semester calculus-level sequence, covering fundamental concepts of physics. This is the preferred sequence for students majoring in physical science or engineering. Topics include classical mechanics and thermodynamics. Prerequisites: MATH 123 or MATH 125 or consent of instructor. 4

PHYS 213 UNIVERSITY PHYSICS II. This course is the second course in a two semester calculus-level sequence, covering fundamental concepts of physics. This is the preferred sequence for students majoring in physical science or engineering. Topics include electricity and magnetism, sound, light, and optics. Prerequisite: PHYS 211. 4

PHYS 291 INDEPENDENT STUDY. A student independently studies a physics topic with help from instructor. Prerequisite: Permission of instructor. 1-3

PHYS 292 TOPICS. Topics of special interest in physics. 1-4

PHYS 351 INTERMEDIATE QUANTUM MECHANICS. Quantum mechanics as related to spectroscopy, radioactivity and particle detection. Prerequisite: PHSI 330. 2

PHYS 361 OPTICS. This is an intermediate level study of geometrical and physical optics. Topics include analysis of refraction phenomena, thick lenses, wave nature of light, interference, diffraction, and polarization. Prerequisites: PHYS 113, or PHY 213 and MATH 225. 3

PHYS 421 ELECTROMAGNETISM. This is a course in the principles of electricity and magnetism, with applications to dielectric and magnetic materials. Topics include the development of Maxwell's equations, and applications. Prerequisites: PHYS 213 and MATH 321. 4

PHYS 424 DIGITAL ELECTRONICS. This course covers electronic components, digital circuits and their application to interfacing computers with the outside world. Prerequisites: PHYS 213 or consent of instructor. 4

PHYS 439 SOLID STATE PHYSICS. This course looks at solid materials from a microscopic level. Topics include basic crystal structure; mechanical and thermal properties; and electronic processes with reference to electrical properties of metals, semiconductors, and insulators. Prerequisite: MATH 321 or Consent of instructor. 3

PHYS 451 CLASSICAL MECHANICS. This is a systematic introduction to classical mechanics emphasizing motion in three dimensions. Topics include central forces, harmonic oscillations, non-inertial reference frames, rigid body motion, and Lagrangian and Hamiltonian Mechanics. 4

PHYS 491 INDEPENDENT STUDY. A student independently studies a physics topic with help from instructor. 1-4

PHYS 492 TOPICS. Advanced topics of special interest in physics. 1-4

PHYS 498 UNDERGRADUATE RESEARCH/SCHOLARSHIP. An independent project involving integration of the student's total experience in science and/or mathematics, and terminology. Prior Application Required. 1-6

Political Science

POLS 100 AMERICAN GOVERNMENT. A study of the basic principles of the American system of government with emphasis on problems relating to governmental structure and policies. 3

POLS 210 STATE AND LOCAL GOVERNMENT. An analysis of the legal status, powers and functions, intergovernmental relations and political problems of state and local governments. 3

POLS 291 INDEPENDENT STUDY. A study independently studies a political science topic with help from instructor. 1-3

POLS 435 POLITICAL PARTIES AND CAMPAIGNS. United States political parties; functions, organization, techniques and significance of parties; varieties of state and local systems; and behavior of the electorate and interest groups. 3

POLS 491 INDEPENDENT STUDY. A student independently studies political science topic with help from instructor. 1-3

Psychology

PSYC 101 GENERAL PSYCHOLOGY. This course is an introductory survey of the field of psychology with consideration of the biological bases of behavior, sensory and perceptual processes, learning and memory, human growth and development, social behavior and normal and abnormal behavior. 3

PSYC 329 ADULT PSYCHOLOGY. Theories of maturation, development of personal, emotional and social skills, family and child-rearing practices and the extent to which these factors affect the

individual during the formative years immediately following the attainment of “young adulthood.” will be explored. Prerequisite: PSYC 101. **3**

