ACCOUNTING

ACCOUNTING (ACCOU) 0430
Bookkeeping - a Practical Focus
2 Credit Hours
Introduction to the accounting cycle of a service company, emphasizing basic accounting concepts. (2 lecture hours)

ACCOUNTING (ACCOU) 1110
Accounting Procedures
3 Credit Hours
The accounting cycles of service organizations and merchandisers focusing on the recording of business transactions and the preparation of financial statements for such organizations. Includes specific accounting concepts relating to current assets, long-term assets, current liabilities, payroll and the operations of corporations. (3 lecture hours)

ACCOUNTING (ACCOU) 1160
Payroll Accounting
3 Credit Hours
This course introduces federal and state laws pertaining to wages, payroll taxes, payroll tax forms, journal and general ledger transactions. Emphasis is placed on computing wages; calculating social security, income, and unemployment taxes; preparing appropriate payroll tax forms; and journalizing/posting transactions. Upon completion, students should be able to analyze data, make appropriate computations, complete forms, and prepare accounting entries using appropriate technology. Prerequisite: Accounting 1110 or equivalent or Accounting 2140 or equivalent. (3 lecture hours)

ACCOUNTING (ACCOU) 1175
Accounting with QuickBooks
3 Credit Hours
Develops understanding of general ledger accounting software using QuickBooks. Includes company setup, chart of accounts, recording transactions with customers, vendors, and employees, managing lists, generating and customizing reports and forms. This course prepares students for the QuickBooks User Certification Exam. Prerequisite: Accounting 1110 or equivalent or Accounting 2140 or equivalent or consent of the instructor. (3 lecture hours)

ACCOUNTING (ACCOU) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

ACCOUNTING (ACCOU) 2140 (IAI BUS 903)
Financial Accounting
4 Credit Hours
An introduction to financial accounting concepts. A study of the accounting cycles of service organizations and merchandisers emphasizing the recording of business transactions, and the preparation of financial statements. Emphasis is also placed on the accounting principles relating to the measurement, valuation, and reporting of assets, liabilities, equity, and internal controls. (4 lecture hours)

ACCOUNTING (ACCOU) 2150 (IAI BUS 904)
Managerial Accounting
4 Credit Hours
An introduction to managerial accounting and cost concepts. A study of the accounting cycle of manufacturers emphasizing the recording of business transactions relating to the manufacture of inventory and the preparation of financial statements. Emphasis is also placed on analysis of cost behavior, budgeting concepts, standard cost systems and variance analysis, and the use of accounting information to make decisions. Prerequisite: Accounting 2140 or consent of instructor. (4 lecture hours)

ACCOUNTING (ACCOU) 2200
Income Tax Return Preparation
3 Credit Hours
Individual income tax return preparation emphasizing the completion of basic tax returns. Resources are provided under the Volunteer Income Tax Assistance (VITA) program which is administered by the Internal Revenue Service. Prerequisite: Accounting 2140, or equivalenht or consent of instructor. (1 lecture hour, 4 lab hours)

ACCOUNTING (ACCOU) 2205
Federal Taxation I
3 Credit Hours
Federal income tax concepts relating to individuals and sole proprietorships. Prerequisite: Concurrent enrollment in Accounting 2140 or consent of instructor. (3 lecture hours)

ACCOUNTING (ACCOU) 2206
Federal Taxation II
3 Credit Hours
Federal income tax concepts relating to corporations, partnerships, S-corporations, trusts. Also includes the tax consequences of state and local and international transactions. Prerequisite: Accounting 2205 or equivalent or consent of instructor. (3 lecture hours)

ACCOUNTING (ACCOU) 2220
Financial Analysis and Valuation
3 Credit Hours
The process of understanding the risks and profitability of a firm through analysis of reported financial statements. It includes a comprehensive review of business strategy, financial strategy and the industry environment, resulting in providing information for management and investment decisions. Prerequisite: Business 1100, Accounting 2140 and Accounting 2150 or equivalent or consent of instructor. (3 lecture hours)

ACCOUNTING (ACCOU) 2241
Intermediate Accounting I
4 Credit Hours
In-depth study of the theory and concepts of accounting emphasizing financial statements, present value concepts and the accounting for cash, receivables, inventory, plant assets, intangible assets, current liabilities, and contingencies. Prerequisite: Accounting 2140 or equivalent or consent of instructor. (4 lecture hours)

ACCOUNTING (ACCOU) 2242
Intermediate Accounting II
4 Credit Hours
In-depth study of the theory and concepts of accounting emphasizing the measurement, recognition, and valuation of investments, long-term liabilities, and stockholders' equity. Topics

include corporate investments in securities, revenue recognition, postretirement benefits, leases, interperiod tax allocations, accounting changes, full disclosure, ratio analysis, and the preparation and presentation of the statement of cash flows. Prerequisite: Accounting 2241 or equivalent or consent of instructor. (4 lecture hours)

ACCOUNTING (ACCOU) 2251
Cost Accounting
4 Credit Hours
In-depth study of methods used by managers for decision making, budgeting and performance evaluation. Emphasizes cost accounting systems and procedures for data accumulation and cost control. Prerequisite: Accounting 2150 or equivalent or consent of instructor. (4 lecture hours)

ACCOUNTING (ACCOU) 2260
Advanced Accounting
3 Credit Hours
In-depth study of the accounting and reporting issues related to consolidated financial statements with an emphasis on consolidation theory, procedures for eliminating various intercompany transactions, and accounting for business combinations. Other topics include partnership accounting, international operations and corporate insolvency. Accounting 2242 or equivalent is recommended prior to enrollment.(3 lecture hours)

ACCOUNTING (ACCOU) 2265
Governmental & Not-For-Profit Accounting
3 Credit Hours
In-depth study of governmental and not-for-profit entity theory, practice and reporting issues. Emphasis on accounting principles relating to governmental agencies, colleges and universities, health care and not-for-profit organizations. Completion of Accounting 2241 is recommended prior to enrollment. (3 lecture hours)

ACCOUNTING (ACCOU) 2271
Auditing I
3 Credit Hours
An introduction to the role of the public accountant, professional standards, attestation and other assurance services, audit evidence and documentation, and reports on audited financial statements, with particular emphasis on the auditor's decision-making process by integrating coverage of the components of audit risk with tests of controls and substantive tests that relate to selected transaction cycles. Accounting 2241 or equivalent is recommended prior to enrollment. (3 lecture hours)

ACCOUNTING (ACCOU) 2272
Auditing II
3 Credit Hours
Continued study of auditing and assurance services. Emphasizing professional standards, ethics, legal liability, and regulation of the public accounting profession. Internal controls, components of audit risk, tests of controls, substantive tests, reporting, and audit sampling applications are also examined. Prerequisite: Accounting 2271 or equivalent or consent of instructor. (3 lecture hours)

ACCOUNTING (ACCOU) 2280
Forensic Accounting-Fraud Examination
3 Credit Hours
Introduction to financial fraud including analysis of major fraud schemes, investigative strategies, and financial controls. Emphasis on detection and prevention of financial fraud in the organization. Completion of Accounting 2241 or equivalent is recommended prior to enrollment. (4 lecture hours)

ACCOUNTING (ACCOU) 2290
Accounting Research
2 Credit Hours
This course provides an analysis of professional accounting research. The content includes the study of professional research processes using authoritative databases, accounting literature, and the application of professional standards. This course satisfies the 2-hour accounting research required by the Illinois Board of Examiners for the CPA exam. Completion of Accounting 2241 or equivalent is recommended. (2 lecture hours)

ACCOUNTING (ACCOU) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ACCOUNTING (ACCOU) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career & Technical Ed). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ACCOUNTING (ACCOU) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ADULT BASIC EDUCATION

ADULT BASIC EDUCATION (ABE) 0700
Reading Skills Development I
3 Credit Hours
Introduces basic word recognition and word attack skills including pre-reading skills, sight words, phonics skills and structural analysis skills; comprehension and advanced reading skills in relation to words, sentences, selections and sequence; specialized skills in locating and organizing information, reading maps, interpreting graphs, tables or diagrams; and the development of personal reading skills. Mandatory testing. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. Prerequisite: Consent of instructor is required. (3 lecture hours)

ADULT BASIC EDUCATION (ABE) 0701
Reading Skills Development II
3 Credit Hours
Reinforces and reviews basic word recognition and word attack skills including pre-reading skills, sight words, phonics skills and structural analysis skills; comprehension and advanced reading skills in relation to words, sentences, selections and sequence; specialized skills in locating and organizing information, reading maps, interpreting graphs, tables or diagrams; and the development of personal reading skills. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. Prerequisite: Consent of instructor is required. (3 lecture hours)

ADULT BASIC EDUCATION (ABE) 0702
Pre-GED Reading Skills I
3 Credit Hours
Reinforces and reviews word recognition and word attack skills of structural analysis; comprehension and advanced reading skills including deriving meaning from words, sentences, selections and identifying sequence; specialized reading skills including locating and organizing information, reading maps and interpreting graphs, tables or diagrams. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. Prerequisite: Consent of instructor is required. (3 lecture hours)

ADULT BASIC EDUCATION (ABE) 0703
Pre-GED Reading Skills II
3 Credit Hours
Introduces personal reading skills and reading in the social studies and science content area. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. Prerequisite: Consent of instructor is required. (3 lecture hours)

ADULT BASIC EDUCATION (ABE) 0710
Basic English Skills I
3 Credit Hours
Introduces basic English grammar and usage, spelling/vocabulary/dictionary use, capitalization and punctuation. Mandatory testing. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. Prerequisite: Consent of instructor is required. (3 lecture hours)

ADULT BASIC EDUCATION (ABE) 0711
Basic English Skills II
3 Credit Hours
Expands knowledge of English grammar, usage, and sentence structure, and includes composition of English paragraphs and essays. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. Prerequisite: Mandatory testing and consent of instructor is required. (3 lecture hours)

ADULT BASIC EDUCATION (ABE) 0720
Basic Mathematical Skills I
3 Credit Hours
Introduces basic arithmetic skills including the fundamental operations with whole numbers, decimals, fractions and mixed numbers; verbal reasoning; and measurement systems. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. Prerequisite: Consent of instructor is required. (3 lecture hours)

ADULT BASIC EDUCATION (ABE) 0721
Pre-GED Mathematical Skills II
3 Credit Hours
Reinforces and reviews arithmetic skills including the fundamental operations with decimals, fractions, and mixed numbers; verbal reasoning; and measurement systems. Introduces percents, ratio and proportion, and charts and graphs. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. Prerequisite: Consent of instructor is required. (3 lecture hours)

ADULT SECONDARY EDUCATION

ADULT SECONDARY EDUCATION (ASE) 0840
Citizenship Preparation
2 Credit Hours
Intended for individuals preparing for naturalization and for successfully completing the oral interview and written test required for U.S. citizenship. The course provides an overview of significant historical events; facts and concepts of federal, state and local government; current political, governmental and social information; and explanations of United States' culture and institutions. The naturalization process and the One Hundred Questions developed by the Bureau of Citizenship and Immigration Services (BCIS) are also covered. This course may be taken four times for credit. This course can only be taken on a pass/fail basis. Prerequisite: Consent of instructor is required. (2 lecture hours)

ANATOMY & PHYSIOLOGY

ANATOMY AND PHYSIOLOGY (ANAT) 1500
Survey of Human Anatomy and Physiology
4 Credit Hours
Essential principles of human anatomy and physiology are presented, including basic chemistry, cell and tissue studies, and an overview of all the body systems. Intended as a survey course for certain allied health and social service programs, and as a general natural science course. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours, 2 lab hours) ** Note ** This course, taken after Spring 2017, will NOT count

towards the Life Science requirement in the AA, AS, AFA or AAT degrees.

ANATOMY AND PHYSIOLOGY (ANAT) 1551
Human Anatomy and Physiology I
4 Credit Hours
First semester of a two-semester sequence dealing with the structure and function of the human body and mechanisms for maintaining homeostasis within it. Includes the study of cells, tissues, and the integumentary, skeletal, muscular and nervous systems. Course is intended to be an alternative to Anatomy & Physiology 1571; credit toward graduation will be granted for Anatomy & Physiology 1551 or Anatomy & Physiology 1571, but not for both. Biology 1151 is strongly recommended. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours, 3 lab hours) ** Note ** This course, taken after Spring 2017, will NOT count towards the Life Science requirement in the AA, AS, AFA or AAT degrees.

ANATOMY AND PHYSIOLOGY (ANAT) 1552
Human Anatomy and Physiology II
4 Credit Hours
Continuation of the study of the structure and function of the human body and the mechanisms for maintaining homeostasis within it. The endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive systems, as well as the concepts of development, metabolism, fluid and electrolyte balance, and acid-base balance are included. Course is intended to be an alternative to Anatomy & Physiology 1572; credit toward graduation will be granted for Anatomy & Physiology 1552 or Anatomy & Physiology 1572 but not for both. Prerequisite: Anatomy & Physiology 1551 or Anatomy & Physiology 1571, with a grade of C or better. Course requires Reading Placement Test Score-Category One. (3 lecture hours, 3 lab hours)

ANATOMY AND PHYSIOLOGY (ANAT) 1571
Anatomy and Physiology With Cadaver I
4 Credit Hours
First semester of a two-semester sequence dealing with the structure and function of the human body and mechanisms for maintaining homeostasis within it. Includes the study of cells, tissues, and the integumentary, skeletal, muscular and nervous systems. Identification of anatomical structures on cadavers will be required in the laboratory. Course is intended to be an alternative to Anatomy & Physiology 1551; credit toward graduation will be granted for Anatomy & Physiology 1551 or Anatomy & Physiology 1571 but not for both. Biology 1151 is strongly recommended. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours, 3 lab hours) ** Note ** This course, taken after Spring 2017, will NOT count towards the Life Science requirement in the AA, AS, AFA or AAT degrees.

ANATOMY AND PHYSIOLOGY (ANAT) 1572
Anatomy and Physiology With Cadaver II
4 Credit Hours
Continuation of the study of the structure and function of the human body and the mechanisms for maintaining homeostasis within it. The endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive systems, as well as the concepts of development, metabolism, fluid and electrolyte balance, and acid-base balance are included. Identification of anatomical structures on cadavers will be required in the laboratory. Course is intended to be an alternative to Anatomy & Physiology 1552; credit toward graduation will be granted for Anatomy & Physiology 1552 or Anatomy & Physiology 1572 but not for both. Prerequisite: Anatomy & Physiology 1551 or Anatomy & Physiology 1571, with a grade of C or better. Course requires Reading Placement Test Score-Category One. (3 lecture hours, 3 lab hours)

ANATOMY AND PHYSIOLOGY (ANAT) 1820
Selected Topics I
3 Credit Hours
Introductory exploration and analysis of selected topics in anatomy and physiology with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (3 lecture hours)

ANATOMY AND PHYSIOLOGY (ANAT) 1821
Selected Topics II
3 Credit Hours
Introductory exploration and analysis of selected topics in anatomy and physiology with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (2 lecture hours, 2 lab hours)

ANATOMY AND PHYSIOLOGY (ANAT) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within anatomy and physiology to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

ANATOMY AND PHYSIOLOGY (ANAT) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ANATOMY AND PHYSIOLOGY (ANAT) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ANATOMY AND PHYSIOLOGY (ANAT) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ANATOMY AND PHYSIOLOGY (ANAT) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ANESTHESIA TECHNOLOGY

ANESTHESIA TECHNOLOGY (ANES) 1501
Anesthesia Technology Principles I
8 Credit Hours
Students will explore anesthesiology's contribution to patient care and the relationship of the anesthesia technologist to other health care professionals. Focus is on the role of the anesthesia care team, scope of practice, specific duties of the anesthesia technologist. Prerequisite: Admission to the program and consent of instructor is required. (7 lecture hours, 2 lab hours)

ANESTHESIA TECHNOLOGY (ANES) 1502
Anesthesia Technology Principles II
11 Credit Hours
Students continue to learn the theory and concepts of the surgical environment as it relates to anesthesia. Topics of discussion will include basic case set-up utilizing anesthesia supplies and equipment. Lastly, there will be an in-depth exploration of the function and handling of anesthesia equipment, supplies for various surgical procedures including general cases, regional anesthesia, and procedural sedation. Prerequisite: Anesthesia Technology 1501 with a grade of C or better, or equivalent.Admission to the program and consent of instructor is required. (9 lecture hours, 4 lab hours)

ANESTHESIA TECHNOLOGY (ANES) 1503
Anesthesia Technology Principles III
4 Credit Hours
Students will explore advanced concepts of anesthesia technology which will be applied towards a practical experience in an operating room. Students will learn proper setup, breakdown for advanced procedures, and how one assists for general, regional, and procedural sedation cases. Preparation for the national certification will also be included. Prerequisite: Anesthesia Technology 1502 with a grade of C or better, or equivalent. Admission to the program and consent of instructor is required. (4 lecture hours)

ANESTHESIA TECHNOLOGY (ANES) 1504
Anesthesia Pharmacology
4 Credit Hours
Students will study various types of anesthesia related drugs and the proper practice in ordering, delivery, and storage of anesthesia medications. Instruction includes an overview of organization and stocking of anesthesia medication carts. Prerequisite: Admission to the Surgical Assisting program is required. Anesthesia Technology 1503 with a grade of C or better, or equivalent and concurrent enrollment in Anesthesia Technology 1505, Anesthesia Technology 1506 and Anesthesia Technology 1507. (4 lecture hours)

ANESTHESIA TECHNOLOGY (ANES) 1505
Anesthesia Technology Equipment
4 Credit Hours
Introduction to the handling of anesthesia equipment, including maintenance, first-level servicing, and troubleshooting of equipment malfunctions. Provides an overview of policies, standards, quality assurance, and process improvement in relationship to anesthesia equipment. Prerequisite: Admission to the Surgical Assisting program is required. Anesthesia Technology 1503 with a grade of C or better, or equivalent and concurrent enrollment in Anesthesia Technology 1504, Anesthesia Technology 1506 and Anesthesia Technology 1507. (4 lecture hours)

ANESTHESIA TECHNOLOGY (ANES) 1506
Anesthesia Technology Fundamentals II
4 Credit Hours
Continuation and in-depth exploration of the theory and concepts of the surgical environment as it pertains to an anesthesia technologist. Preparation and response to anesthesia emergencies and complications will be examined for all surgical specialties and patient populations. Prerequisite: Admission to the Surgical Assisting program is required. Anesthesia Technology 1503 with a grade of C or better, or equivalent and concurrent enrollment is required in Anesthesia Technology 1504, Anesthesia Technology 1505 and Anesthesia Technology 1507. (3 lecture hours, 2 lab hours)

ANESTHESIA TECHNOLOGY (ANES) 1509
Anesthesia Technology Capstone
5 Credit Hours
Capstone course will require students to utilize theory and concepts of the didactic and clinical practicum for demonstration of safe and effective support for all types of anesthesia in preoperative, intraoperative, and postoperative surgical environments. Prerequisite: Admission to the Surgical Assisting program is required. Anesthesia Technology 1504, Anesthesia Technology 1505, Anesthesia Technology 1506 and Anesthesia Technology 1507 with a grade of C or better, or equivalent and concurrent enrollment in Anesthesia Technology 1508. (5 lecture hours)

ANESTHESIA TECHNOLOGY (ANES) 1510
Anesthesia Tech Clinical Practicum I
4 Credit Hours
The concepts of anesthesia technology will be applied towards a practical experience in an operating room. Students receive hands-on experience with a mentor to integrate didactic knowledge for proper setup, breakdown, and assistance for general, regional, and

procedural sedation cases. Prerequisite: Admission to the program and consent of instructor is required. Concurrent enrollment in Anesthesia Technology 1501.

ANESTHESIA TECHNOLOGY (ANES) 1520
Anesthesia Tech Clinical Practicum II
4 Credit Hours
Students will receive hands-on experience with a mentor to integrate advanced didactic knowledge for proper setup, breakdown, and assistance for general, regional, and procedural sedation cases of anesthesia technology practice in the clinical anesthesia setting. Prerequisite: Admission to the program is required. Anesthesia Technology 1501 with a grade of C or better, or equivalent and concurrent enrollment in Anesthesia Technology 1502 is required.

ANESTHESIA TECHNOLOGY (ANES) 1530
Anesthesia Tech Clinical Practicum III
4 Credit Hours
Students will receive advanced hands-on experience with a mentor to integrate didactic knowledge for proper setup, breakdown, and assistance for general, regional, and procedural sedation cases. Prerequisite: Admission to the program is required. Concurrent enrollment in Anesthesia Technology 1503 is required.

ANTHROPOLOGY

ANTHROPOLOGY (ANTHR) 1000 (IAI S1 900N)
Introduction to Anthropology
3 Credit Hours
Introduces students to the four primary sub-fields of anthropology as well as the applications of anthropological work in addressing domestic, international, and cross-cultural issues and dilemmas. Emphasis is placed on the complementary and interrelated nature of archaeology, cultural anthropology, biological anthropology, and linguistic anthropology. (3 lecture hours)

ANTHROPOLOGY (ANTHR) 1100 (IAI S1 901N)
Cultural Anthropology
3 Credit Hours
Introduces cultural anthropology as a subfield of anthropology that studies contemporary societies. Focuses on patterns in human behavior and on culture as the way people live and adapt to their various situations. Emphasis is on the diversity of cultural patterns throughout the world and the essential humanity of all people. Examples from a wide variety of cultures are presented in a variety of formats. (3 lecture hours)

ANTHROPOLOGY (ANTHR) 1105 (IAI S1 904D)
Practical Anthropology
3 Credit Hours
Concentrates on how concepts, techniques and information from anthropology can be applied to helping people solve their problems and improve their lives. Emphasizes the relevance of anthropology to development issues and to concerns of many career fields such as business, medicine, social work, teaching and management. Course examples are drawn from diverse parts of the world. Individual project(s) relate to students' interests and/or careers. (3 lecture hours)

ANTHROPOLOGY (ANTHR) 1110
Business Anthropology
3 Credit Hours
Holistic approach to economic systems examining how family, language, religion, class, education and gender roles inform economic practices. Emphasis on the diversity of cultural patterns throughout the world and the essential humanity of all people. (3 lecture hours)

ANTHROPOLOGY (ANTHR) 1130 (IAI S1 904D)
People and Cultures of the World
3 Credit Hours
An introductory exploration of specific populations and cultures in different areas of the world today, focusing on interaction between a society's culture and its environmental, demographic, and historical conditions. Emphasis on the areas of subsistence, religion, and/or urbanization/complexity. (3 lecture hours)

ANTHROPOLOGY (ANTHR) 1200 (IAI S1 903)
Discovering Archaeology
3 Credit Hours
Introduces archaeology as a subfield of anthropology that studies humanity's prehistory, history and present through the study of material remains and the archaeological record of human development. Emphasis is placed on what archaeologists do and the science of archaeology. (2 lecture hours, 2 lab hours)

ANTHROPOLOGY (ANTHR) 1210
Ancient Civilizations and Societies
3 Credit Hours
Explores the emergence of human societies and civilizations through archaeology. This course covers major landmarks in the development of human civilizations including the emergence of humankind, the development of agriculture, urbanism, and the high civilizations of antiquity. (3 lecture hours)

ANTHROPOLOGY (ANTHR) 1300
Language and Culture
3 Credit Hours
Introduces Linguistic Anthropology as a subfield of Anthropology that explores how humans communicate. Focuses on language as the basis for social relations and culture. Emphasis is on the similarities and differences of human languages, the cognitive basis for language, the formation of communication systems, and the adaptive use of those systems in human societies. (3 lecture hours)

ANTHROPOLOGY (ANTHR) 1400 (IAI S1 902)
Race, Sex and Human Evolution
3 Credit Hours
Introduces the field of physical anthropology, sometimes known as biological anthropology. Topics include the scientific foundations for studying race and human variation as well as popular misconceptions about human genetic diversity; primatology, including a survey of living primate forms; evolutionary theory, the fossil record and the development of humans; and humanity's place in world ecology. Introduces forensic anthropology. Includes laboratory work centered on these topics and skeletal biology. (2 lecture hours, 2 lab hours)

ANTHROPOLOGY (ANTHR) 1410
Evolution of Human Sexual Behavior
3 Credit Hours
Introduces human sex and sexuality from an evolutionary perspective. Explores how evolution has shaped the bodies, behaviors, and nature of modern humans as sexual beings. (3 lecture hours)

ANTHROPOLOGY (ANTHR) 1800
Special Project
1 to 3 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.).

ANTHROPOLOGY (ANTHR) 1820
Selected Topics I
1 to 3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (1 to 3 lecture hours)

ANTHROPOLOGY (ANTHR) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

ANTHROPOLOGY (ANTHR) 2100
Introduction to Anthropological Methods
4 Credit Hours
Introduces anthropological methods with an applied focus to study contemporary societies and addresses contemporary problems. Utilizes ethnography, case studies, cultural mapping interviews, textual analysis, observations, participant observation, ethology, focus groups, and other techniques. Students develop a keen awareness of cultural issues in research. Prerequisite: Anthropology 1000, Anthropology 1100, or Anthropology 1105, all with a grade of C or better, or equivalent or consent of instructor. (4 lecture hours)

ANTHROPOLOGY (ANTHR) 2150
Culture and the Mind
3 Credit Hours
Introduces an evolutionary approach to the understanding of how human nature was shaped in the Pleistocene Era and continues to have profound influences on contemporary behavior. Focuses on the evolution of traits that serve as the basis for human adaptations imposed by the needs related to subsistence, safety, sex, and sociality. Emphasis is on the role of culture and language as selective pressures in their own right, the evolved mental domains that have served our species, the basis for these adaptations, and the biological platforms for these systems. Anthropology 1101 and Anthropology 1125 are recommended. Prerequisite: Psychology 1100 with a grade of D or better, or equivalent or consent of instructor. (3 lecture hours)

ANTHROPOLOGY (ANTHR) 2200
Introduction to Anthropological Methods
4 Credit Hours
Provides an overview of the major methods of field work and research design in anthropology and related social and behavioral sciences. Students will analyze one or more topics using appropriate qualitative and quantitative methodological techniques. Some field work may be required. (2 lecture hours, 4 lab hours)

ANTHROPOLOGY (ANTHR) 2210
Field Experience/Applied Anthropology
4 Credit Hours
Introduces students to experiential-based learning of anthropological methods with an applied focus to study contemporary societies. Provides a framework for implementing the methods designed in the Introduction to Anthropological Methods course. Prerequisite: Anthropology 2100, with a grade of C or better, or equivalent and Business 1100, with a grade of C or better, or equivalent or consent of instructor (8 lab hours)

ANTHROPOLOGY (ANTHR) 2240
Field Work Archaeology
3 Credit Hours
Introduces the techniques and theory of field archaeology through actual excavation of prehistoric and historic field archaeological sites and work with actual artifacts and other materials from those sites. Check the anthropology lab or semester listings of the timing and location of archaeological field schools. Prerequisite: At least one course in the discipline or consent of instructor. (1 lecture hour, 4 lab hours)

ANTHROPOLOGY (ANTHR) 2245
Laboratory Methods in Archaeology
3 Credit Hours
Introduces the techniques and theory of archaeological lab analysis through the examination of materials from various sites in both the United States and other regions of the world. Individual projects may center around particular interests. Prerequisite: At least one course in the discipline or consent of instructor. (1 lecture hour, 4 lab hours)

ANTHROPOLOGY (ANTHR) 2400
Introduction to Forensic Anthropology
3 Credit Hours
Introduces students to the identification of the bones of the human skeleton and techniques used to recover and treat forensic material. Topics include use of skeletal remains to identify age at death, biological sex, ancestry and stature; identification of traumatic, pathological and occupational markers on the skeleton; and determination of time since death and post-mortem damage. Includes discussion of ethics involved in forensic anthropology. Prerequisite: Anthropology 1101 or Anthropology 1125 or Criminal Justice 1142 or Criminal Justice 2230, with a grade of C or better, or equivalent, or consent of instructor. (2 lecture hours, 2 lab hours)

ANTHROPOLOGY (ANTHR) 2800
Special Project
1 to 3 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The

course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) Prerequisite: At least one course in the discipline or consent of instructor.

ANTHROPOLOGY (ANTHR) 2820
Advanced Selected Topics I
3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: At least one course in the discipline or consent of instructor. (3 lecture hours)

ANTHROPOLOGY (ANTHR) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ANTHROPOLOGY (ANTHR) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ANTHROPOLOGY (ANTHR) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ARABIC

ARABIC (ARABI) 1100
Arabic Civilization & Culture
3 Credit Hours
Introduction to Arabic culture and civilization as reflected in geography, history, economics, political institutions, literature, music, art, architecture, customs, and social institutions. Class conducted in English. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ARABIC (ARABI) 1101
Elementary Arabic I
4 Credit Hours
Develops the ability to speak, understand, read, and write Arabic in a cultural context. For beginning students with no prior experience in the language. (4 lecture hours)

ARABIC (ARABI) 1102
Elementary Arabic II
4 Credit Hours
Continues the development of the ability to speak, understand, read, and write Arabic in a cultural context. For students who have successfully completed Arabic 1101 or equivalent or one year of high school Arabic. Prerequisite: Arabic 1101 or one year of high school Arabic or consent of instructor. (4 lecture hours)

ARABIC (ARABI) 2201
Intermediate Arabic I
4 Credit Hours
Continues to develop the ability to speak, understand, read, and write Arabic in a cultural context. Includes reading and discussion of modern texts, conversation, composition, grammar review, and cultural activities. Recommended for students who have successfully completed Arabic 1102 or equivalent or two years of high school Arabic or consent of instructor. (4 lecture hours)

ARABIC (ARABI) 2202
Intermediate Arabic II
4 Credit Hours
Continues to develop the ability to speak, understand, read, and write Arabic in a cultural context. Includes reading and discussion of modern texts, conversation, composition, grammar review, and cultural activities. Recommended for students who have successfully completed Arabic 2201 or equivalent or three years of high school Arabic. (4 lecture hours)

ARCHITECTURE

ARCHITECTURE (ARCH) 1100
Introduction to Architecture
3 Credit Hours
Introductory study of the theory, history, and principles, and of architecture. Basic principles of architectural analysis, criticism, and aesthetic principles. Includes the relationship of architecture to the cultures that create it specifically in terms of the societies' economic, political and social organization, technological abilities, and spiritual values. Also discusses ethical responsibilities of design professionals especially as environmental stewards. (3 lecture hours)

ARCHITECTURE (ARCH) 1101
Basic Architectural Drafting
3 Credit Hours
Fundamentals of hand drafting and architectural conventions. Includes use of tools, lettering, dimensioning, drafting techniques, and frame construction vocabulary and technology. (2 lecture hours, 2 lab hours)

ARCHITECTURE (ARCH) 1111
Building Materials
4 Credit Hours
Characteristics, properties, and applicable standards of construction materials. Includes all major structural, enclosure and finish materials and standards for materials. Emphasis on the process of material selection and evaluation including sustainability concepts and criteria. Prerequisite: Architecture 1101 with a grade of C or better, or equivalent or Architecture 1121 with a grade of C or better, or equivalent or Architecture 1130 with a grade of C or better, or equivalent or consent of instructor. (4 lecture hours)

ARCHITECTURE (ARCH) 1121
Architectural Design Communication
4 Credit Hours
Introduction to 2-D and 3-D communication and presentation techniques as used in architecture. Includes orthographic, paraline, perspective and freehand drawing techniques and procedures. Covers basic model building and the use of drawing as a problem abstraction and diagramming technique. (1 lecture hour, 6 lab hours)

ARCHITECTURE (ARCH) 1130
Blueprint Reading
2 Credit Hours
A survey of graphic construction drawings including paper and electronic mediums. Students learn to interpret construction drawings for residential, commercial and industrial structures. Includes architectural and engineering documents and graphic conventions. (1 lecture hour, 2 lab hours)

ARCHITECTURE (ARCH) 1131
Introduction to Architectural Design
4 Credit Hours
Basic design theories and strategies related to the development of spatial concepts in architectural design, including composition, color, form, relationship of elements, and development of 2-D and 3-D design projects. Emphasis on concept generation and evaluation. Prerequisite: Architecture 1100 and Architecture 1121, both with a grade of C or better, or equivalent or consent of instructor. (2 lecture, 4 lab hours)

ARCHITECTURE (ARCH) 1141
Construction Methods I
2 Credit Hours
Survey of basic construction techniques and procedures through project applications. Topics include concrete, masonry, wood frame and lightweight steel construction methods and materials. Includes tool selection and use. Course is not designed to give students trade skills in these areas. (1 lecture hour, 2 lab hours)

ARCHITECTURE (ARCH) 1211
Basic Computer-Aided Drafting-AutoCAD
3 Credit Hours
Fundamentals of Computer-Aided Drafting and Design (CADD). Introduces concepts, techniques and procedures necessary to facilitate a basic functional understanding of AutoCAD. Prerequisite: Basic technical drafting course, drafting experience or consent of instructor. (1 lecture hour, 4 lab hours)

ARCHITECTURE (ARCH) 1212
Adv Computer-Aided Drafting-AutoCAD
3 Credit Hours
Advanced functions of Computer-Aided Drafting and Design (CADD). Includes advanced commands, system customization, and Internet applications. 3-D modeling and rendering will be introduced. Prerequisite: Architecture 1211 with a grade of D or better, or equivalent or consent of instructor. (1 lecture hour, 4 lab hours)

ARCHITECTURE (ARCH) 1301
Introduction to Construction Management
3 Credit Hours
Construction management as a project delivery system emphasizing the roles and responsibilities of construction managers, contractors, sub-contractors, owners and design professionals, and how they relate to each other. Fundamentals of project administration from pre-construction planning to project close-out through the study and review of case studies. Includes an overview of cost estimating, meetings, project safety and scheduling. (3 lecture hours)

ARCHITECTURE (ARCH) 1411
Introduction to BIM-Revit
3 Credit Hours
Fundamentals of Building Information Modeling (BIM) as a construction documentation system. Introduces concepts and features of BIM. Includes software structure and features, modeling and editing techniques, and sheet creation and organization. Recommended: Architecture 1101 and Architecture 1211 or architectural drafting class or experience or consent of instructor. (1 lecture hour, 4 lab hours)

ARCHITECTURE (ARCH) 1412
Advanced BIM-Revit
3 Credit Hours
Advanced concepts of Building Information Modeling (BIM). Focuses on applying BIM software to develop a set of construction documents. Simulates project development and documentation. Prerequisite: Architecture 1411 with a grade of C or better, or equivalent or consent of instructor. (1 lecture, 4 lab hours)

ARCHITECTURE (ARCH) 1820
Selected Topics in Architecture I
3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (3 lecture hours)

ARCHITECTURE (ARCH) 1821
Selected Topics in Architecture II
3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (2 lecture hours, 2 lab hours)

ARCHITECTURE (ARCH) 1827
Selected Topics in Architecture
1 Credit Hour
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (1 lecture hour)

ARCHITECTURE (ARCH) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours, 2 to 8 lab hours)

ARCHITECTURE (ARCH) 2102
Detailing and Construction Documents
4 Credit Hours
Study of commercial construction systems and techniques. Project based class which simulates the process of a project's development in an architectural office. Includes analysis and applications of codes, regulations, and standards, material review and selection, construction detailing and documentation, and office standards and procedures for computer aided drafting and design (CADD) application. Prerequisite: Architecture 1101, Architecture 1111 and Architecture 1211, all with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 4 lab hours)

ARCHITECTURE (ARCH) 2142
Construction Methods II
2 Credit Hours
Survey of basic construction techniques and procedures through project applications. Topics include insulation, roofing, siding, installation of doors and windows, drywall, flooring and mechanical and electrical systems. Includes tool selection and use. Course is not designed to give students trade skills in these areas. (1 lecture hour, 2 lab hours)