PSYC / EPSY 422 PSYCHOLOGY OF ADOLESCENCE. The student will learn to understand the major influences on adolescent development and behavior including biological, cultural, educational, peer, and family influences. Emphasis will also be placed on methodology necessary to aid adolescents in their development process. Prerequisite: PSYC 101, EPSY 302, Admission to Teacher Education or consent of instructor. **2**

PSYC 424 THE PSYCHOLOGY OF THE EXCEPTIONAL CHILD. The nature and causes of mental deficiency, characteristics and social control of the mentally handicapped; selection and preparation of curriculum material as well as methods and devices used in presenting these materials. Prerequisite: PSYC 101, EPSY 302, EPSY 330, EPSY 330, SPED 100 or consent of instructor, admission to teacher education. **3**

Respiratory Care

All RESP courses in the primary clinical setting utilize computer-assisted instruction and computerized clinical simulations. All RESP courses are only for students officially accepted into the respiratory care program. Satisfactory performance in the preceding semesters as defined in the Respiratory Care Student Handbook is a prerequisite for all courses.

RESP 110 INTRODUCTION TO RESPIRATORY CARE. Introduces respiratory care students to the profession in the clinical laboratory setting. Students will apply methods and principles from the clinical areas through small group projects and discussion under faculty supervision. Prerequisite: concurrent enrollment in RESP 150. **6**

RESP 150 CLINICAL EXPERIENCE I. An introduction to patient care in the clinical setting and the application of basic respiratory therapeutics. Prerequisite: concurrent enrollment in RESP 110. **6**

RESP 180 PATHOPHYSIOLOGY FOR RESPIRATORY CARE. An introduction, in the clinical laboratory setting, to the skills necessary to assess patient. Respiratory status, etiology and symptomatology of respiratory disease through linkage of patients and their disease processes observed in the clinical areas, where students discuss and apply the methods and principles. Prerequisite: RESP 110 and concurrent enrollment in RESP 210 and RESP 250. **3**

RESP 210 RESPIRATORY CRITICAL CARE. Advanced respiratory care procedures in the clinical laboratory setting. Includes mechanical ventilation and critical care of the adult and neonatal patient. Prerequisite: RESP 110 and concurrent enrollment in RESP 180 and RESP 250. **5**

RESP 250 CLINICAL EXPERIENCE II. An application of more advanced procedures of patient care in the clinical setting and introduction to the critical care areas of the hospitals. Prerequisite: RESP 150 and concurrent enrollment in RESP 180 and RESP 210. **6**

RESP 291 INDEPENDENT STUDY. A student independently studies a respiratory care topic with help from instructor. **1-4**

RESP 292 TOPICS. Topics in Respiratory Care. **1-4**

RESP 310 ADVANCED RESPIRATORY CARE. Advanced study of cardiopulmonary physiology in the clinical laboratory setting. Applies methods and principles learned in the clinical areas through projects and discussions under faculty supervision. Prerequisite: RESP 210 and concurrent enrollment in RESP 350 and RESP 355. **5**

RESP 341 PHARMACOLOGY. A clinical approach to the principles of pharmacology and therapeutics with emphasis on drugs affecting the respiratory system. Students' ability to care for cardiopulmonary disease patients is enhanced through linkages established between small group projects and clinical experiences. State-of-the-art medical knowledge is explored and expanded through projects, research and clinical application. Prerequisite: RESP 310. **2**

RESP 350 CLINICAL EXPERIENCE III. Advanced application of respiratory care in all areas with emphasis in advanced pulmonary diagnostics and critical care. Prerequisite: RESP 250 and concurrent enrollment in RESP 310 and RESP 355. **6**

RESP 355 RESPIRATORY CARE IN CLINICAL MEDICINE. Critical study of all areas of medical specialty with emphasis on pediatrics and neonatology encouraging relevancies to the clinical areas. Methods and principles are applied through small group projects under the supervision of the faculty member. Prerequisite: RESP 210 and concurrent enrollment in RESP 310 and RESP 350. **4**