ARCHITECTURE (ARCH) 2150
Basic Surveying
2 Credit Hours
Basic procedures, calculations and field data recording techniques used in surveying. Correct procedures for the use of surveyor's tape, engineer's level, and transit and rod to establish locations and elevations. This is not an appropriate course for someone seeking to become a licensed surveyor. (1 lecture hour, 2 lab hours)

ARCHITECTURE (ARCH) 2201
Architectural Design I
5 Credit Hours
Exploration of form and space of the built environment. Includes process of problem analysis and evaluation to generate concepts and develop solutions. Prerequisite: Architecture 1131 with grade of C or better, or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category One. (2 lecture hours, 6 lab hours)

ARCHITECTURE (ARCH) 2202
Architectural Design II
5 Credit Hours
Continuation of Architectural Design I. Problems involve larger scale, broader scope, and increased complexity. Advanced and digital presentation techniques will be used for presentations. Prerequisite: Architecture 2201 with a grade of C or better, or equivalent or consent of instructor. (2 lecture, 6 lab hours)

ARCHITECTURE (ARCH) 2203
Introduction to Architectural Theory
3 Credit Hours
Traces the history of architecture and architectural theory from the Renaissance to the contemporary period through built projects, theoretical designs, and original writings of architects and others. Prerequisite: Architecture 1100 with a grade of D or better, or equivalent and English 1101 with a grade of C or better, or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ARCHITECTURE (ARCH) 2210
Mechanical, Electrical, & Plumb Systems
3 Credit Hours
An overview of mechanical, electrical and plumbing systems for buildings as used by architects and construction managers. Introduction to systems, equipment, design calculations, and drawings, standards, and conventions. Prerequisite: Architecture 1111 with a grade of C or better, or equivalent or consent of instructor. (1 lecture hour, 4 lab hours)

ARCHITECTURE (ARCH) 2220
Architectural Computer Modeling
2 Credit Hours
Computer graphics course using Computer-Aided Drafting (CAD) and other software to create computer architectural models and presentations. Prerequisite: Architecture 1211 with a grade of C or better, or equivalent or consent of instructor. (1 lecture hour, 3 lab hours)

ARCHITECTURE (ARCH) 2230
Structural Systems
3 Credit Hours
An overview of components and concepts of structural systems in steel, concrete, and wood as used by architects. Includes basic structural calculations and analysis of loads and forces. Prerequisite: Architecture 1111 with a grade of C or better, or equivalent or consent of instructor (3 lecture hours)

ARCHITECTURE (ARCH) 2240
Codes, Specifications and Contracts
3 Credit Hours
Introduction to the legal framework of construction. The scope and implications of codes, includes model codes and review of structure and organization of the International Building Code (IBC), the organization, structure, and role of specifications within construction documents, standard forms of contracts and contractual relationships. Prerequisite: Architecture 1111 or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ARCHITECTURE (ARCH) 2250
Architectural Presentation and Portfolio
3 Credit Hours
Advanced architectural presentation techniques. Covers both hardcopy and digital product formats. Uses various 3-D modeling, digital presentation, digital publication and image enhancement software. Prerequisite: Architecture 1121 with a grade of C or

better, or equivalent or Architecture 1211 with a grade of C or better, or equivalent or consent of instructor. (1 lecture hour, 4 lab hours)

ARCHITECTURE (ARCH) 2260
Construction Estimating
3 Credit Hours
Basic procedures, calculations, and techniques used in construction cost estimating. Includes bidding procedures, different types of construction estimates and the appropriate procedures for each, and the process of quantity take-offs and cost calculations including equipment, overhead, and profit components. Computer applications to produce estimates and review of existing software titles. Prerequisite: Architecture 1111 or equivalent or consent of instructor. (3 lecture hours)

ARCHITECTURE (ARCH) 2270
Construction Scheduling
3 Credit Hours
Construction scheduling as a tool for project delivery and documentation, from project conception to building occupancy. Emphasizing the interrelationship of the trades and sequencing of the work during the construction process. Includes schedule composition and schedule implementation for project success. Prerequisite: Concurrent enrollment in Architecture 1130 and Architecture 1301 or consent of instructor. (3 lecture hours)

ARCHITECTURE (ARCH) 2413
BIM Management-Revit
3 Credit Hours
Introduction to Building Information Modeling (BIM) applications for the construction industry. Recommended course: Architecture 2260 or concurrent enrollment in Architecture 2260. Prerequisite: Architecture 1130 with a grade of C or better, or equivalent and Architecture 1301 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

ARCHITECTURE (ARCH) 2820
Advanced Selected Topics Architecture I
3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: At least one course in the discipline or consent of instructor. (3 lecture hours)

ARCHITECTURE (ARCH) 2823
Advanced Selected Topics Architecture IV
3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: At least one course in the discipline or consent of instructor. (6 lab hours)

ARCHITECTURE (ARCH) 2840
Experimental/Pilot Class
1 to 6 Credit Hours
Exploration and analysis of topics within the discipline. This course is used to pilot a proposal for a permanent discipline course. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 6 lecture hours, 1 to 12 lab hours)

ARCHITECTURE (ARCH) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ARCHITECTURE (ARCH) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ART

ART (ART) 1100 (IAI F2 900)
Introduction to the Visual Arts
3 Credit Hours
Overview of the visual arts as transmitters of cultural, humanistic and aesthetic values. Global selections from the remote past to the present examined in thematic studies including visual elements and design principles, motivations for art making within cultural and historical contexts, material processes, and issues in world art. Designed to encourage visual literacy and develop analytical skills of the non-art major. Field trip may be required. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ART (ART) 1101
Drawing I
3 Credit Hours
Introductory studio course with emphasis on accurate observation and representation, informed use of drawing materials, and awareness of two-dimensional art elements. Course includes vocabulary development and reference to historic models of drawing. (6 lab hours)

ART (ART) 1102
Drawing II
3 Credit Hours
Continued exploration of the nature, scope, and principles of drawing. Further development of critical thinking and visual problem solving abilities. Exploration of additional concepts, materials, and processes of visual art. Completion of Art 1151 is recommended prior to enrollment. Prerequisite: Art 1101 with grade of C or better, or equivalent. (6 lab hours)

ART (ART) 1105
Introduction to Studio Art
3 Credit Hours
Introduction to art methods and materials. Includes two-dimensional and three-dimensional design concepts introduced through a variety of media. May include painting, drawing, ceramics, sculpture, computer art, jewelry, and printmaking. Field trip may be required. Course is intended for non-art majors. No previous art background is required. (6 lab hours)

ART (ART) 1140
Introduction to Ceramics
3 Credit Hours
Introduction to the materials, techniques, and concepts in ceramics. Includes handbuilding, throwing, surface treatment, and kiln loading. Course is intended for the general interest student. (6 lab hours)

ART (ART) 1151
Two-Dimensional Foundations Studio
3 Credit Hours
Studio course exploring the principles and elements of 2-D art and design. Development of visual awareness, critical thinking and problem-solving abilities. Emphasis will be placed on concepts, materials and processes associated with the principles of visual perception. (6 lab hours)

ART (ART) 1152
Three-Dimensional Foundations Studio
3 Credit Hours
An introduction to the design and construction of three-dimensional objects and environments, including an exploration of the principles and elements of three-dimensional art and design. Use of tools in projects designed to explore the relationship of form to function, building processes to materials, and transformations of architectural space. Prerequisite: Art 1101 with a grade of C or better, or equivalent or concurrent enrollment in Art 1101 or consent of instructor. (6 lab hours)

ART (ART) 1185
Book Arts
2 Credit Hours
Introduction to the theory, history and processes in book making. Traditional and non-traditional formats will be explored with emphasis on the relationship between form and content. (4 lab hours)

ART (ART) 1250
Introduction to Jewelry
3 Credit Hours
Introduction to the materials, techniques and concepts in jewelry and metalsmithing. Includes forming, casting, surface treatment and soldering. Course is intended for the general interest student. (6 lab hours)

ART (ART) 1800
Special Project
1 to 4 Credit Hours
Special project courses in Art cover topics not otherwise covered by general education courses and other courses in the catalog for the Art discipline. These courses require direct experience and focused reflection in an in-depth study of a specific Art topic and/or the critical analysis of contemporary issues in Art. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30% but not to exceed 70%. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of Art concepts, theories, principles, and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) This course may be taken four times for credit as long as different topics are chosen.

ART (ART) 1823
Selected Topics in Art
1 to 3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Will vary with topic. (1 to 3 lecture hours, 2 to 6 lab hours)

ART (ART) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required (2 to 8 lab hours)

ART (ART) 2201
Life Drawing I
3 Credit Hours
Introduction to drawing the figure from observation. Emphasizes accurate portrayal of the undraped figure. Various drawing materials will be used to investigate anatomical study and pictorial composition. Prerequisite: Art 1101 with a grade of C or better, or equivalent or consent of instructor. (6 lab hours)

ART (ART) 2202
Life Drawing II
3 Credit Hours
Continued exploration of life drawing concepts, materials, and processes concentrating on the undraped figure. Emphasis will be placed upon accurate anatomical proportions and portrayal of sculptural solidity. Individual expression and use of visual metaphors will be developed. Prerequisite: Art 2201 or consent of instructor. (6 lab hours)

ART (ART) 2211 (IAI F2 901)
History of Art: Prehistory to 1300
3 Credit Hours
The development of Western visual arts and aesthetics from Prehistory through the High Middle Ages. Examines major works of painting, sculpture, architecture, and the decorative arts within their historical, cultural, and social contexts. Field trip may be required. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ART (ART) 2212 (IAI F2 902)
History of Art: 1300 to Present
3 Credit Hours
The development of Western visual arts and aesthetics from the Renaissance through the 20th Century. Examines major artists, styles, and movements within their historical, cultural, and social

contexts. Field trip may be required. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ART (ART) 2213 (IAI F2 902)
Modern and Contemporary Art
3 Credit Hours
The development of visual arts and aesthetics from 1900 through Contemporary Art. Examines major artists, styles, and movements within their historical, cultural, and social contexts. Field trip may be required. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ART (ART) 2214 (IAI F2 903N)
Non-Western Art
3 Credit Hours
Survey of the aesthetic traditions of selected non-Western societies, including those of Africa, Asia, Oceania, and the Native Americas. Examines major works of painting, sculpture, architecture, and the decorative arts within their historical, cultural, and social contexts. Field trip may be required. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ART (ART) 2215
History of Adornment
3 Credit Hours
A survey of the history of jewelry and metals in a social and cultural context. This course introduces students to representative examples of historical world jewelry and metals. Using a combination of lectures, slides, videos, readings, and group discussions, the course explores the roles of personal adornment, jewelry, and metals in terms of major historical periods, worldwide cultures, important events, and famous personages. Attention will be paid to contemporary work and international art jewelry, including design, and fabrication issues. Class discussions will focus on the function of jewelry and its presentation and display on the body. (3 lecture hours)

ART (ART) 2216
Introduction to Philosophy of Art
3 Credit Hours
Philosophical theories of the creative process in art. The course offers the study and analysis of ideas and concepts about art as a basis for critical assessment of artistic pursuits. Credit cannot be given for both Art 2216 and Philosophy 2250. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ART (ART) 2221
Painting I
3 Credit Hours
Introduction to painting methods using various materials such as acrylic, watercolor, and oil paint. Emphasis in paintings will be on technical skill sets, originality of content, and an understanding of art history as contextual and referential. Prerequisite: Art 1101 with a grade of C or better, or college equivalent or concurrent enrollment in Art 1101. (6 lab hours)

ART (ART) 2222
Painting II
3 Credit Hours
Further exploration of painting skills with continued development of individual expression. Formal and conceptual rigor is emphasized. Prerequisite: Art 2221 with a grade of C or better, or college equivalent. (6 lab hours)

ART (ART) 2231
Sculpture I
3 Credit Hours
Introduction to basic sculptural materials, tools, equipment, processes and concepts associated with wood and plaster sculpture. Basic three-dimensional design principles are addressed throughout the course. An informed context is provided by the study of the work of current and historic sculptors. Studio safety is considered at all times. Prerequisite: Art 1101 with a grade of C or better, or concurrent enrollment in Art 1101 (6 lab hours)

ART (ART) 2232
Sculpture II
3 Credit Hours
Introduction to basic sculptural materials, tools, equipment, processes, and concepts associated with steel sculpture. Large-scale installation or site-specific sculpture will be investigated in group activities. An informed context will be provided by the study of the work of current and historic sculptors. Studio safety will be considered at all times. Prerequisite: Art 1101 and Art 2231 with a grade of C or better. (6 lab hours)

ART (ART) 2235
Introduction to Design Objects
3 Credit Hours
An introduction to object design methods and research skills. Emphasis is placed on the development of fundamental skills such as design ideation, 2D drawing and rendering, hands-on model making and material experimentation, and design presentation techniques. In addition to examining an object's function, use and form, students will analyze the cultural ideas, values and beliefs that are embedded within objects we create and put to use in our lives. Recommended course: Art 1152 Prerequisite: Art 1101 with a grade of C or better. (6 lab hours)

ART (ART) 2241
Ceramics I
3 Credit Hours
An introductory studio consisting of conceptual and technical processes in ceramics. Exploration of functional design and sculpture utilizing basic clay construction methods, surface treatment and kiln loading. Prerequisite: Art 1101 with a grade of C or better, or equivalent or concurrent enrollment in Art 1101. (6 lab hours)

ART (ART) 2242
Ceramics II
3 Credit Hours
Continued exploration of sculptural and functional ceramics. Students will build competency in the entire ceramics process, from idea development through presentation of finished form, including clay use, surface application, and kiln firing. Prerequisite: Art 1101 and Art 2241, both with a grade of C or better, or equivalent. (6 lab hours)

ART (ART) 2243
Student Art Gallery
2 Credit Hours
Examination of the process by which galleries and museums create exhibitions, from planning and research through exhibition design, selection process, installation, communication with the audience,

accessibility, and evaluation. Includes management of student art gallery on campus. This course may be taken four times for credit. Prerequisite: Art 1100 with a grade of C or better, or equivalent or consent of instructor. (4 lab hours)

ART (ART) 2251
Jewelry/Metalsmithing I
3 Credit Hours
A studio introduction to basic jewelry and metalsmithing processes, materials, tools and equipment. Basic techniques such as sawing, soldering and cold connecting sheet metal (silver, copper, brass) are introduced. Craftsmanship, health work habits and studio safety are emphasized. Historical and contemporary aesthetics and concepts in art metals and jewelry design are examined. Prerequisite: Art 1101 or concurrent enrollment in Art 1101. (6 lab hours)

ART (ART) 2252
Jewelry/Metalsmithing II
3 Credit Hours
Continued exploration of jewelry/metalsmithing processes, materials, tools, and equipment. Techniques introduced include stone setting, lost wax casting, enameling, and etching. Focus on proficiency in the selection, use, and manipulation of materials as well as a mastery of the processes involved. Contemporary trends in jewelry/metalsmithing are examined. Craftsmanship, healthy work habits, and studio safety will be emphasized. Prerequisite: Art 1101and Art 2251. (6 lab hours)

ART (ART) 2266
Computer Art I
3 Credit Hours
An introduction to the use of computer hardware and two dimensional software in the creation of fine art. Topics will include the creation and manipulation of direct-drawn, formula-generated, and photographic images. Techniques will include the use of a stylus, a scanner, and a printer for use with bitmap and vector based software. Note: This is not a graphic design computer course. Prerequisite: Art 1101 with a grade of C or better or concurrent enrollment in Art 1101. (6 lab hours)

ART (ART) 2267
Computer Art II
3 Credit Hours
An introduction to the use of three dimensional software using one or more modeling, animation, and editing software packages. Topics will include organic and geometric modeling, surface rendering, animation, CNC, and video production in the creation of film, installation, and sculptural artforms. Prerequisite: Art 1101 with a grade of C or better, and Art 2266 with a grade of C or better, or college equivalent. (6 lab hours)

ART (ART) 2275
Intaglio Printmaking
3 Credit Hours
An introduction to the intaglio printmaking processes. Topics include etching, engraving, drypoint, aquatinting, and photo-etching in creating editions of fine art prints. Emphasis is placed upon mastery and the creative use of these printmaking techniques. Prerequisite: Art 1101 with a grade of C or better, or equivalent. (6 lab hours)

ART (ART) 2276
Lithography
3 Credit Hours
An introduction to the lithographic printmaking process. Topics include the use of crayon, tusche, photocopy and drawing transfers, and multiple plate printing in creating editions of lithographic prints from both metal plate and stone. Emphasis is placed upon mastery and the creative use of these printmaking techniques. Prerequisite: Art 1101 with a grade of C or better, or equivalent. (6 lab hours)

ART (ART) 2800
Special Project
1 to 4 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30% but not to exceed 70%. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles, and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.). Prerequisite: At least one course in the discipline or consent of the instructor.

ART (ART) 2820
Advanced Selected Topics I
1 to 3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: At least one course in the discipline or consent of instructor. (1 to 3 lecture hours)

ART (ART) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ART (ART) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work

with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ART (ART) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

AUTOMOTIVE SERVICE TECHNOLOGY

AUTOMOTIVE SERVICE TECHNOLOGY (AUTO) 1040
Automotive for Non-Majors
3 Credit Hours
Overview of personal auto maintenance principles. Topics include proper maintenance for longevity, resale value, and safety; how vehicle systems work; and how to complete some light vehicle repairs. (2 lecture hours, 2 lab hours)

AUTOMOTIVE SERVICE TECHNOLOGY (AUTO) 1100
Intro to Automotive Service Technology
1 Credit Hour
An introductory course in the fundamental knowledge and skills that an automotive student will need for the automotive program. Students will learn shop safety, use of service information, automotive lifts, use of hand tools, identification of fasteners, and automotive measurement techniques. (1 lecture hour, .5 lab hours)

AUTOMOTIVE SERVICE TECHNOLOGY (AUTO) 1110
Engine Design and Operation
3 Credit Hours
Design, operation and troubleshooting procedures of the gasoline engine. Includes disassembly, identification and inspection of parts, use of service manuals, safety, and shop procedures. Prerequisite: Course requires Reading Placement Test Score-Category One and Corerequisite: Automotive Service Technology 1100 or consent of instructor. (1 lecture hour, 4 lab hours)

AUTOMOTIVE SERVICE TECHNOLOGY (AUTO) 1120
Manual Drive Train and Axles
3 Credit Hours
The course covers automotive manual drive trains, clutch hydraulics, axle systems, diagnostics and inspection. Prerequisite: Course requires Reading Placement Test Score - Category One and concurrent enrollment in Automotive Service Technology 1100 or consent of instructor. (1 lecture hour, 4 lab hours)

AUTOMOTIVE SERVICE TECHNOLOGY (AUTO) 1131
Automotive Basic Electricity
3 Credit Hours
Automotive circuit construction emphasizing meter usage. Analog and digital meters and oscilloscopes are stressed. Practical approach to reading wiring diagrams, service manuals, and manufacturers' repair procedures, including diagnosis of selected vehicle accessory circuits. Prerequisite: Course requires Reading Placement Test Score-Category One or consent of instructor. (1 lecture hour, 4 lab hours)

AUTOMOTIVE SERVICE TECHNOLOGY (AUTO) 1140
Suspension, Steering and Alignment
3 Credit Hours
Automotive suspension systems for front-wheel drive and rear-wheel drive vehicles. Steering systems, including rack and pinion, are diagnosed and repaired. Wheels and tires and their effect on handling and ride. Wheel alignment angles are measured and adjusted. Prerequisite: Course requires Reading Placement Test Score - Category One and Concurrent enrollment in Automotive Service Technology 1100 or consent of instructor. (1 lecture hour, 4 lab hours)

AUTOMOTIVE SERVICE TECHNOLOGY (AUTO) 1232
Automotive Engine Electricity
4 Credit Hours
Starting and charging systems, including starting and charging components. System testing for both no-start and preventive maintenance conditions and charging system construction and on-car testing. Construction, operation, function and testing of ignition systems of current vehicles, including electronic ignition, distributorless ignition and oscilloscope testing. Prerequisite: Automotive Service Technology 1131 with a grade of C or better, or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category One. (3 lecture hours, 2 lab hours)

AUTOMOTIVE SERVICE TECHNOLOGY (AUTO) 1240
Braking Systems
3 Credit Hours
Automotive braking systems including rotor and drum machining, caliper and wheel cylinder rebuilding, wheel-bearing service, brake pad and shoe replacement, and diagnosis and service of anti-lock systems. Prerequisite: Course requires Reading Placement Test Score-Category One and Automotive Service Technology 1131 with a grade of C or better, or equivalent or consent of instructor. (1 lecture hour, 4 lab hours)

AUTOMOTIVE SERVICE TECHNOLOGY (AUTO) 1250
Automotive Air Conditioning and Heating
3 Credit Hours
The servicing of automotive air conditioning and heating systems, including refrigerant recovery and recycling, performance testing, and system diagnosis and repair. Prerequisite: Course requires Reading Placement Test Score-Category One and Automotive Service Technology 1131 with a grade of C or better, or equivalent, or consent of instructor. (1 lecture hour, 4 lab hours)

AUTOMOTIVE SERVICE TECHNOLOGY (AUTO) 1261
Engine Controls & Emissions I
4 Credit Hours
Engine computer controls including theory, inspection, testing, and diagnosis of sensors, outputs, emission controls, and fuel systems. Automotive Service Technology 1110 is recommended. Prerequisite: Course requires Reading Placement Test Score-Category One and Automotive Service Technology 1131 with a grade of C or better, or equivalent, or consent of instructor. (3 lecture hours, 2 lab hours)

AUTOMOTIVE SERVICE TECHNOLOGY (AUTO) 1301
Automotive Service Consulting
3 Credit Hours

Fundamentals of automotive customer service, sales skills, and writing effective repair orders will be covered. Prerequisite: Course requires Reading Placement Test Score-Category One or consent of instructor. (3 lecture hours)

AUTOMOTIVE SERVICE TECHNOLOGY (AUTO) 1302
Automotive Service Management
3 Credit Hours
Principles of service management and repair shop ownership will be covered. Shop operations, facilities, marketing, and employee management will be explored. Prerequisite: Course requires Reading Placement Test Score-Category One and Automotive Service Technology 1301 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

AUTOMOTIVE SERVICE TECHNOLOGY (AUTO) 1820
Selected Topics
1 to 6 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. (1 to 6 lecture hours, 2 to 12 lab hours)

AUTOMOTIVE SERVICE TECHNOLOGY (AUTO) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. Course requires Reading Placement Test Score-Category One. (1 to 4 lecture hours)

AUTOMOTIVE SERVICE TECHNOLOGY (AUTO) 2120
Automatic Transmission
3 Credit Hours
Inspection, construction, nomenclature, diagnosis, disassembly, and assembly of automatic transmissions and transaxles. Topics also include fundamental operation and construction, inspection and rebuilding of apply devices, planetary gear sets, oil pumps, valve bodies, and one-way clutches. Prerequisite: Course requires Reading Placement Test Score-Category One and Automotive Service Technology 1120 with a grade of C or better, or equivalent or consent of instructor. (1 lecture hour, 4 lab hours)

AUTOMOTIVE SERVICE TECHNOLOGY (AUTO) 2133
Automotive Body Electricity
3 Credit Hours
Selected automotive electrical accessories will be emphasized. Diagnose and repair causes of poor, intermittent, and/or no operation of accessories, such as windshield wipers and washers, power windows, power seats, power mirrors, power antennas, cruise controls, window de-icers, automatic headlights, power door locks, vehicle networks, and security systems. Completion of Automotive Service Technology 1261 is recommended prior to enrollment. Prerequisite: Automotive Service Technology 1131 and Automotive Service Technology 1232, both with a grade of C or better, or equivalent, or consent of instructor. Course requires Reading Placement Test Score-Category One. (1 lecture hour, 4 lab hours)

AUTOMOTIVE SERVICE TECHNOLOGY (AUTO) 2140
Advanced Chassis Systems
3 Credit Hours
Advanced operation, diagnosis and testing of suspension and chassis systems. Topics include TPMS, electronic power steering and suspension systems, and NVH diagnostics. Prerequisite: Course requires Reading Placement Category One. Automotive Service Technology 1120, 1131, 1140 and 1240, all with a grade of C or better, or equivalent or consent of instructor. (1 lecture hour, 4 lab hours)

AUTOMOTIVE SERVICE TECHNOLOGY (AUTO) 2162
Engine Controls and Emissions II
4 Credit Hours
Advanced computerized engine control systems common to domestic and import vehicles. Testing of systems, sensors, components, circuits, scan-tool use, fuel injection, and On Board Diagnostics (OBD) II. Prerequisite: Course requires Reading Placement Test Score-Category One and Automotive Service Technology 1131, Automotive Service Technology 1232, and Automotive Service Technology 1261, all with a grade of C or better or equivalent, or consent of instructor. (3 lecture hours, 2 lab hours)

AUTOMOTIVE SERVICE TECHNOLOGY (AUTO) 2220
Advanced Automotive Drivetrains
3 Credit Hours
Inspection, construction, operation, and diagnosis of automatic and manual transmission, transaxle, transfer case, and driveline electrical components and controls. Includes fundamental theory, operation, construction, inspection, and diagnosis of switches, sensors, solenoids, motors, and control devices. Prerequisite: Course requires Reading Placement Test Score-Category One and Automotive Service Technology 1120, Automotive Service Technology 1131 and Automotive Service Technology 2120 with a grade of a C or better, or equivalent or consent of instructor. (1 lecture hour, 4 lab hours).

AUTOMOTIVE SERVICE TECHNOLOGY (AUTO) 2280
Automotive Service
6 Credit Hours
Trade experience for the advanced automotive student. Prerequisite: Course requires Reading Placement Test Score-Category One and Automotive Service Technology 1110, Automotive Service Technology 1120, Automotive Service Technology 1140, Automotive Service Technology 1232, Automotive Service Technology 1240, Automotive Service Technology 1250, Automotive Service Technology 1261 and Automotive Service Technology 2120 or equivalent or consent of instructor. (1 lecture hour, 10 lab hours).

AUTOMOTIVE SERVICE TECHNOLOGY (AUTO) 2345
Automotive Hybrid Technology
2 Credit Hours
Overview of Hybrid Electric Vehicles (HEV), Plug-in Hybrid Electric Vehicles (PHEV), and Battery Electric Vehicles (BEV) terminology, safety requirements, theory of operation, modification to other automotive systems, and specialized tool requirements. Prerequisite: Course requires Reading Placement Test Score-Category One and Automotive Service Technology 1131 with a grade of C or better, or equivalent or consent of instructor. (1 lecture hour, 2 lab hours)

AUTOMOTIVE SERVICE TECHNOLOGY (AUTO) 2364
Automotive ScanTool Usage & Exploration
1 Credit Hour
Hands-on practice and experience with multiple manufacturer-specific and generic OBD2 ScanTools. Students will explore the many different functions of original equipment and aftermarket

ScanTools for diagnosis and programming capabilities on multiple vehicle systems. Prerequisite: Course requires Reading Placement Test Score-Category One and Automotive Service Technology 1232 or equivalent or Automotive Service Technology 1261 or equivalent or consent of instructor. (2 lab hours)

AUTOMOTIVE SERVICE TECHNOLOGY (AUTO) 2365
Intro to Diesel Fuel Systems & Emissions
2 Credit Hours
A generic course designed to increase the knowledge of diesel engine design, fuel control systems, and emission controls. Topics of discussion include direct and indirect injection, mechanical fuel systems, unit injection systems, electronic diesel control, hydraulically actuated electronic unit injectors (HEUI), common-rail fuel systems and related emission control devices. Prerequisite: Course requires Reading Placement Test Score-Category One and Automotive Service Technology 1110 and Automotive Service Technology 1261 with a grade of C or better, or equivalent or consent of instructor. (1 lecture hour, 2 lab hours)

AUTOMOTIVE SERVICE TECHNOLOGY (AUTO) 2370
A.S.E. Certification Analysis & Tech
2 Credit Hours
An integrative course teaching a higher level of skills to combine previous courses and introduce updates in technology to prepare for the National Institute for Automotive Service Excellence (ASE) certification exams. Prerequisite: Course requires Reading Placement Test Score-Category One. (2 lecture hours)

AUTOMOTIVE SERVICE TECHNOLOGY (AUTO) 2840
Experimental/Pilot Class
1 to 6 Credit Hours
Exploration and analysis of topics within the discipline. This course is used to pilot a proposal for a permanent discipline course. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Course requires Reading Placement Test Score-Category One. (6 lecture hours, 12 lab hours)

AUTOMOTIVE SERVICE TECHNOLOGY (AUTO) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

AUTOMOTIVE SERVICE TECHNOLOGY (AUTO) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

BIOLOGY

BIOLOGY (BIOLO) 0470
Biology Study Skills
1 Credit Hour
Designed for students who need basic knowledge, improvement or practice in study skills for biology. This course includes basic study techniques, techniques specific for biology terminology, text and lecture notes, problem solving, laboratory skills, test-taking techniques and biology resources. This course is especially appropriate for students in Biology 1100 and 1151, or those who have little or no experience in biology. This course can only be taken on a pass/fail basis. Prerequisite: Course requires Reading Placement Test Score-Category One. (1 lecture hour)

BIOLOGY (BIOLO) 1100 (IAI L1 900L)
Survey of Biology
4 Credit Hours
This biology course promotes scientific literacy for non-science majors and interested students. Organisms are studied from their behavioral, ecological, hereditary and evolutionary perspectives. An inquiry-based approach to understanding biological processes is emphasized. Students explore the relevance of biology to contemporary issues in human society. Prerequisite: Mathematics 0465 or Mathematics 0481 (or college equivalent) with a C or better, or a qualifying score on the mathematics placement test or a qualifying A.C.T. math score. Course requires Reading Placement Test Score-Category One. (3 Lecture hours, 2 lab hours)

BIOLOGY (BIOLO) 1110 (IAI L1 905L)
Environmental Biology
4 Credit Hours
An interdisciplinary study of the environment investigating how nature works and how things are interconnected. Based on an understanding of ecological concepts and principles, students examine lifestyle issues and critically analyze the relationship among population, natural resources, land use, agriculture, biodiversity, industrialization and pollution. Environmental problems are examined from scientific, ethical, economic and sociological perspectives to enable students to understand the relevance of biology to contemporary issues in human society. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours, 2 lab hours)

BIOLOGY (BIOLO) 1120 (IAI L1 906)
Introduction to Genetics
3 Credit Hours
This course provides an introduction to the principles of genetics emphasizing the significance of genetics to human culture, including classical transmission genetics, molecular genetics and biotechnology, and the genetics of populations. Prerequisite: Mathematics 0481 (or college equivalent) with a grade of C or better or qualifying score on the mathematics placement test or a qualifying A.C.T. math score. Course requires Reading Placement Test Score - Category One. (3 lecture hours)

BIOLOGY (BIOLO) 1130 (IAI L1 906L)
Fundamentals of Biotechnology
4 Credit Hours

Application of living organisms and their products in industry, medicine, agriculture, forensics, and environmental science. This multidisciplinary course introduces fundamental principles of biology and chemistry that are used to develop biotechnology and surveys various fields of biotechnology. Topics include biochemistry, recombinant DNA, bioinformatics, medical biotechnology, and bioremediation. Laboratory includes techniques that are routinely used in biotechnology such as chromatography, electrophoresis, and genetic transformation of cells. This course is intended for both science majors and non-science majors. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours, 3 lab hours)

BIOLOGY (BIOLO) 1140
Introduction to Biology of Aging
3 Credit Hours
Study of aging in humans and other species. Topics include theories of aging, aging research, age-related changes at the molecular, cellular, systemic and organismal levels, and normal aging and its relationship to human disease. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

BIOLOGY (BIOLO) 1151 (IAI L1 910L/BIO 910)
Principles of Biological Science
5 Credit Hours
An introduction to biology for the biological science major and interested students. Topics include the philosophy of science, scientific method, chemical organization of life, cell biology, cellular metabolism, genetics, molecular genetics, molecular biology, evolution, and biodiversity of the Bacteria, Archaea, protists, and Fungi. Prerequisite: Mathematics 0481 (or college equivalent) with a grade of C or better or qualifying score on the mathematics placement test or a qualifying A.C.T. math score. Course requires Reading Placement Test Score-Category One. (4 lecture hours, 3 lab hours)

BIOLOGY (BIOLO) 1152 (IAI L1 910L/BIO 910)
Principles of Biological Science
5 Credit Hours
Continuation of Biology 1151. An introduction to higher levels of biological organization from the organism to the ecosystem. Topics include diversity of the plants and animals, organismal structure and physiology, behavior, population ecology, community ecology, ecosystem ecology, and environmental biology. Prerequisite: Biology 1151 with a grade of C or better. (4 lecture hours, 3 lab hours)

BIOLOGY (BIOLO) 1800
Special Project
1 to 3 Credit Hours
Special project courses in biology cover topics not otherwise covered by general education courses and other courses in the Catalog for the biology discipline. These courses require direct experience and focused reflection in an in-depth study of a specific biology topic and/or the critical analysis of contemporary issues in biology. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of biology concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.). This course may be taken four times for credit as long as a different topic is selected each time. Prerequisite: Course requires Reading Placement Test Score-Category One.

BIOLOGY (BIOLO) 1820
Selected Topics I
3 Credit Hours
Introductory exploration and analysis of selected topics in biology with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Course requires Reading Placement Test Score-Category One (6 lab hours)

BIOLOGY (BIOLO) 1821
Selected Topics II
3 Credit Hours
Introductory exploration and analysis of selected topics in biology with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Course requires Reading Placement Test Score-Category One. (2 lecture hours, 2 lab hours)

BIOLOGY (BIOLO) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within biology to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. Course requires Reading Placement Test Score-Category One. (2 to 8 lab hours)

BIOLOGY (BIOLO) 2150
Ecology
4 Credit Hours
Introduction to the field of ecology. Ecological principles and concepts pertaining to ecosystems, communities and populations are examined. Emphasis is given to experimentation in the field. Prerequisite: Biology 1151 and Biology 1152 or equivalent. Course requires Reading Placement Test Score-Category One. (2 lecture hours, 4 lab hours)

BIOLOGY (BIOLO) 2151
Cell Biology
4 Credit Hours
Advanced examination of the morphology and physiology of eukaryotic and prokaryotic cells. Coverage includes organelle structure and function, cell membranes, the cytoskeleton, extracellular matrices, enzymes, bioenergetics, cell division, gene expression, cell movement, and cell communication. Course is intended for the biological science major and has a lab component. Prerequisite: Biology 1152 with a grade of C or better, or equivalent and Chemistry 1552 with a grade of C or better, or equivalent. Course requires Reading Placement Test Score-Category One. (3 lecture hours, 2 lab hours)

BIOLOGY (BIOLO) 2800
Special Project
1 to 3 Credit Hours
Special project experiential courses in biology cover topics not otherwise covered by general education courses and other courses in the Catalog for the biology discipline. These courses require direct experience and focused reflection in an in-depth study of a

specific biology topic and/or the critical analysis of contemporary issues in biology. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning and/or the practical application of biology concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) Prerequisite: At least one course in Biology or consent of instructor. Course requires Reading Placement Test Score-Category One.

BIOLOGY (BIOLO) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

BIOLOGY (BIOLO) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

BIOLOGY (BIOLO) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

BIOLOGY (BIOLO) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

BOTANY

BOTANY (BOTAN) 1310
Ethnobotany
4 Credit Hours
This course is designed to introduce students to the origins of many of the plants and plant products that are an important part of everyday life, and the ways that the development of different cultures has been influenced by plants throughout history. Topics covered include basic plant morphology, plant reproduction, origins of major agricultural crops, economically important plant products, and medicinal and poisonous plants. Designed for non-science majors and interested students. (3 lecture hours, 2 lab hours) ** Note ** This course, taken after Spring 2017, will NOT count towards the Life Science requirement in the AA, AS, AFA or AAT degrees.