RESP 381 RESPIRATORY CARE MANAGEMENT. This course prepares the student to assume a management position. Topics include

resumes, management and budget projects. Computerized word processing, spreadsheet and database management are utilized. Prerequisite: concurrent enrollment in RESP 310. 1

RESP 395 OBSERVATION PRACTICUM. Observation of respiratory care procedures in the smaller hospital setting. Research paper prepared. (80 clock hours). Prerequisite: RESP 150 and concurrent enrollment in RESP 250. 2

RESP 440 ETHICS FOR HEALTH PROFESSIONALS. A study of ethical topics commonly encountered in the hospital and other health care settings. Topics will include interaction with ill persons and family members, ethical and moral considerations of case scenarios, patient care based on age, communication skills, death and dying, stress, ethical principles, medical legalities, and resource allocation. Prerequisite: PSYC 101; prior clinical education and/or experience in the medical profession. 3

RESP 460 CURRENT ISSUES IN RESPIRATORY CARE. Students engage in an in-depth project on current issues, apply principles from clinical areas, critique literature, and write and present a formal paper. Prerequisite: RESP 310 and RESP 350. 3

RESP 475 CLINICAL EXPERIENCE IV. Specialty clinical rotations in all areas of the hospital with advanced application of respiratory care procedures. Prerequisite: RESP 350. 5

RESP 489 PROGRAM SUSTAINING. This course is used to track students who are in the Respiratory Care program, who are not currently taking a course from DSU. 0

RESP 491 INDEPENDENT STUDY. The student, with the assistance of the instructor, designs and conducts laboratory or library research in respiratory care. Completion of the third year of the Respiratory Care curriculum and approval of respiratory care program faculty. Prior application required. 1-4

RESP 492 TOPICS. Advanced topics in respiratory care. 1-4

RESP 495 MANAGEMENT OBSERVATION PRACTICUM. An introduction to managing a respiratory care department. Topics include staffing, budgeting, and medical staff interactions in the hospitals. Prerequisite: RESP 381. 1

Science Education

SCED 493 SCIENCE EDUCATION WORKSHOP. Training in the form of a workshop to further content knowledge in one or more areas of the sciences and to increase participants' abilities to apply and transfer scientific ideas and techniques to the classroom. 1-3

Science Technology

SCTC 291 INDEPENDENT STUDIES. A student independently studies a science technology topic with help from instructor. 1-3

SCTC 292 TOPICS. Topics of special interest in science technology. 1-4

SCTC 303 COMPUTER APPLICATIONS IN THE NATURAL SCIENCES. A writing intensive interdisciplinary introduction to the use of computer technology and the use of on-line technology for the research and retrieval of scientific literature in the practice of science. Prerequisites: CSC 105, and ENGL 201. 3

SCTC 332 INSTRUMENTAL METHODS OF FORENSIC DETECTION. Fundamental concepts and principles for forensic detection of quantitative chemical analysis including quantitative chemical equilibrium calculations and error analysis applied to the evaluation of experimental measurements and data. Prerequisite: CHEM 114. 4

SCTC 381 FORENSIC PROBABILITY AND STATISTICS. As appropriate for forensic study, introduction to probability theory, discrete and continuous distributions, sampling distributions and the Central Limit Theorem with general principles for statistical inference and applications of random sampling to hypothesis testing, confidence limits, correlation, and regression. Prerequisite: MATH 125 3

SCTC 390 SEMINAR IN SCIENTIFIC FORENSIC TECHNOLOGY. Discussion and study of the overall application of chemistry, math, physics and computer graphics for forensic applications. Prerequisite: Completion of or concurrent enrollment in a minimum of 40 credits of coursework with prefixes CHEM, MATH, PHSI, PHYS, SCTC or ARTD 1-3