BOTANY (BOTAN) 1320
Prairie Ecology
4 Credit Hours
The organisms, environments and ecological processes of the tallgrass prairie ecosystem are examined through lecture, discussion and field studies. Identification of prairie plants, with an emphasis on species in northern Illinois, is included. Students participate in College of DuPage's prairie reconstructions. Field trips and activities are required. Biology 1100 or Biology 1151 is recommended (2 lecture hours, 4 lab hours)

BOTANY (BOTAN) 1800
Special Project
1 to 3 Credit Hours
Special project courses in botany cover topics not otherwise covered by general education courses and other courses in the catalog for the botany discipline. These courses require direct experience and focused reflection in an in-depth study of a specific botany topic and/or the critical analysis of contemporary issues in botany. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30% but not to exceed 70%. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of botany concepts, theories, principles, and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.). This course can be taken four times for credit as long as a different topic is chosen.

BOTANY (BOTAN) 1820
Selected Topics I
3 Credit Hours
Introductory exploration and analysis of selected topics in botany with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (3 lecture hours)

BOTANY (BOTAN) 1821
Selected Topics II
1 to 3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (2 lecture hours, 2 lab hours)

BOTANY (BOTAN) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within botany to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (2 to 8 lab hours)

BOTANY (BOTAN) 2350
Introduction to Botany
4 Credit Hours
Introduction to Botany, including classification, morphology, anatomy, physiology and diversity. Includes lab and field experiences. Prerequisite: Biology 1151. (2 lecture hours, 6 lab hours)

BOTANY (BOTAN) 2360
Local Flora
3 Credit Hours
Explores the ecology and distribution of vascular plants from selected study areas. Includes the basic principles and methods of plant taxonomy: identification, classification, herbarium techniques. Study areas in addition to the College of DuPage campus will be indicated in the current class schedule. Costs vary. Prerequisite: Biology 1152 or Botany 2350 or equivalent. (1 lecture hour, 4 lab hours)

BOTANY (BOTAN) 2800
Special Project
1 to 3 Credit Hours
Special project experiential courses in botany cover topics not otherwise cvered by general education course and other courses in the Catalog for the botany discipline, while building upon academic knowledge and skills acquired in introductory-level botany classes. These courses required direct experience and focused reflection in an in-depth study of a specific botany topic and/or the critical analysis of contemporary issues in botany. They are targeted of self-selected students with an interest in the subject matter and involved active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning and/or the practical application of more complex botany concepts, theories, principles, and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) Prerequisite: At least one course in Botany or consent of instructor.

BOTANY (BOTAN) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

BOTANY (BOTAN) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

BOTANY (BOTAN) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

BOTANY (BOTAN) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

BUSINESS

BUSINESS (BUSIN) 1100
Introduction to Business
3 Credit Hours
Introduction to the environment and functions of business. Organization and operation of business, the relationships of business to society, and types of business are surveyed. Marketing, finance production and human resource management are covered. (3 lecture hours)

BUSINESS (BUSIN) 1111
Customer Service
3 Credit Hours
Interacting with customers and responding to customer concerns in-person, on the telephone and electronically. Customer service throughout the organization and as a system for meeting customer expectations. Verbal and nonverbal communications as they relate to customer service. Methods for responding to different types of customers. (3 lecture hours)

BUSINESS (BUSIN) 1120
Fundamentals of Personal Investing
3 Credit Hours
Explores various investment vehicles utilized by the personal investor including stocks, bonds, real estate, mutual funds and insurance. Investment vehicle descriptions, values and economic complications are surveyed. Application of investment theory and risk analysis associated with investment decisions as it relates to building a hypothetical personal investment portfolio. (3 lecture hours)

BUSINESS (BUSIN) 1155
Diversity in Business
3 Credit Hours
Introduction to the role of diversity in the environment and functions of business. Surveys the impact of diversity on organizations, teamwork, strategy and customer relationships. Individual and group perspectives will be explored. Gender, race, ethnicity, generation, social class and other bases for diversity will be considered. (3 lecture hours)

BUSINESS (BUSIN) 1161
Entrepreneurship
3 Credit Hours
Exploration of the start-up of small businesses and franchises. Essential business ownership primarily focusing on the marketing and management aspects of entrepreneurship. Product ideas, product development, patents, copyright, and trademarks. Introduction to start-up financing and business planning. (3 lecture hours)

BUSINESS (BUSIN) 1170
Electronic Business/Commerce
3 Credit Hours
Overview of resources, knowledge, skills, practices and techniques necessary to conduct business online. Explores nature and impact of e-commerce on business and business operation, resources required versus available resources, e-management, Customer Relationship Management (CRM), ordering systems, end-to-end marketing, and performance and control systems. (3 lecture hours)

BUSINESS (BUSIN) 1800
Special Project
1 to 4 Credit Hours
Special project courses in business topics not otherwise covered by general education courses and other courses in the catalog for the business discipline. These courses require direct experience and focused reflection in an in-depth study of a specific Business topic and/or the critical analysis of contemporary issues in business. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30% but not to exceed 70%. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of business concepts, theories, principles, and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) This course may be taken four times for credit as long as different titles are chosen.

BUSINESS (BUSIN) 1840
Independent Study
1 to 3 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 3 lecture hours)

BUSINESS (BUSIN) 2200
Business Budgeting
3 Credit Hours
A hands-on study in the preparation and analysis of reports in the budgeting system. Includes detailed budgets for various departments; budgeted income statements and balance sheets with supporting schedules will be prepared. Special emphasis on the financial manager's role in budgeting as well as the relationship of the budgeting process with the long-term corporate goals and objectives. Completion of Business 1100 is recommended prior to enrollment. Prerequisite: Accounting 1110 or Accounting 2140 or equivalent or consent of instructor. (3 lecture hours)

BUSINESS (BUSIN) 2210
Principles of Finance
3 Credit Hours
The theoretical and conceptual framework used by financial managers to reach decisions in a dynamic economy including problems related to sources of capital and financial analysis. Emphasis is placed on financial statement analysis, time value of money, cash flow management, risk and return, and sources financing. Completion of Business 1100 is recommended prior to enrollment. Prerequisite: Accounting 1110 or Accounting 2140 or equivalent or consent of instructor. (3 lecture hours)

BUSINESS (BUSIN) 2220
Financial Analysis and Valuation
3 Credit Hours
The process of understanding the risks and profitability of a firm through analysis of reported financial statements. It includes a comprehensive review of business strategy, financial strategy and the industry environment, resulting in providing information for management and investment decisions. Prerequisite: Business 1100, Accounting 2140 and Accounting 2150 or consent of instructor. (3 lecture hours)

BUSINESS (BUSIN) 2255
International Business
3 Credit Hours
Theoretical and descriptive exploration of the interdependent world of international business. Explores globalization trends, international trade theories, regulations affecting trade, regional economic integration, and the impact these factors have on developing nations. Examines how company functions such as marketing, finance and management operate in the international setting. Special emphasis is placed on strategy development and the role of culture. Completion of Business 1100 or equivalent is recommended prior to enrollment. (3 lecture hours)

BUSINESS (BUSIN) 2800
Special Project
1 to 4 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) Prerequisite: At least one course in the discipline or consent of instructor

BUSINESS (BUSIN) 2860
Internship for Business
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and Business 1100, 2.0 cumulative grade point average; six semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Associate Dean from the academic discipline where the student is planning to earn credit.

BUSINESS (BUSIN) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

BUSINESS (BUSIN) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

BUSINESS (BUSIN) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Associate Dean from the academic discipline where the student is planning to earn credit.

BUSINESS LAW

BUSINESS LAW (BUSLW) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

BUSINESS LAW (BUSLW) 2205
Legal Environment of Business
3 Credit Hours
Traces the history and development of the judicial system and the social and legal environment of business. Principles of business legal ethics and corporate social responsibilities, government regulation of business, securities law, consumer protection law labor law, employment law and environmental law are discussed and analyzed through use of cases and problems. Emphasis will be placed upon the legal dimension of ethical issues in the world of business. (3 lecture hours)

BUSINESS LAW (BUSLW) 2211
Business Law I
3 Credit Hours
Introduction to our Anglo-American system of law, tracing its sources and history. Introduction to the legal system as it affects business activity. Principles of the law of contracts, agency relationships, commercial paper and sales are discussed and analyzed through the use of the Uniform Commercial Code, cases and problems. Emphasis is upon the law and business relationships. (3 lecture hours)

BUSINESS LAW (BUSLW) 2212
Business Law II
3 Credit Hours
Principles of the law of agency, partnerships, corporations, wills, trusts, accounting law and liability bankruptcy, and real property are discussed and analyzed through the use of the Model Corporation Act, the Illinois Business Corporation Act, cases and problems. Emphasis is placed on the Uniform Commercial Code, including negotiable instruments, holder in due course, credit and secured transactions. Prerequisite: Business Law 2211. (3 lecture hours)

BUSINESS LAW (BUSLW) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours

Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

BUSINESS LAW (BUSLW) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

CANCER REGISTRY MANAGEMENT

CANCER REGISTRY MANAGEMENT (CRM) 2301
Cancer Registry Management I
4 Credit Hours
Overview of basic cancer registry functions, registry organization, standards and types, accreditation/standard setting organizations, credentialing pathways, stakeholders as well as legal and ethical issues. Covers data collecting procedures including case-finding, abstracting, reporting, and follow-up on reportable cancers. Prerequisite: Admission to program or consent of instructor is required. (3 lecture, 2 lab hours)

CANCER REGISTRY MANAGEMENT (CRM) 2302
Cancer Disease Management
3 Credit Hours
Overview of the cancer (oncology) disease process for all body systems, diagnostic and staging procedures including laboratory, imaging, surgery and pathology and therapeutic treatments (surgery, radiation, chemotherapy, immunotherapy, etc.). Major sites of cancer will be emphasized. Overview of clinical trials/ research protocols. Prerequisite: Admission to program or consent of instructor is required. (2 lecture, 2 lab hours)

CANCER REGISTRY MANAGEMENT (CRM) 2303
Oncology Classification & Staging System
4 Credit Hours
Overview of the International Classification of Diseases for Oncology (ICD-O) and Staging Systems (SS). Focuses on coding clinical information from health records with staging and extent of disease used by physicians. Explores guidelines for multiple primaries, coding extent of disease, and metastatic sites. Prerequisite: Admission to program or consent of instructor is required. (3 lecture, 2 lab hours)

CANCER REGISTRY MANAGEMENT (CRM) 2304
Principles of Abstracting I
4 Credit Hours
Explores concepts of data set collection and abstract items contained in the health record of oncology patients. Emphasis will be placed on standards and techniques to assure compliance with regulatory protocols for organizing, summarizing and categorizing crucial information for reportable tumors. Prerequisite: Admission to program or consent of instructor is required. (3 lecture, 2 lab hours)

CANCER REGISTRY MANAGEMENT (CRM) 2305
Cancer Registry Management II
4 Credit Hours
Exploration of advanced cancer registry management functions. Topics will include regional registry operations, follow-up procedures, cancer committee operations, policies and procedure, comprehensive annual report construction, and process improvement. Prerequisite: Cancer Registry Management 2301 with a grade of C or better, or equivalent or consent of instructor. (3 lecture, 2 lab hours)

CANCER REGISTRY MANAGEMENT (CRM) 2306
Principles of Abstracting II
3 Credit Hours
Exploration of advanced abstracting protocols to assure timeliness, completeness and accuracy of data. Benchmarking of current research advances which impacts the management of cancer registry systems will be covered. Prerequisite: Cancer Registry Management 2304 with a grade of C or better, or equivalent or consent of instructor. (2 lecture, 2 lab hours)

CANCER REGISTRY MANAGEMENT (CRM) 2307
Professional Practice Experience
2 Credit Hours
Supervised professional practice (clinical) experiences in a variety of cancer registry settings. Application of cancer registry theory will be emphasized in the clinical setting. Prerequisite: Cancer Registry Management 2305 and 2306 with a grade of C or better, or equivalent. (1 lecture, 2 lab hours)

CENTRAL STERILE PROCESSING DISTRIBUTION

CENTRAL STERILE PROCESSING DISTRIBUTION (CSPD) 1111
Central Processing Distribution Technician
4 Credit Hours
This is a one semester certificate program that provides the student with the basic fundamentals of central processing, supplies, services, and distribution of hospital instrumentation, supplies, and equipment. This course will provide the student with didactic instruction and clinical practice in aseptic techniques, patient care concepts, and theories and practices of central services departments. Students who successfully complete the program will be eligible to sit for the International Association of Healthcare Central Service Material Management (IAHCSMM) National Certifying Examination. Prerequisite: Students must complete a background check, provide proof of health insurance, and complete mandatory health requirements including a chart review from designated health evaluator or consent of instructor. (2 lecture hours, 3 lab hours)

CHEMISTRY

CHEMISTRY (CHEMI) 0485
Basic Laboratory and Computation Chemist
3 Credit Hours
A study of the metric system, dimensional analysis, density, physical and chemical properties of matter, formulae, gas laws, stoichiometry, and acids and bases. Examination of the rules for presentation of graphical and calculated formats of laboratory measurements. (2 lecture hours, 2 lab hours)

CHEMISTRY (CHEMI) 1105 (IAI P1 903L)
Contemporary Chemistry
4 Credit Hours
Introduction to chemical concepts using practical issues and applications to illustrate the principles of chemistry. The language of chemistry, scientific method and measurement, experimentation with data collection, and current issues with application to chemical principles. One year of high school algebra is recommended. This course is not a prerequisite for Chemistry 1212. (3 lecture hours, 3 lab hours)

CHEMISTRY (CHEMI) 1137 (IAI P1 903L)
Concepts and Applications in Nanoscience
4 Credit Hours
Inter-disciplinary course combining elements of chemistry, physics and electronics, takes a non-mathematical approach to examine the fundamental scientific principles behind the new field of nanotechnology. The course is intended for non-science majors. The important future role of nanotechnology in society is discussed, using applications in the consumer world and industry involving materials and electronics. The course provides experience from theoretical, laboratory and laboratory simulation perspectives. (3 lecture hours, 3 lab hours)

CHEMISTRY (CHEMI) 1205 (IAI P1 903L)
Intro to Forensic Science & Chemistry
4 Credit Hours
Basic principles and uses of forensic science in the United States system of justice. Addresses the application of science to the processes of law, and involves the collection, examination, evaluation and interpretation of evidence. Applies chemical concepts to evidence and law. (3 lecture hours, 3 lab hours)

CHEMISTRY (CHEMI) 1211 (IAI P1 902L)
Survey of General Chemistry
5 Credit Hours
This is a one-semester survey of general inorganic chemistry intended for health science majors. Topics include: formula naming, atomic structure, stoichiometry, gas laws, solutions, equilibria, oxidation-reduction, acid-base theory, and nuclear chemistry. Not intended for science or engineering majors; not intended for pre-professional programs (e.g. pre-med). Prerequisite: Mathematics 0465 or Mathematics 0481 (or college equivalent) with a grade of C or better, or a qualifying score on the mathematics placement test or a qualifying A.C.T. math score. (4 lecture hours, 3 lab hours)

CHEMISTRY (CHEMI) 1212
Survey of Organic Chemistry
5 Credit Hours
Introduction to organic chemistry. Nomenclature, structure, physical properties, reactions, and synthesis of major organic functional groups. Intended for health science majors. Prerequisite: Chemistry 1211 or Chemistry 1551. (4 lecture hours, 3 lab hours)

CHEMISTRY (CHEMI) 1237
Scientific Concepts - Sustainable Energy
4 Credit Hours
Non-mathematical approach in examining a range of sustainable energy sources including wind, solar, ethanol, biodiesel, gasification, geothermal, hydrogen and fuel cells. Fundamental laws governing energy conversion in sustainable energy are introduced. Economic and environmental issues and the role of climate change in sustainable energy will be reviewed. Intended for students interested in a career in the renewable energy industry and non-science majors. Provides experience from theoretical, laboratory and laboratory simulation perspectives. (3 lecture hours, 3 lab hours)

CHEMISTRY (CHEMI) 1551 (IAI P1 902L/CHM 911)
Principles of Chemistry I
5 Credit Hours
This is the first course of a two-semester sequence of general chemistry for science and engineering majors. Topics include: measurement, the mole concept, composition and reaction stoichiometry, types of reactions, thermochemistry, atomic theories, chemical periodicity, bonding, molecular geometry, and properties and theories of the gaseous, liquid, and solid states. Laboratory includes both qualitative and quantitative analysis. Prerequisite: Mathematics 1428 (or college equivalent) or Mathematics 1431 (or college equivalent) with a grade of C or better, or qualifying score on the mathematics placement test or a qualifying A.C.T. math score and one year high school chemistry with a satisfactory grade or Chemistry 0485 (or college equivalent) with a grade of C or better. (4 lecture hours, 3 lab hours)

CHEMISTRY (CHEMI) 1552 (IAI CHM 912)
Principles of Chemistry II
5 Credit Hours
This is the second course of a two-semester sequence of general chemistry for science and engineering majors. Topics include: properties of solutions, chemical kinetics, equilibrium, acid-base theory and equilibria, solubility equilibria, electrochemistry, thermodynamics, coordination chemistry, and nuclear chemistry. Laboratory includes both qualitative and quantitative analysis. Prerequisite: Chemistry 1551 with a grade of C or better, or equivalent. (4 lecture hours, 3 lab hours)

CHEMISTRY (CHEMI) 1800
Special Project
1 to 3 Credit Hours
Special project courses in chemistry cover topics not otherwise covered by general education courses and other courses in the catalog for the chemistry discipline while building upon academic knowledge and skills acquired in introductory-level chemistry classes. These courses require direct experience and focused reflection in an in-depth study of a specific chemistry topic and/or the critical analysis of contemporary issues in chemistry. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30% but not to exceed 70%. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of chemistry concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.)