SCTC 403 ADVANCED COMPUTER APPLICATIONS IN THE NATURAL SCIENCES. An advanced interdisciplinary application of computer technology in the practice of science and mathematics. Emphasis will be on group projects that apply fundamentals learned in SCTC 303 to

development of understanding of experimental design and execution of computer based laboratory studies, use of mathematical models, and use of on-line technology for research and retrieval of scientific literature. Prerequisite: SCTC 303. 2

SCTC 451 MECHANICS FOR FORENSICS. Topics related to forensic analysis and illustration such as central forces, harmonic oscillations, non-inertial reference frames, rigid body motion and Lagrangian and Hamiltonian Mechanics. Prerequisite: PHYS 113 or PHYS 213 4

SCTC 452 FORENSIC ANALYSIS OF MATERIALS AND EFFECTS. Theoretical and periodic aspects of inorganic chemistry appropriate for forensic analysis. Prerequisite: CHEM 114 3

SCTC 460 MEDICAL BIOCHEMISTRY FOR FORENSICS. Medical and forensic applications, study of biomolecules, metabolism, and transmission of genetic information. The structures, properties and biochemical functions of mono- and polysaccharides, lipids, amino acids, proteins and nucleic acids are introduced. Metabolic pathways and cycles for the catabolism and anabolism of sugar, triglycerides, steroids, amino acids, proteins, and polynucleotides are detailed. Energetics, and potential fates of chemical intermediates, and information storage and transmission are studied. Prerequisite: CHEM 326 3

SCTC 491 INDEPENDENT STUDY. Includes Direct Study, Problems, Readings, Directed Readings, Special Problems and Special Projects. Students complete on individualized plans of study which include significant one-on-one student-teacher involvement. The faculty member and student negotiate the details of the study plans. Enrollments are usually 10 or fewer students. Meetings depending on the requirements of this topic. 1-3

SCTC 492 TOPICS. Includes current topics, advanced topics and special topics. A course devoted to a particular issue in a specified field. Course content is not wholly included in the regular curriculum. Guest artists or experts may serve as instructors. Enrollments are usually 10 or fewer students with significant one-on-one student/teacher involvement. 1-4

SCTC 494 INTERNSHIP. Practical professional experience in Scientific Forensic Technology. Prerequisite: SCTC 390. 1-2

Secondary Education

Prior to registering for these courses, the student must be admitted to Teacher Education. Refer to section on Admission to the Teacher Education Program.

Level III field experiences require (half-day or full days to total 30 hours) of clinically supervised teaching and learning activities in public school classrooms.

SEED 291 INDEPENDENT STUDY. A student independently studies a secondary education topic with help from instructor. 1-4

SEED 302 SECONDARY AND MIDDLE LEVEL CONTENT METHODS: (CONTENT AREA) MAJOR. Content methods; assessment/evaluation procedures, curriculum issues; lesson planning; grouping, organizing and managing the classroom; communication and consultation techniques; middle school concepts; and use of state and national curriculum standards. Includes a Level III Field Experience. Admission to Teacher Education. This course must be taken concurrent with SEED 303. 2

SEED 303 SECONDARY AND MIDDLE LEVEL CONTENT METHODS: (CONTENT AREA) MINOR. Complements SEED 302 by focusing on minor content methods; assessment/evaluation procedures; curriculum issues; lesson planning; grouping; organizing and managing the classroom; communication and consultation techniques; middle school concepts; and use of state and national curriculum standards. Admission to Teacher Education. This course must be taken concurrent with SEED 302. 1

SEED 401 METHODS OF EDUCATIONAL TECHNOLOGY. Methods of teaching educational technology including the integration of technology to support teaching and learning in K-12 classrooms. Admission to Teacher Education. 1

SEED/ENGL 450 7-12 TEACHING READING IN THE CONTENT AREA. Introduction to the teaching of basic reading skills in all content areas of K-12 and secondary education. Methods, materials, and research findings used in teaching discipline-specific reading. Admission to Teacher Education. 1-3

SEED 471 K-12/SECONDARY EDUCATION CLASSROOM MANAGEMENT. Current research and practices on establishing and maintaining a safe, orderly, and equitable learning environment that fosters positive social interaction

and active engagement in the K-12 and secondary classrooms. Admission to Teacher Education. **1**

SEED 488 7-12 STUDENT TEACHING.

Students preparing for teaching in the secondary school will observe, participate and teach under the supervision of the regular classroom teacher in an approved elementary school. Admission to Teacher Education and consent of instructor. **6-10**

SEED 491 INDEPENDENT STUDY. A student independently studies a secondary education topic with help from instructor. **1-4**

Sociology

SOC 100 INTRODUCTION TO SOCIOLOGY.

Comprehensive study of society, with analysis of group life, and other forces shaping human behavior. **3**

SOC 110 CAREER PLANNING. Individual interest, values and skills as they relate to possible career choices. Individual exploration of potentially compatible occupations and development of job seeking skills. **1**

SOC 150 SOCIAL PROBLEMS. A study of present day problems in contemporary societies, such as racism, sexism, ageism, alcoholism, drug addiction, physical and mental health, war and environmental issues-their significance and current policies and action. **3**

SOC 240 THE SOCIOLOGY OF RURAL AMERICA. Focus is on rural society, rural communities, population composition and trends, social processes, social participation in rural organizations and agencies; American agriculture in a global context; and changing relationship between country and city in contemporary society. **3**

SOC/HON 285 INFORMATION SOCIETY.

Analysis of the present and future impact of computerized information on social relationships and fabric of society. Sociology Section Prerequisites: CSC 105. Honors Section Prerequisite: ACT score of 24 or above or 3.2 cumulative GPA. **3**

SOC 291 INDEPENDENT STUDY. A student independently studies a sociology topic with help from instructor. **1-4**

SOC 292 TOPICS IN SOCIETY. Introductory study of an aspect of sociology. **1-4**

SOC 352 SOCIAL INDICATORS. Statistical techniques, data analysis, and trend models for specific sociological concepts. Prerequisites: Six credit

hours of sociology, two computer-related courses, and three credit hours of mathematics. **3**

SOC 360 SOCIAL SYSTEMS AND TECH-

NOLOGY. The changes in human values that take place because of technological innovations in Biology, biochemistry, medical science, and engineering. Prerequisites: three hours of Social Systems and eight hours of science. **3**

SOC 370 PEOPLE AND THEIR CULTURES.

The course is divided into two major sections. The first part is an examination of ethnics and racial groups in the U.S. with special focus on the Native American. In this section special emphasis will be given to various learning styles of the people from various cultural backgrounds. The second section of the course is devoted to cultures around the world such as Japanese, West African, Middle East. Focus of the course is on cultural variation. **3**

SOC 381 SOCIAL INSTITUTIONS. The major institutions in society (Political, Economic, Family, Science, Religion, and Education). The impact of computer information and technology on each. Prerequisite: SOC 285. **3**

SOC 382 THE FAMILY. Focus is on the development and maintenance of the family as a social institution with emphasis on comparative family systems and the contemporary American family from the standpoint of social class, ethnic background and family crises. Prerequisites: SOC 100 or SOC 150. **3**

SOC/EDFN 475 HUMAN RELATIONS. Focuses on characteristics, contributions, and strengths of a pluralistic society; various cultural perspectives and specific information about cultures; the dehumanizing impact of biases and negative stereotypes; and the human relations approach to teaching. Admission to Teacher Education. **1-3**

SOC 491 INDEPENDENT STUDY. Independent study of some aspect of sociology. **1-3**

SOC 492 TOPICS. Advanced study of an aspect of sociology. **1-3**

SOC 498 UNDERGRADUATE/RESEARCH SCHOLARSHIP. An independent project involving integration of the student's total academic experience. Prior application required. **3**

Special Education

Level III field experiences require full days for a two-to-three week period of clinically supervised teaching and learning activities in public school classrooms.