CHEMISTRY (CHEMI) 1820
Selected Topics I
1 to 3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 3 lecture hours)

CHEMISTRY (CHEMI) 1821
Selected Topics II
3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (2 lecture hours, 2 lab hours)

CHEMISTRY (CHEMI) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

CHEMISTRY (CHEMI) 2213
Introduction to Biochemistry
4 Credit Hours
Introduction of biochemical topics of carbohydrates, lipids, proteins, nucleic acids and their subsequent metabolism. Prerequisite: Chemistry 1212 or Chemistry 2551. (3 lecture hours, 3 lab hours)

CHEMISTRY (CHEMI) 2551 (IAI CHM 913)
Organic Chemistry I
5 Credit Hours
This is the first semester of a one-year course in Organic Chemistry for science and engineering majors. Topics include bonding principles, functional groups and their properties, isomerism, stereochemistry, nomenclature, synthesis and reactions of alkanes and cycloalkanes, alkenes, alkynes, alcohols, alkyl halides, and conjugated dienes. Mechanisms include addition, elimination, rearrangement, and substitution. Laboratory emphasizes small-scale techniques, separations, purifications, syntheses, and infrared and nuclear magnetic resonance spectroscopy. Prerequisite: Chemistry 1552 with a grade of C or better, or equivalent. (3 lecture hours, 6 lab hours)

CHEMISTRY (CHEMI) 2552 (IAI CHM 914)
Organic Chemistry II
5 Credit Hours
This is the second semester of a one-year course in Organic Chemistry for science and engineering majors. Topics include nomenclature, properties, reactions and synthesis of aromatics, organometallics, alcohols and thiols, phenols, ethers and sulfides, aldehydes and ketones, carboxylic acids and their derivatives, amines, carbohydrates, amino acids, proteins, and nucleic acids. Mechanisms include electrophilic aromatic substitution and nucleophilic addition. Laboratory emphasizes single and multi-step syntheses along with mass spectrometry, ultraviolet, and carbon-13 nuclear magnetic resonance spectroscopy with integrated spectral analysis. Prerequisite: Chemistry 2551 with a grade of C or better, or equivalent. (3 lecture hours, 6 lab hours)

CHEMISTRY (CHEMI) 2800
Special Project
1 to 3 Credit Hours
Special project courses in chemistry cover topics not otherwise covered by general education courses and other courses in the Catalog for the chemistry discipline. These course require direct experience and focused reflection in an in-depth study of a specific chemistry topic and/or the critical analysis of contemporary issue in chemistry. They are targeted to self-selected students with an interest in the subject matter involve active participation. The course delivery incorporates an experimental component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning and/or the practical application of chemistry concepts, theories, principle and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, filed preparation, logistics, etc.) Prerequisite: At least one course in Chemistry or consent of the instructor.

CHEMISTRY (CHEMI) 2820
Advanced Selected Topics I
1 to 3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: One other course in the discipline and consent of instructor. (1 to 3 lecture hours)

CHEMISTRY (CHEMI) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

CHEMISTRY (CHEMI) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

CHEMISTRY (CHEMI) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by

student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

CHEMISTRY (CHEMI) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

CHINESE

CHINESE (CHINE) 1100
Civilization and Culture of China
3 Credit Hours
This course is a brief introduction to the culture, history, political institutions, social, philosophical and economic development of China from ancient times to the present. Prerequisite: Course requires Reading Placement Test Score-Category One (3 lecture hours)

CHINESE (CHINE) 1101
Elementary Chinese I
4 Credit Hours
Introduction to standard, modern Mandarin Chinese: pronunciation, idiomatic expressions, speech patterns and characters for the beginning students. (4 lecture hours)

CHINESE (CHINE) 1102
Elementary Chinese II
4 Credit Hours
A continuation of CHINE-1101 with emphasis on listening, speaking, and reading and writing complex sentences. For students who have successfully completed Chinese 1101 or equivalent or three years of high school Chinese. (4 lecture hours)

CHINESE (CHINE) 1800
Special Project
1 to 3 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.). Prerequisite: Course requires Reading Placement Test Score-Category One.

CHINESE (CHINE) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

CHINESE (CHINE) 2201
Intermediate Chinese I
4 Credit Hours
This course is a continuation of CHINE-1102 with emphasis on further accuracy and comprehension in listening, reading, speaking, and writing. More Chinese characters are introduced. For students who have successfully completed Chinese 1102 or equivalent or four years of high school Chinese. (4 lecture hours)

CHINESE (CHINE) 2202 (IAI H1 900)
Intermediate Chinese II
4 Credit Hours
Continuation of Chinese 2201. More Chinese characters are introduced. For students who have successfully completed Chinese 2201 or equivalent or five years of high school Chinese. (4 lecture hours)

CHINESE (CHINE) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

CHINESE (CHINE) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

CHINESE (CHINE) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

CHINESE (CHINE) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

COMMUNICATIONS

COMMUNICATIONS (COMMU) 0441
Paragraph Development
1 Credit Hour
Basic course with practice in composing well-constructed paragraphs. Students write paragraphs in basic rhetorical forms using skills of effective organization, unity, detail and transition. Emphasis is on understanding paragraph components to write well-developed and coherent paragraphs. This course may be taken four times for credit. This course can only be taken on a pass/fail basis. (1 lecture hour)

COMMUNICATIONS (COMMU) 0443
Essay Organization
1 Credit Hour
Basic course in elements of essay organization and development. Students write essays utilizing writing process: invention, collection of supporting information, development of thesis statement, organization of ideas, multiple drafts/revisions and editing. Emphasis is on learning to write and organize essays with specific rhetorical devices, such as description, example and comparison/ contrast. This course may be taken four times for credit. This course can only be taken on a pass/fail basis. (1 lecture hour)

COMMUNICATIONS (COMMU) 0449
Term Paper Supplement
1 Credit Hour
Basic course reviewing essential skills in writing term papers. Students review skills through reading and practical exercises. Emphasis is on writing term papers using sound research and documentation methods. May be taken in conjunction with a course that requires a research paper. This course may be taken four times for credit. This course can only be taken on a pass/fail basis. (1 lecture hour)

COMPUTER & INTERNETWORKING TECHNOLOGIES

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 1100
PC Maintenance & Upgrading
2 Credit Hours
Introduction to maintaining and upgrading personal computers (PCs). System component identification, configuration, assembly and disassembly, upgrading procedures, basic troubleshooting techniques, and preventative maintenance are included. Prepares students for the CompTIA Strata certification. (1 lecture hour, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 1111
Computer and Hardware Maintenance
3 Credit Hours
Covers aspects of hardware support relating to personal computers (PCs) including system troubleshooting, system board, drive subsystems, memory, input/output devices, and multimedia. Prepares the student for the CompTIA A+ exam. Prerequisite: Computer and Internetworking Technologies 1100 with a grade of C or better or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 1112
Advanced System Maintenance
3 Credit Hours
Maintaining and servicing modern personal computer systems, with emphasis on advanced hardware, operating systems, troubleshooting, networks, printers, and other peripheral devices. Prepares the student for the CompTIA A+ exam. Prerequisite: Computer and Internetworking Technologies 1100 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 1113
Advanced Computer Maintenance Tools
2 Credit Hours
Covers advanced system maintenance with emphasis on maintaining and repairing laptop computers, data recovery, system restoral, virus detection and removal. Students will use the latest freeware tools with emphasis on using Knoppix as a troubleshooting tool. Prerequisite: Computer and Internetworking Technologies 1111 with a grade of C or better, or equivalent and Computer and Internetworking Technologies 1112 with a grade of C or better, or equivalent or CompTIA A+ Certification or consent of instructor. (1 lecture hour, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 1114
Apple MacOS Maintenance/Troubleshooting
3 Credit Hours
Introduction to configuring and maintaining the Apple Macintosh Operating System (MAC O/S). Troubleshooting, configuration and upgrading of Apple MAC operating systems will be covered. Prerequisite: Computer and Internetworking Technologies 1100, Computer and Internetworking Technologies 1111 and Computer and Internetworking Technologies 1112, all with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 1116
Network Essentials
3 Credit Hours
Course covers principles of wired and wireless network devices, configuration, and data network systems operation. Technologies such as mobile, cloud, and virtualization are also covered in this course. It also prepares the student for the CompTIA Network+ certification exam. Completion of Computer and Internetworking Technologies 1100 is recommended. (2 lecture hours, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 1120
Binary Numbers & Subnetting
2 Credit Hours
Introduction to numbering systems used in computers and networking systems. Binary, Hexadecimal numbering systems as well as subnetting, Variable Length Subnet Masks (VLSM), Classless Inter-Domain Routing (CIDR), Supernetting, Internet Protocol version 4 (IPv4), and an overview of IPv6. (2 lecture hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 1121
Introduction to Networks
3 Credit Hours
Current and emerging internetworking technologies. Including Open Systems Interconnect (OSI) reference model, binary numbers, hexadecimal numbers, address classes, Internet Protocol (IP) addressing and subnetting, protocols, standards, and cabling techniques. Completion of Computer and Internetworking Technologies 1120 or equivalent is recommended prior to enrollment. (2 lecture hours, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 1122
Routing and Switching Essentials
3 Credit Hours
Describe the architecture, components, and operations of routers and switches in a small network. Students learn to configure and troubleshoot routers and switches for basic functionality. Prerequisite: Computer and Internetworking Technologies 1121 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 1123
Scaling Networks
3 Credit Hours
Practical skills required to configure routers and switches for advanced functionality. The content of the course aligns with CISCO certification. Prerequisite: Computer and Internetworking Technologies 1122 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 1124
Connecting Networks
3 Credit Hours
Practical skills required to configure and troubleshoot network devices and resolve common issues with data link protocols. The content of the course aligns with Cisco certification. Prerequisite: Computer and Internetworking Technologies 1123 or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 1125
Cisco Certified Design Associate (CCDA)
3 Credit Hours
Design of routed and switched network infrastructures and services involving Local Area Network (LAN), Wide Area Network (WAN), and broadband access for businesses and organizations. After completion of this course students should be prepared to participate in the Cisco Certified Design Associate (CCDA) examination. Prerequisite: Computer and Internetworking Technologies 1124 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 1151
Wireless Network Administration
3 Credit Hours
Introduction to the design, implementation and maintenance of wireless networks. Topics include 802.11 standards, wireless radio technology, wireless topologies, access points, bridges, wireless security, site surveys, troubleshooting and antenna systems. Prerequisite: Computer and Internetworking Technologies 1121 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 1612
Windows PC Desktop Operating Systems
3 Credit Hours
Introduction to Microsoft Windows 8 operating system support. Topics include install, upgrade, and migrate Microsoft windows operating system, and configuration of hardware and software applications. Prepares students for Microsoft Certified Solution Associate (MCSA) certifications. (2 lecture hours, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 1613
Enterprise Desktp PC Support Technician
3 Credit Hours
Supporting Microsoft Windows operating system. Topics include managing and maintaining issues related to Microsoft PC windows operating system. Prepares students for Microsoft Certified Solution Associate (MCSA)certification. Prerequisite: Computer and Internetworking Technologies 1612 with a grade of C or better, or equivalent. (2 lecture hours, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 1640
Security Plus
3 Credit Hours
Information security principles providing participants tools for implementing and managing security in enterprise. Covers a broad review of information security, including terminology and overview of information security management. After completion of this course students should be prepared to participate in CompTIA Security+ examination. Prerequisite: Computer and Internetworking Technologies 1122 with a grade of C or better, or equivalent or Computer and Internetworking Technologies 1635 with grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 1645
Internet Telephony
3 Credit Hours

Covers aspects of converging voice, data, messaging, and video as well as emerging Voice Over Internet Protocol (VOIP) Technologies. Circuit switched and packet switched networks will be covered as well as related protocols. Prepares the student for the CompTIA Convergence+ certification exam. Recommended: Computer and Internetworking Technologies 1640 with a grade of C or better, or equivalent. Prerequisite: Computer and Internetworking Technologies 1121 with a grade of C or better, or equivalent. (2 lecture hours, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 1650

IT Project Plus

3 Credit Hours

Introduction to IT project management tools and methodology as needed for the CompTIA Project+ certification. Topics include project initiation, project planning, estimating and scheduling, team building, controlling cost, budgeting and resource allocation, project quality, and closure. (3 lecture hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 1710

Introduction to Servers

3 Credit Hours

Introduction to server hardware and software technologies and various types of server operating systems. Topics include server hardware, software, storage, disaster recovery, and troubleshooting. Prepare students for CompTIA server+ certification exam. The following courses are recommended prior to enrollment: Computer and Internetworking Technologies 1112 or Computer and Internetworking Technologies 1612. (2 lecture hours, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 1825

Selected Topics

2 Credit Hours

Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (2 lecture hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 1840

Independent Study

1 to 4 Credit Hours

Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline, and methods of evaluation in coordination with, and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 2170

Virtual PC-VMware Workstation

2 Credit Hours

Practical skills required to install and configure VMware virtual workstation. Topics include VMware workstation installation, guest operating system installation, snapshot creation, virtual machine cloning, team management and virtual machine networking. (1 lecture hour, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 2173

Virtualization: Install/Configure/Manage

3 Credit Hours

Develop practical skills required to install and configure VMware virtual vSphere. Topics covered include installation and configuration of ESX or ESXi, vCenter server, storage networking, vMotion, high availabilities and data protection. Prerequisite: Computer and Internetworking Technologies 1122 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 2175

Information Storage and Management

3 Credit Hours

Students in this course will develop practical knowledge and skills in information storage technologies. Students will learn about the architectures, features, and benefits of Intelligent Storage Systems; networked storage technologies such as Fiber-Channel Storage Area Network, IP Storage Area Networks, IP-SAN, Network Attached Storage. Students will engage with backup, replication and archiving, and information security. Prerequisite: Computer and Internetworking Technologies 1124 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 2241

Cisco Certified Network Professional-ROUTE

3 Credit Hours

Basic routing principles including route summarization, route redistribution, route optimization, Internet Protocol version 4 (IPv4) and IPv6. Routing protocols covered include Open Shortest Path First (OSPF), Enhanced Interior Gateway Routing Protocol (EIGRP), Border Gateway Protocol (BGP) and Layer 3 path control. Prerequisite: Computer and Internetworking Technologies 1124 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 2242

Cisco Certified Network Professional 2

3 Credit Hours

Media, devices, and protocols to build, configure, and troubleshoot a remote access network to interconnect central sites to branch offices and home offices. Includes configuring Digital Subscribe Line (DSL), MultiProtocol Label Switching (MPLS), Virtual Private Network (VPN), Site-to-site VPN, Cisco device hardening, and Cisco Intrusion Detection System (IDS) and Intrusion Prevention System (IPS) systems. Prerequisite: Computer and Internetworking Technologies 1124 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 2243

Cisco Certified Network Professional-SWITCH

3 Credit Hours

Basic and multi-layer switching configuration. Includes Spanning Tree Protocol (STP), Virtual Local Area Networks (VLANs), secure integration of VLANs, inter-VLAN routing, Hot-Standby Routing Protocol (HSRP), Virtual Router Redundancy Protocol (VRRP), wireless LANs, voice over internet protocol (VOIP), and security. Prerequisite: Computer and Internetworking Technologies 1124 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 2244
Cisco Certfd Netwk Professional-TSHOOT
3 Credit Hours
Methods and tools used to troubleshoot the following: Internet Protocol (IP) communication problems, IPv6 problems, Local Area Network (LAN) switch environments, Virtual Local Area Networks (VLANs) in router and switch environments, Enhanced Interior Gateway Routing Protocol (EIGRP), Open Shortest Path First (OSPF), and Border Gateway Protocol (BGP) problems. Prerequisite: Computer and Internetworking Technologies 2241 and Computer and Internetworking Technologies 2243, both with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 2251
CCNA Security
3 Credit Hours
Provides the knowledge and hands-on skills required to install, troubleshoot, and monitor Cisco security network devices. Students who complete this course will be prepared to sit for the Cisco Certified Networking Associate (CCNA) Security Certification exam which is a stepping stone for job roles such as network security specialist and network security administrator. CCNA Security certification is a prerequisite for becoming a Cisco Certified Security Professional (CCSP). Prerequisite: Computer and Internetworking Technologies 1122 with a grade of C or better, or equivalent or CCNA Certification or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 2410
CCNA Voice
3 Credit Hours
Basic operation and components involved in Voice Over Internet Protocol (VOIP). Configuration of IP phone, Cisco CallManager Express (CME) and Cisco Unity Express (CUE) solutions are covered. Prerequisite: Computer and Internetworking Technologies 1122 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 2510
Advanced Server 2012 Administration
3 Credit Hours
Administration of network server technologies and various types of server services with in-depth hands-on practice. Topics include server image, software, storage, disaster recovery, and troubleshoot. Prepare students for Microsoft Certified Solution Associate (MCSA) certification exam. Prerequisite: Computer and Internetworking Technology 1710 with a grade of C or better, or equivalent or Computer Information Systems 1620 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 2511
Adv Windows Server 2012 Configuration
3 Credit Hours
Advanced administration network server technologies and various types of server services with in-depth hands-on practice. Topics include iSCSI, file server resource manager, load balance, and failover. Prepare students for Microsoft Certified Solution Associate (MCSA) certification exam. Prerequisite: Computer and Internetworking Technology 1710 with a grade of C or better, or equivalent or Computer Information Systems 1620 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 2640
Ethical Hacking
3 Credit Hours
Introduces network security specialists to various methodologies used to attack a network and the countermeasures employed to prevent attacks. Exposes students to the various phases involved in hacking, attacks, countermeasures, and exploit categories. Concepts, principles and techniques are supplemented by hands-on exercises for attacking and disabling a network. The topics are presented in the context of properly securing the network. Prerequisite: Computer and Internetworking Technologies 1124 with a grade of C or better, or equivalent or Computer and Internetworking Technologies 1640 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 2651
Computer Forensics I
3 Credit Hours
Focuses on the preservation, identification, extraction, documentation and interpretation of computer data. Topics covered include evidence handling, chain of custody, collection, preservation, identification, and recovery of computer data using forensic recovery software and methods. Prerequisite: Computer and Internetworking Technologies 1111 and Computer and Internetworking Technologies 1112, both with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 2652
Computer Forensics II
3 Credit Hours
A continuation of Computer Forensics I. Extends the use of analysis software and forensics tools. Focuses on network and open source forensics tools. Prerequisite: Computer and Internetworking Technologies 2651 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 2710
Capstone: Computer Network Integration
3 Credit Hours
Capstone course assesses student competency and hands-on skills learned in Computer and Internetworking Technologies (CIT). Students focus on the integration of computer networks and produce a network portfolio. It is recommended that students take the capstone course in their last semester. Prerequisite: Computer and Internetworking Technology 1640 with a grade of C or better, or equivalent and Computer and Internetworking Technologies 2251 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 2840
Experimental/Pilot Class
1 to 6 Credit Hours
Exploration and analysis of topics within the discipline. This course is used to pilot a proposal for a permanent discipline course. This

course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (6 lecture hours, 12 lab hours)