SPED 100 INTRODUCTION TO PERSONS WITH EXCEPTIONALITIES. A survey of the various exceptionalities and implications of education; the history and philosophy of special education; and state and federal legislation affecting special education. Includes a Level I field experience. 2-3

SPED 235 SPECIAL CHILDREN. An overview of the physiological, psychological and cultural characteristics of high-risk preschool children; strategies for designing and establishing early intervention programs. Prerequisite: SPED 100. 3

SPED 291 INDEPENDENT STUDY. A student independently studies a special education topic with help from instructor. 1-4

SPED 292 TOPICS. Introductory topics in special education. 1-3

SPED 340 CREATIVE TEACHING AND LEARNING. Research-supported instructional strategies and practices, with an emphasis on curriculum development and assessment for gifted learners. Prerequisite: Admission to Teacher Education. 3

SPED 391 INDEPENDENT STUDY. A student independently studies a special education topic with help from instructor. 1-3

SPED 395 PRACTICUM. Supervised practicum in an educational setting for gifted learners. 3

SPED 400 TEACHING IN DIVERSE CLASSROOM. The course presents practical strategies for adapting standard instruction to meet the learning needs of all students in general education classrooms with emphasis on groups of students with special needs; students with disabilities; gifted and talented learners; culturally and linguistically diverse individuals; and students at risk for school failure. Includes a Level III field experience. Prerequisite: Admission to Teacher Education. 2

SPED 413 SERVING STUDENTS WITH MR, DD & SEVERE DISABILITIES. This course the study of instructional strategies, materials and equipment specific to the instruction of students with mental retardation, developmental disabilities, and severe disabilities. Includes a Level II field experience. Prerequisites: Admission to Teacher Education. 3

SPED 417 VOC-TRANSITIONAL PROGRAMMING. This course presents knowledge and skills regarding vocational and transition planning and programming, including an overview of internal and community resources such as rehabilitation services and interagency services. Prerequisite: SPED 100 2-3

SPED 431 IDENTIFICATION AND ASSESSMENT IN SPECIAL EDUCATION. The course covers the development, selection, administration and interpretation of assessment instruments and strategies used to determine whether students have a disability and require special education or related services and to evaluate their level of performance to develop and monitor progress on individual education program. Prerequisite: Admission to Teacher Education 2-3

SPED 442 SERVING STUDENTS WITH LEARNING DISABILITIES. Examination of how children evidencing a learning disability or mild mental retardation can have their academic, social/emotional needs met in inclusive settings and/or the more traditional special education setting. This course includes a practicum experience to be done while completing the Level III experiences and will entail demonstrating skills acquired in the college classroom. Prerequisite: Admission to Teacher Education. 3

SPED 450 GIFTED AND TALENTED. This course focuses on the nature and needs of the gifted child. 3

SPED 451 CURRICULUM & INSTRUCTION IN GIFTED EDUCATION. This course focuses on curriculum development and teaching strategies for the gifted. 3

SPED/ELED 454 GUIDED READING. Emphasis is on combining theory to practice in the areas of guided reading, writing, phonemic vocabulary and selected reading and research to support teaching strategies and assessment. This course includes a Level III Field Experience in a guided reading classroom. Admission to Teacher Education. Prerequisites: LIBM 205, ELED 440 and ELED 4503

SPED 460 FAMILY SYSTEMS AND PROFESSIONAL COLLABORATION. This covers the collaboration and communication skills necessary to work within family systems and the use of resources and services supporting birth through lifespan services, multidisciplinary team functioning, and the placement committee processes. Admission to Teacher Education. 2-3

SPED 462 BEHAVIORAL DISORDERS. Emphasis on the principles and practices involved in effective diagnosis and curriculum development for children with emotional and/or behavioral problems. Includes a Level II field experience. Prerequisite: Admission to Teacher Education. 3

SPED 465 COMPUTER APPLICATIONS IN SPECIAL EDUCATION. ISTE Foundation Standards will be studied for the implementation and management of computers in the special edu-

cation setting. A functional curriculum framework for designing computer learning activities and experiences appropriate for children and adolescents with learning problems will be developed. Other points of emphasis will be computer adaptive equipment, multicultural concerns, and developing critical thinking skills with the use of the computer. Includes a Level II field experience. Prerequisites: SPED 100, CSC 105 and Admission to Teacher Education. **3**

SPED 466 ORGANIZATION AND IMPLEMENTATION OF SPECIAL EDUCATION. Comprehensive study of procedures used in the organization of special education programs; includes legal provisions relevant to special education. Includes a Level II field experience. Prerequisite: Admission to Teacher Education Program, SPED 100 and nine hours of Special Education. **3**

SPED 488 STUDENT TEACHING IN SPECIAL EDUCATION. Supervised placement in a special education classroom. Students assume full responsibility for planning, instruction, evaluation, and classroom management during their experience. Student teaching fee assessed. Prerequisite: Admission to Teacher Education. **1-16**

SPED 491 INDEPENDENT STUDY. A student independently studies a special education topic with help from instructor. **1-3**

SPED 492 TOPICS. Advanced topics in special education. **1-4**

SPED 495 PRACTICUM. Examination of how to serve children in inclusionary K-8 settings as well as special education settings who evidence mild learning problems. Techniques and strategies reviewed in class as well as those employed by the child's teacher are implemented in these inclusive settings. A minimum of twenty (20) hours of direct on site experience is required. **1-2**

Speech Communication

DCOM 431 INTRODUCTION TO SPEECH CORRECTION AND LANGUAGE DEVELOPMENT. The vocal and mechanism, language development and the most prevalent speech defects are studied. Ways of aiding the student or referring the student for specialized help are studied. Prerequisite: SPCM 101. **3**

SPCM 101 FUNDAMENTALS OF SPEECH. Introduces the study of speech fundamentals and critical thinking through frequent public speaking practice, including setting, purpose, audience, and subject. **3**

SPCM 200 ELECTRONIC AND MEDIA COMMUNICATION. A study of the uses and effectiveness of verbal and nonverbal communication techniques via electronic sources such as radio, television, video tape, and telenetworking. Prerequisite: SPCM 101. **3**

SPCM 201 INTERPERSONAL COMMUNICATION. Studies modes of interpersonal communication through readings, and experiential discussions of the role of interpersonal communications in common situations within our society. **3**

SPCM 215 PUBLIC SPEAKING. Sharpens students skills in platform speaking events, covering the preparation for and delivery of competitive speaking formats including oral interpretation, persuasive, expository, impromptu, extemporaneous, and after dinner speaking. **3**

SPCM 222 ARGUMENTATION AND DEBATE. Explores argument as a communication activity, constructing sound arguments in a variety of venues and analyzing the contribution of argument to public dialogue on contemporary issues. **3**

SPCM 225 SYMBOLIC, STRATEGIC COMMUNICATION. In this course students will explore and learn the power of metaphor, narrative, identification, symbolic convergence, and constructivism on the sharing of meaning through technology. Prerequisites: SPCM 101 or SPCM 215 or SPCM 222. **3**

SPCM 250 STORYTELLING. An exploration of narrative forms and techniques in the art of storytelling. Prerequisite: SPCM 101 or SPCM 215 or SPCM 222. **3**

SPCM 281 SPEECH AND DEBATE ACTIVITIES. Initiates active participation in competitive public speaking, including debate, oral interpretation, and non-competitive public performances. **1-4**

SPCM 291 INDEPENDENT STUDY. A student independently studies a speech communications topic with the help from instructor. **1-3**

SPCM 292 TOPICS. Introductory special topics in speech. **1-4**

SPCM 340 ORAL INTERPRETATION OF LITERATURE. Examines the theory and practice of the performance of texts, the artistic, aesthetic, and carefully considered sharing of our personal understanding of a literary selection, involving analysis, planning, rehearsing, and effective sharing of meaning with an audience. **3**