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

COMPUTER & INTERNETWORKING TECHNOLOGIES (CIT) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

COMPUTER INFORMATION SYSTEMS

COMPUTER INFORMATION SYSTEMS (CIS) 0800
Learning Computer Basics
3 Credit Hours
Prepares students for computer related courses that do not require a prerequisite and develops computer skills for personal or professional growth. Theory and practice are integrated through a combination of instructor-led lessons and mandatory, guided, self-paced practice exercises. Topics include hardware, word processing, math utilized in spreadsheets, presentation software, basic Internet use and e-mail. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1110
Introduction to Informatics
2 Credit Hours
Prepares students for technological challenges prevalent in professions where human interaction is combined with information science, ethics, privacy, security, information processing, communication software, productivity software, and the transformation of data to information for decision making. (2 lecture hours, 1 lab hour)

COMPUTER INFORMATION SYSTEMS (CIS) 1120
The Internet
2 Credit Hours
Introduces the fundamental skills and knowledge needed to master and use the Internet. Provides an understanding of the concepts behind the Internet as a tool as well as hands-on activities using the Internet. Intended for a broad audience. (2 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1130
Windows Basics
2 Credit Hours
Introduction to the Windows operating system and its Graphical User Interface (GUI). Prerequisite: Basic computer mouse skills. (2 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1140
Web Technologies & Cloud Computing
3 Credit Hours
Introduces the use of dynamic Web applications that provide the ability to collaborate and share information online, creating a connective intelligence with data, concepts, applications, and ultimately people. Focuses on user perspective of social and professional networking, current Web technologies, and Cloud Computing applications. Benefits, risks, and areas of legal and ethical concerns are discussed. Prerequisite: Computer Information Systems 1110 or Computer Information Systems 1120 or Computer Information 1150 or equivalent or consent of instructor. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1150 (IAI BUS 902)
Understand Computers/Information/Systems
3 Credit Hours
An overview of the computing field and its typical applications. Covers key terminology and components of computer hardware, software and operating systems. Other topics include systems development methods, management information systems, programming languages, communications, networks, application software, the Internet and career opportunities. Microcomputer applications include word processing, spreadsheet, database, and presentation software. (3 lecture hours, 1 lab hour)

COMPUTER INFORMATION SYSTEMS (CIS) 1160
Windows Command Line
2 Credit Hours
Introduction to microcomputer operating systems. Provides an opportunity to work with the Microsoft Windows operating system command line. Includes the major components of an operating system, command syntax, disk format and management, internal/ external commands, file manipulation, directory structure, files and disk maintenance, configuration and batch files, and network connectivity. (2 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1180
Introduction to Networking
3 Credit Hours
Survey course in network management that provides the critical foundation of the theory and design of Local Area Networks (LAN). Includes network topologies, standards and protocols, LANs as nodes in larger networks in micro-to-mainframe links, the internet, wireless transmission, client-server, and an overview of security and Network Management and system administration. Prerequisite: Computer Information Systems 1150 or Computer Information Systems 1160 or consent of instructor. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1199
Introduction to Game Industry
3 Credit Hours
An introduction to video game industry and development. This course explores the history of games, the game development cycle, game careers, and the social impact of games. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1200
Game Design
3 Credit Hours
Survey of computer game and simulation design. Topics include design elements, user interface, game rules, genres and game media. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1201
Advanced Game Design
3 Credit Hours
Advanced exploration of game design and the different game genres. Topics will include storyboarding, story and game play, troubleshooting game design, logic flaws, and conceptualizing games for modding. Prerequisite: Computer Information Systems 1200 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1205
Office Ste SOFTWARE and Integration
3 Credit Hours
Introduction to the integrative aspects of business suite software. Concepts related to the creation and editing of word processing, spreadsheet, database, and graphics files. Includes the principles of document integration as it relates to suite applications and the integration of suite software to build web pages. Prerequisite: Computer Information Systems 1110 or Computer Information Systems 1130 or Computer Information Systems 1150 or consent of instructor. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1211
2D Game Development
3 Credit Hours
Computer game development including player controls, sound, music and animation. Two-dimensional games will be created using game editors and development tools. Recommended courses: Computer Information Systems 1200 and Computer Information Systems 1400. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1212
Game Asset Creation and File Optimization
3 Credit Hours
This course will cover the most up-to-date methods in developing functional audio and visual assets for games, as well as file optimization, file conversion and asset porting techniques. Topics in game asset creation and file optimization includes, functional 2D/3D asset creation, shaders, rigging, audio, file types, file conversions, file optimization, and file parting to game engines. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1221
Introduction to Spreadsheets
3 Credit Hours
Computerized spreadsheets, for database (list) operations, statistical analysis, and financial analysis, Includes planning and creating spreadsheets. Use of customization and automation features of software. Prerequisite: Computer Information Systems 1110, 1130, or 1150 or Office Technology Information 1200, or equivalent or consent of instructor. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1222
Advanced Spreadsheets
3 Credit Hours
Advanced features and analytical concepts for an electronic spreadsheet program. Customization, automation features, advanced data analysis, Business Intelligence (BI) tools, and summarization tools. Prerequisite: Computer Information Systems 1221 with a grade of C or better, or equivalent, or consent of instructor. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1230
Microcomputer Database Application
3 Credit Hours
Relational database management course using a Windows platform including database design, database creation, database maintenance, firm creation, report creation, query creation and macros creation. Instruction in application development and programming using a representative microcomputer database management package. Prerequisite: Computer Information Systems 1110 or Computer Information Systems 1130 or Computer Information Systems 1150 or consent of instructor. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1240
Presentation Graphics - Windows Based
2 Credit Hours
Introduction to the design and use of presentation graphics for microcomputers in a Windows-based environment. Includes basics of visual design, numeric charts, text charts, diagrams, organization charts, screenshow presentations and other advanced topics. Prerequisite: Computer Information Systems 1110 or Computer Information Systems 1130 or Computer Information Systems 1150 or consent of instructor. (2 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1250
Intro to Project Management Software
2 Credit Hours
Introduction to project management software to effectively control project development. Topics covered include application of software in planning, timelines, communication, resources, and costs. Prerequisite: Computer Information Systems 1150 or consent of instructor. (2 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1270
IT Proposals and Presentations
2 Credit Hours
Introduces tools and techniques used to develop and present effective proposals for IT projects. Audience identification, stakeholder classification and decision making criteria will be covered. Recommended: Computer Information Systems 1150 with a grade of C or better, or equivalent. (2 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1300
Web Design Software
3 Credit Hours
Creation of Web sites using Web design software such as DreamWeaver or FrontPage. Topics include Web site design, styles, graphics, tables, frames, forms, and layers. Prerequisite: Computer Information Systems 1120 and Computer Information Systems 1130 or Computer Information Systems 1150 or consent of instructor. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1310
HTML and CSS
3 Credit Hours
Creation of effective web pages using Hyper Text Markup Language (HTML) and Cascading Style Sheets (CSS). Includes web page and web site design concepts and preparation of graphics for the web. Primary focus on implementation of web design. Completion of Computer Information Systems 1110 and Computer Information Systems 1150 is recommended. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1315
Web Development for Educators
3 Credit Hours
Creation of an educational web site used within an academic environment using web design software, Hyper Text Markup Language (HTML) and Cascading Style Sheets (CSS). Prerequisite: Computer Information Systems 1110 or Computer Information Systems 1150 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1400
Programming Logic and Technique
4 Credit Hours
An introduction to computer-based problem-solving techniques. Includes software design tools such as structure charts, Input Processing Output (IPO) charts, flowcharts, pseudocode, and Unified Modeling Language (UML) diagrams. Concepts such as documentation, structured design, modularity, Object Oriented Program (OOP) design, and event driven programming are covered. Programming of algorithms are implemented using a high level language that emphasize structured and object oriented design techniques. Prerequisite: Mathematics 0482 with a grade of C or better, or equivalent or Mathematics 1115 with a grade of C or better, or equivalent or a qualifying score on the mathematics placement test or consent of instructor. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1450
Intro to Linux/Unix Operating Systems
3 Credit Hours
Introduction to Linux and Unix, two multi-user, interactive real-time operating systems. Includes the Linux graphical user interfaces, Linux applications, Linux/Unix utilities, file structures, text editors, regular expressions and the help system. Emphasis on building the foundation necessary to understand the capabilities of both the Linux and Unix operating systems and on developing the basic skills necessary to utilize these systems effectively. Prerequisite: Computer Information Systems 1150 or Computer Information Systems 1160 or Computer and Internetworking Technologies 1122 or equivalent or consent of instructor. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1510
Graphical User Interface Programming
4 Credit Hours
Introduction to event-driven programming in the Windows environment and design techniques used to create the Windows Graphical User Interface (GUI). Includes program design, program syntax and control structures, forms and controls. Prerequisite: Computer Information Systems 1130 and Computer Information Systems 1400 or consent of instructor. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1600
Fundamental Principles Operating Systems
3 Credit Hours
Fundamental principles of operating systems, process execution, scheduling, memory management, concurrent processes, distributed processing, deadlock, security, and related topics. Also examines current microcomputer, mid-range computer, and mainframe operating systems. The following courses are strongly recommended: Computer Information Systems 1130 and Computer Information Systems 1160. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1610
Windows Client OS
3 Credit Hours
Introduces theoretical and practical concepts of local area network on the Microsoft Windows desktop Operating System (OS). Includes installing and configuring the client OS, administering users, managing devices, organizing file system, establishing security, and installation and configuration of networking components. Covers network and performance monitoring tools provided by the OS and the establishment of baselines to troubleshoot problems. This course may be taken four times for credit as new versions are released. Prerequisite: Computer Information Systems 1180 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1611
Windows Vista Administration
3 Credit Hours
Introduces the theoretical and practical concepts of local area network on the Microsoft Windows Vista Operating System (OS). Includes installing and configuring the OS, administering users, managing devices, organizing file system, establishing security, and installation and configuration of networking components. Covers network and performance monitoring tools and establishes baseline for troubleshooting problems. Prerequisite: Computer Information Systems 1121 with a grade of C or better, or equivalent or Computer Information Systems 1180 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1620
Windows Server OS
3 Credit Hours
Introduces administration of the Windows server Operating System (OS). Includes nstalling and configuring server operating system, planning security, installing applications, backing up file system, using utilities, managing users, setting network printers, and troubleshooting. Also includes Terminal Services (TS) administration and Network Monitor installation and configuration as well as system recovery functions. This course may be taken four times for credit as new versions are released. Prerequisite: Computer Information Systems 1610 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1630
Windows Server Active Directory (AD)
3 Credit Hours
Advanced administrative course for Windows server, Active Directory Services (ADS) on the Windows network operating system. Includes network administration tasks and tools, management of user and group accounts, organization of shared folders, management of ADS, policy, security, and installation and management of Trees and Forests. This course may be taken four times for credit as new versions are released. Prerequisite: Computer Information Systems 1620 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1660
Managing Microsoft Windows Server Netwk
3 Credit Hours
Administration course for managing a Microsoft Windows Server network. Includes configuration, administration, and troubleshooting elements ranging from user accounts to server security. Covers how to create and manage network resources such as file, print and web resources as well as Active Directory (AD) objects. Prerequisite: Computer Information Systems 1620 or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1670
Planning a Microsoft Win Server Network
3 Credit Hours
Administration course for planning a Microsoft Windows Server network. Includes overview of network services. Plan for a network infrastructure, network data flow, configuration of routing and switching, Dynamic Host Configuration Protocol (DHCP), and Domain Name Services (DNS). Covers security, network access, server availability, certificates, and problem recovery. Prerequisite: Computer Information Systems 1620 or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1820
Selected Topics
1 to 3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as a different topic is selected each time. Prerequisites will vary depending upon the course contents. Skills attained in prerequisites are necessary for successful completion of the course. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2211
2D Game Scripting
3 Credit Hours
Introduction to 2D game development using a scripting language. Topics include sprite control, keyboard, mouse, controller, game play, and control of non-playable characters. Prerequisite: Computer Information Systems 1211 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2212
3D Game Development
3 Credit Hours
Computer game level development in three dimensions. Topics include assets, textures, lighting, and camera. Computer game levels will be created using three-dimensional editors and development tools. Recommended: Computer Information Systems 1211 or experience with 3Dimension development software. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2213
Advanced 3D Game Development
3 Credit Hours
Advanced topics in 3D game level design and development. Advanced materials, particles, sound, camera, animation, and specialized editors will be covered. Prerequisite: Computer Information Systems 2212 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2220
Game Programming Using C++
3 Credit Hours
Game programming using C++ libraries to create Windows-based games and simulators. Topics include player controls, sound, music, and animation. Prerequisite: Computer Information Systems 2542 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2230
Simulation and Serious Game Design
3 Credit Hours
Introduction to simulation and serious game design which may include military, academic, medical, and training applications. Prerequisite: Computer Information Systems 1201 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2240
Cross-Platform Game Design
3 Credit Hours
Development factors considered when designing a computer game across multiple platforms and devices. Topics include game design elements and development tools. Game platforms will be analyzed. Prerequisite: Computer Information Systems 1200 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2250
Multiplatform Game Programming
3 Credit Hours
Game programming for multiplatform development. Topics include player controls, sound, music, and animation. Prerequisite: Computer Information Systems 2541 or Computer Information Systems 2561 or equivalent. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2252
Advanced Multiplatform Game Programming
3 Credit Hours
Advanced programming for multiplatforms such consoles, phones, tablets, and/or hand-held devices. Prerequisite: Computer Information Systems 2250 or equivalent. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2260
Game Programming Cross-Platform
3 Credit Hours
Development factors considered when programming a computer game across multiple platforms and devices. Topics include memory, storage, system configuration, and development tools. Current game platforms will be analyzed. Recommended: C++ Programming experience. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2290
Game Development Capstone Project
4 Credit Hours
This course provides students with a real-life experience where students will design and develop marketable games

from conceptual design through marketable build using industry methodologies and development process that may include agile development process and Scrum methodologies. Topics in Pre-Production, Production and Post-Production phases will be covered. Prerequisites: Computer Information Systems 1211 with a grade of "C" or better, or equivalent and Computer Information Systems 2212 with a grade of "C" or better or equivalent or consent of instructor. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2320
JavaScript and Advanced HTML
3 Credit Hours
Creation of web pages using a combination of HTML, DHTML and JavaScript. Includes functions, event handling, control structure, Windows, form validation, animation, cookies and debugging. Prerequisite: Computer Information Systems 1310 and Computer Information Systems 1400 or consent of instructor. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2330
Introduction to XML
3 Credit Hours
An exploration of extensible Markup Language (XML) Web technology, highlighting the power of XML to structure data without regard to how the data will be presented. Prerequisite: Computer Information Systems 1310 or consent of instructor. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2331
Advanced XML
3 Credit Hours
Advanced study of eXtensible Markup Language (XML) Web technology. Covers latest XML technologies relating to XML document validation, query and processing. Also includes formal XML data models, XQuery, XSLT, and Document Object Model (DOM). Prerequisite: Computer Information Systems 2330 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2335
AJAX
4 Credit Hours
Advanced study in AJAX (Asynchronous JavaScript and XML) web development. Emphasis is on understanding and implementing basic AJAX techniques to develop highly responsive web pages. Students will examine the use of essential client-side libraries to implement AJAX applications that enhance the user experience and support effective application architecture. Prerequisite: Computer Information Systems 2320 with a grade of C or better, or equivalent and Computer Information Systems 2330 with a grade of C or better, or equivalent or consent of instructor. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2340
Common Gateway Interface (CGI)/Perl
4 Credit Hours
Introduction of CGI/Perl, a portable cross-platform, object-based scripting language using the Unix/Linux platform to write Perl scripts and use modules from the Perl module library. Includes simple data types, standard and file input/output, flow control, lists and arrays, regular expressions, subroutines and functions, objects and modules, Perl Database Interface (DBI), process management, security, and introduction to the Common Gateway Interface (CGI) and client-server applications. Prerequisite: Computer Information Systems 1450 and any Computer Information Systems 2000-level programming language or consent of instructor. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2350
Introduction to ASP.NET
4 Credit Hours
Introduction to web server programming. Includes server programming models, processing forms, creating dynamic web applications, working within the server application environment, debugging web applications, integrating with the file system and other components, interacting with data sources and other web services, using server programming tools, and developing web server applications. Prerequisite: Computer Information Systems 1310 and Computer Information Systems 1400 or consent of instructor. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2360
Intro to PHP Programming Language
4 Credit Hours
Introduces students to the PHP scripting language. Covers history of PHP and compares PHP with dynamic content alternatives such as Perl and CGI. Covers creation of basic PHP scripts, self referring forms, HTTP headers, passing of PHP variables via the URL, debugging, PHP functions, PH flow control and configuration. Prerequisite: Computer Information Systems 1400 with a grade of C or better, or equivalent or consent of instructor. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2411
Introduction to COBOL Programming
4 Credit Hours
Introduction to business programming on medium-to-large scale computers using COBOL. Emphasizes program structure, language syntax, sequential file processing, table handling, sorting procedures, and report logic with control breaks. Prerequisite: Computer Information Systems 1400 or consent of instructor. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2420
Microprocessor Assembly Language
4 Credit Hours
Introduction to the Assembly language of the Intel microprocessor-based microcomputer. Includes the architecture of the microprocessor, the instruction set, memory organization, data representation, and data manipulation. Recommended: Any computer programming experience. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2430
Mainframe Assembly Language
4 Credit Hours
Introduction to mainframe assembly language for IBM and IBM-compatible mainframe computer systems. Includes the architecture of the mainframe microprocessor, the instruction set, memory organization, data representation and data manipulation. Prerequisite: Computer Information Systems 1400 and any Computer Information Systems 2000-level programming language course or consent of instructor. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2440
Shell Programming for Unix/Linux
3 Credit Hours
Introduction to shell programming. Covers a variety of popular shells used in both UNIX and LINUX operating systems. Includes file security and permissions, filename substitution, shell standard input and output, redirection, file input and output, regular expressions, utilities such as grep, awk, sed and the login environment. Emphasis on shell programming, user defined and shell variables, flow control structures, shell functions, shell built-in commands, and the writing and executing of shell scripts.