SPCM 410 ORGANIZATIONAL COMMUNICATION. Explores communication processes in organizational contexts, theories of leadership, decision making and conflict, the application of principles that facilitate communication in organizations, and other selected topics. **3**

SPCM 472 FORENSICS FOR THE HIGH SCHOOL TEACHER. An introduction to the guidelines for developing and coaching a speech program in high school and junior high school. Prerequisite: SPCM 101. **2**

SPCM 481 SPEECH AND DEBATE ACTIVITIES. Active participation in competitive public speaking, including debate, oral interpretation, and non-competitive public performances. **1-2**

SPCM 491 INDEPENDENT STUDY. Independent study of some aspect of speech. **1-3**

SPCM 492 TOPICS. Advanced special topics in speech. **1-5**

SPCM 498 UNDERGRADUATE RESEARCH/SCHOLARSHIP. Special projects are designed to meet individual backgrounds and needs. The hours are determined in conference with the instructor whose approval must be obtained before registration. Prior application required. **1-4**

Theatre

THEA 100 INTRODUCTION TO THEATRE. Introductory course designed to enhance the student's enjoyment and understanding of the theatrical experience. Play readings, films, and demonstrations acquaint the students with the history and techniques of the theatrical art. **3**

THEA 131 INTRO TO ACTING. Designed for the non-major interested in exploring acting as a means of improving communication skills and self-expression. Includes specific process for role development, text analysis, and opportunities to practice the craft and art of acting. **3**

THEA 200 THEATRE HISTORY. A study of theatre history as it relates to social, political, and cultural history from the Ancient Greek period up to and including contemporary performance styles and genres. **3**

THEA 241 STAGECRAFT. Theory and practical experience in theatre production. Lab work on two major theatre productions. **3**

THEA 281 DRAMA ACTIVITIES. Active participation in the theatre program. One hour per semester may be earned. **0-4**

THEA 291 INDEPENDENT STUDY. A student independently studies a theatre topic with help from instructor. **1-3**

THEA 292 TOPICS. Introductory special topics in theatre. **1-4**

THEA 351 DIRECTING. Introduction to the techniques and concerns of the stage director, including composition, movement, and tempo-rhythm. Script analysis and scene presentation form the core of the course. **3**

THEA 353 CREATIVE DRAMATICS. The theory and techniques of informal drama, improvisation, story telling, and dramatic play. **2**

THEA 355 CHILDREN'S THEATRE. Children's theatre as an art form. Students become proficient in organization, design, and presentation of a children's theatre program. **3**

THEA 395 THEATRE PRACTICUM. Special projects are designed to meet individual backgrounds and needs. Hours are determined in conference with the instructor whose approval must be obtained before registration. Prior Application Required. **3**

THEA 404 EXPERIMENTAL THEATRE FORMS. Creation and performance of non-traditional group theatrical forms such as narrative adaptations, personal narratives, improvised texts, compiled scripts, etc. **3**

THEA 405 PERFORMANCE ART. Explorations in solo and performance art, including their creation, production and use of traditional and digital media. Prerequisites: THEA 351, THEA 441. **3**

THEA 441 SCENE DESIGN. Principles and practices of scenic design, including the scenic image, movement patterns, color, form, and rendering techniques. **3**

THEA 491 INDEPENDENT STUDY. Independent study of some aspect of theatre. **1-6**

THEA 492 TOPICS. Advanced special topics in theatre. **1-5**

Wellness

WEL 100 WELLNESS FOR LIFE. This course introduces the importance and holistic nature of the six dimensions of personal wellness and fitness. The course will provide the necessary knowledge and skills to make informed decision which will lead to the development of a healthy lifestyle. Various issues related to the dimensions of wellness will be discussed. Students will have the opportunity to assess their current health status and identify potential risk factors. **1**

WEL 100L WELLNESS LAB. This laboratory experience applies wellness concepts taught in WEL 100 lecture. Students will gain a level of understanding about one's personal fitness level as well as learn a variety of skills to enhance personal wellness. **1**