Prerequisite: Computer Information Systems 1450 and any Computer Information Systems 2000 level-programming language course. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2450
UNIX System Administration
3 Credit Hours
Advanced course in the administration and maintenance of the UNIX operating system. Emphasizes UNIX system installation, management and maintenance, users' account control, file system and services, system performances, and security. Prerequisite: Computer Information Systems 1450 or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2455
LINUX System Administration
3 Credit Hours
Advanced course in the administration and maintenance of the LINUX operating system. Emphasizes LINUX system installation, management and maintenance, users' account control, file system and services, system performances, and security. Prerequisite: Computer Information Systems 1450 or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2480
FORTRAN for Scientific Programming Appl
3 Credit Hours
Comprehensive coverage of the FORTRAN programming language. Emphasis on design, programming and documentation of scientific applications, including statistical analysis, curve fitting, optimization and engineering, and scientific modeling applications. Prerequisite: Mathematics 2231. (or college equivalent) (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2485
C++ for Science and Engineering
3 Credit Hours
Development and application of the C++ language. Emphasis on object- oriented design, programming and documentation of scientific applications. Includes statistical analysis, curve fitting, optimization and engineering, and scientific modeling applications. Topics include language format and syntax, functions, data-storage classes, arrays, structures, introduction to user-defined classes, inheritance and polymorphism. Prerequisite: Mathematics 2231 or college equivalent. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2510
Adv Graphical User Interface Programming
4 Credit Hours
Advanced topics in event driven programming in the Windows environment. Prerequisite: Computer Information Systems 1510 or consent of instructor. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2521
Visual Basic .NET I
4 Credit Hours
Visual Basic .NET (VB.NET), a graphical user interface programming language, .NET Framework, Visual Studio .NET (VS.NET), object-oriented/event-driven programming, object-oriented programming(OOP) terminology, ActiveX Data Object (ADO).NET, and Active Server Page (ASP).NET. Emphasis on using .NET managed code. Prerequisite: Computer Information Systems 1510 with a grade of C or better, or equivalent or consent of instructor. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2541 (IAI CS 911)
C++ Language Programming
4 Credit Hours
Introduces C++ Language Programming, an object-oriented programming language. Includes C++ data types, operators, expressions, control structures, functions, arrays, pointers, strings, Abstract Data Types (ADTs), classes, inheritance, polymorphism, virtual functions and file input/output. Emphasis on building the foundation to understand the capabilities of the C++ programming language and the skills to develop practical procedural and object-oriented applications. Prerequisite: Computer Information Systems 1400 or consent of instructor. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2542 (IAI CS 912)
Adv C++ With Data Structure Application
4 Credit Hours
Covers advanced C++ Programming Language features with data structure applications. Includes object-oriented applications using classes, inheritance, encapsulation, polymorphism and other advanced C++ language features. Emphasis on the use of vectors, pointers, dynamic memory, lists, iterators, stacks, queues, linked lists, binary trees, associative containers, hashing, sequential file access, direct file access, recursive algorithms, sorting and searching techniques. Prerequisite: Computer Information Systems 2541 or consent of instructor. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2551
Introduction to MS Visual C++ .NET Prog
4 Credit Hours
Introduction to Visual C++ Graphical User Interface (GUI) programming, the Microsoft .NET Visual Studio, .NET Framework Library, and the Common Language Runtime (CLR). Includes Visual C++ Managed Extensions, control structures, methods, arrays, classes, Active Server Pages (ASP) .NET Web Services, database access, GUI windows forms, windows control, event handling/delegates, files and streams, multithreading, namespaces and assemblies. Emphasis is on building the foundation necessary to thoroughly understand the capabilities of .NET and object-oriented, event-driven client/server GUI software development. Prerequisite: Computer Information Systems 2542. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2552
Object-Oriented Program Development With
4 Credit Hours
Introduction to application development using Visual C++ .NET. Includes client/server model, the common object model, Active Template Library (ATL) components, Active Template Library servers, Active Data Object (ADO) and Object Data Base Connectivity (ODBC) technologies, Internet programming, Visual Basic integration, C# integration, managed and unmanaged C ++, and Extensible Markup Language (XML) services. The Unified Modeling Language (UML) is introduced as a design tool. Prerequisite: Computer Information Systems 2551 or consent of instructor. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2561
Introduction to C# .NET
4 Credit Hours
Introduction to C# .NET (pronounced C-sharp dot NET), an object-oriented, Graphical User Interface .NET programming language. Designed to introduce the .NET platform, the .NET Framework Library, C# control structures, methods, arrays, object-oriented programming, graphical user interface, strings, regular expressions, graphics, files, streams and data base access.

Emphasis is on building the foundation necessary to understand the capabilities of the C# programming language and the skills to develop Internet and World-Wide-Web based client/server applications. Prerequisite: Computer Information Systems 1510 or Computer Information Systems 2541 or consent of instructor. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2562
Advanced C# Programming
4 Credit Hours
Covers advanced C# programming language features with data structure applications. Includes object oriented applications using classes, inheritance, encapsulation, polymorphism, and other advanced features. Emphasis on the use of Windows Communication Foundation (WCF) Web Services, rich Internet applications, multimedia, data structures, generics, collections, and ASP.NET. Prerequisite: Computer Information Systems 2561 with a grade of C or better, or equivalent or consent of instructor. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2571
Introduction to Java
4 Credit Hours
Introduction to object-based problem solving in the Java language. Includes encapsulation, class design, objects, polymorphism, and Graphical User Interface (GUI) components. Prerequisite: Computer Information Systems 1400 with a grade of C or better, or equivalent or consent of instructor. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2572
Collections in Java
4 Credit Hours
Development of applications using the Java language. Emphasis on applications involving exception handling, images, animation, files, streams, recursion, generics, collections, containers, menus, toolbars, borders, layout managers, graph applications and data structures. Prerequisite: Computer Information Systems 2571 with a grade of D or better, or equivalent or consent of instructor. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2573
Advanced Java Technologies
4 Credit Hours
Development of applications using advanced Java technologies, including observers, multi-document interfaces, model-view-controllers, multi-threading, networking, Remote Method Invocation (RMI), Java Beans, Java database connectivity, servlets, and Java Server Pages (JSP). Prerequisite: Computer Information Systems 2572 with a grade of D or better, or equivalent or consent of instructor. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2591
Objective C
4 Credit Hours
Introduction to Objective-C programming language. Students will use XCode to enter, develop, and debug their programs under Mac OSX for iPhone/iPad application development. Prerequisite: Computer Information Systems 1400 with a grade of C or better, or equivalent or consent of instructor. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2592
iPhone/iPad Development
4 Credit Hours
Introduces iPhone /iPad Application Programming environment and use of Apple's System Development Kit (SDK) to develop and deploy applications on iPhone /iPad. Overview of Objective C, Cocoa Touch, User Interface (UI) framework, and use of various Application Program Interfaces (API) to build applications. Students will leave this class with knowledge to write simple iPhone/iPad application. Prerequisite: Computer Information Systems 2541 or equivalent, or consent of instructor. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2593
Android Application Development
4 Credit Hours
Introduces design and programming principles used in creating applications for Android, an open source software stack for mobile devices. Overview of the Android Application Framework, SDK (Software Development Kit), and guidelines for application design. Students will be able to create simple Android applications. Prerequisite: Computer Information Systems 2571 or equivalent, or consent of instructor. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2594
Adv iPhone/iPad Application Development
4 Credit Hours
Advanced course in iPhone/iPad application programming environment and use of Apple's System Development Kit (SDK) to develop and deploy data driven applications on iPhone/iPad. Topics include data modeling, databases using core data, SQLite and MySQL, interfaces to web services, database applications, debugging, application design and implementation of data driven applications. Prerequisite: Computer Information Systems 2592 or equivalent, or consent of instructor. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2595
Advanced Android Application Development
4 Credit Hours
Builds upon basic design and programming principles used in creating applications for Android, an open source software stack for mobile devices. Topics include creation of Android applications using advanced features, asynchronous processing, services, broadcasts, notifications, persistent data storage, mobile networking, advanced graphics and user interface features. Prerequisite: Computer Information Systems 2593 or equivalent or consent of instructor. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2610
Network Security
3 Credit Hours
Advanced administration course for Network Security on the Windows network operating system. Includes basics of Firewall, Intrusion Detection (IDS), virus scanning, attack/prevention methodologies, advanced security scenarios, Virtual Private Network (VPN), remote access, wireless security, security policy, and Microsoft security solutions. Prerequisite: Computer Information Systems 1630 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2620
Exchange Server
3 Credit Hours
Advanced administration course or Exchange Server, the mail system on the Windows network operating system. Includes installation and configuration of basic Exchange Server features, various Outlook clients, and advanced Exchange Server features. Create, publish and manage public folders, monitor Exchange Server performance and status, integrate Exchange with Microsoft

Mail, setup and configure Exchange/Internet security, and setup and maintain users and distribution lists. This course may be taken four times for credit as new versions are released. Prerequisite: Computer Information Systems 1620 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2630
MS SQL Server Administration
3 Credit Hours
Administration course for Microsoft Standard Query Language (MS SQL) Server, database system on Windows server network operating system. Includes installation and configuration of SQL Server, configuration of SQL Extensible Markup Language (XML) support in Internet Information Server (IIS), enterprise manager, and creating databases. Covers SQL database structure, physical data storage, transaction architecture, query analyzer, import and export data, profiler, bulk copy program, data transformation services, and replication. This course may be taken four times for credit as new versions are released. Prerequisite: Computer Information Systems 1620 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2650
MS SharePoint Portal
3 Credit Hours
Administrative course for a local intranet system based on Microsoft SharePoint Portal. This course covers tasks in planning, installing, configuring, and maintaining an intranet site. This course may be taken four times for credit as new versions are released. Prerequisite: Computer Information Systems 1620 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2710
Database Management
4 Credit Hours
Surveys micro, mini and mainframe database (DB) systems including physical and logical structures, data languages, and database design and administration. Includes client/server, Internet DB environments, data warehousing, Object-Oriented data modeling, On-line Analytic Processing (OLAP) and DB development. DB commercially available database systems are discussed and hands-on experience is given using a specific database system. Prerequisite: Any college-level programming class or consent of instructor. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2720
Structured Query Language (SQL) I
3 Credit Hours
Introduction to Structured Query Language (SQL) programming. Includes concepts of relational databases and SQL programming commands. Uses SQL statements to create and maintain database objects. One or more DataBase Management Systems (DBMS) are used. No prior SQL programming knowledge is required. Prerequisite: Computer Information Systems 1230 and Computer Information Systems 2710 or equivalent, or consent of instructor. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2725
Enterprise SQL Application
3 Credit Hours
Application of Structured Query Language (SQL) command statements on a vendor-specific Enterprise Database Management System (DBMS). Creation, maintenance and deployment of a database in an enterprise network environment. Covers writing stored procedures, triggers, Windows applications, Web applications. Essential Administrative information for developers is also introduced. Prerequisite: Computer Information Systems 2720 or equivalent, or consent of instructor. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2730
Enterprise Database Development
3 Credit Hours
Apply Structured Query Language (SQL) command statements on a vendor-specific Enterprise Database Management System (DBMS). Creation, maintenance and deployment of a database in an enterprise network environment. Essential administrative information for developers is also introduced. Prerequisite: Computer Information Systems 2720 or equivalent, or consent of instructor. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2735
Data Analytics and Visualization
4 Credit Hours
Focus of this course is to correctly use existing software products and gain an overview of current analytics tools in Business Intelligence (BI). Through hands-on labs, assignments and projects, this course teaches ways to build insightful and interactive dashboards using a variety of data sources. This hands-on course is designed for database professionals, data analysts, and professionals in business, social, health, and engineering fields. Prerequisite: Computer Information Systems 1221 with a grade of C or better, or equivalent and Computer Information Systems 1222 with a grade of C or better, or equivalent or consent of instructor. (4 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2770
Introduction to System Analysis & Design
3 Credit Hours
Concepts, tools and techniques required to analyze and design business information systems. Includes both Structured and Object approaches in covering the Systems Development Life Cycle (SDLC). Information systems in organizations, Structured and Object modeling, project plan development, financial models for cost/benefit analysis project failure analysis, and risk assessment models. Recommended: Any 2000-level programming course, advanced spreadsheet course or advanced database course. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2775
Information Technlogy Project Management
3 Credit Hours
Introduces principles of Project Management as defined by the Project Management Institute (PMI). Students gain hands-on experience with information technology project management procedures to increase basic familiarity with state-of-the-art project management processes. Prerequisite: Computer Information Systems 1400 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2790
Systems Analyst Simulation
3 Credit Hours
Case study and team-based simulation techniques using estimating tools and project management techniques to analyze client opportunities, develop payback scenarios, work plans and deliverables. Prerequisite: Computer Information Systems 2770 with a grade of C or better, or consent of instructor. (3 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2840
Experimental/Pilot Class
1 to 6 Credit Hours
Exploration and analysis of topics within the discipline. This course is used to pilot a proposal for a permanent discipline course. This course may be taken four times for credit as long as different topics are selected. Prerequisite: At least one course in the Computer Information Systems discipline. (1 to 6 lecture hours)

COMPUTER INFORMATION SYSTEMS (CIS) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

COMPUTER INFORMATION SYSTEMS (CIS) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

COSMETOLOGY

COSMETOLOGY (COSME) 1101
Introduction to Cosmetology
3 Credit Hours
Introduction to required safety and decontamination procedures in a salon. Business etiquette in the cosmetology field is introduced. Prepares student for state certification for the Illinois Cosmetology License from the Department of Professional and Financial Regulations. Prerequisite: Admission to the Cosmetology Program is required and concurrent enrollment in Cosmetology 1103, Cosmetology 1105, and Cosmetology 1107 or consent of instructor. Reading Placement Test Score-Category Two is required. (2 lecture hour, lab hours)

COSMETOLOGY (COSME) 1103
Chemical Services I
3 Credit Hours
Introduction to basic cosmetic chemical services including shampoo, scalp treatment, chemical texture, and hair color. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. Prerequisite: Admission to the Cosmetology Program is required and concurrent enrollment in Cosmetology 1101, Cosmetology 1105, and Cosmetology 1107 or consent of instructor. Reading Placement Test Score-Category Two is required. (2 lecture hours, 2 lab hours)

COSMETOLOGY (COSME) 1105
Hair Styling I
3 Credit Hours
Introduction to hairstyling and design techniques. Includes basic finger waving, braiding, extensions and hair roller placement. Prepares student for state certification for the Illinois Cosmetology License from the Department of Professional and Financial Regulations. Prerequisite: Admission to the Cosmetology Program is required and concurrent enrollment in Cosmetology 1101, Cosmetology 1103, and Cosmetology 1107 or consent of instructor. Reading Placement Test Score-Category Two is required. (1 lecture hour, 4 lab hours)

COSMETOLOGY (COSME) 1107
Thermal Styling I
3 Credit Hours
Introduction to thermal hair styling using the various thermal implements and techniques. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. Prerequisite: Admission to the Cosmetology Program is required and concurrent enrollment in Cosmetology 1101, Cosmetology 1103, and Cosmetology 1105 or consent of instructor. Reading Placement Test Score-Category Two is required. (1 lecture hour, 4 lab hours)

COSMETOLOGY (COSME) 1111
Hair Styling II
3 Credit Hours
Continued study of hairstyling techniques. Focuses on haircutting techniques using shears and razors. Basic principles of hair roller placement, set, and comb out are also covered. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. Prerequisite: Cosmetology 1107 with a grade of C or better, or equivalent and concurrent enrollment is required in Cosmetology 1113, Cosmetology 1115 and Cosmetology 1117 or consent of instructor. (1 lecture hour, 4 lab hours)

COSMETOLOGY (COSME) 1113
Chemical Services II
3 Credit Hours
Application of chemical texturing, relaxing and permanent waving. Application of hair color and lightening. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. Prerequisite: Cosmetology 1107 with a grade of B or better, and concurrent enrollment is required in Cosmetology 1111, Cosmetology 1115 and Cosmetology 1117 or consent of instructor. (1 lecture hour, 4 lab hours)

COSMETOLOGY (COSME) 1115
Salon Operations I
2 Credit Hours
Introduction to salon operations, effective communication, and sanitation management. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. Prerequisite: Cosmetology 1107 with a grade of B or better, and concurrent enrollment is required in Cosmetology 1111, Cosmetology 1113 and Cosmetology 1117 or consent of instructor. (1 lecture hour, 2 lab hours)

COSMETOLOGY (COSME) 1117
Esthetics and Nail Technology I
3 Credit Hours
Introduction to massage movements, facial techniques, hair removal, eyebrow arching, manicuring, and pedicuring. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. Prerequisite: Cosmetology 1107 with a grade of B or better, and concurrent enrollment is required in Cosmetology 1111, Cosmetology 1113 and Cosmetology 1115 or consent of instructor. (1 lecture hour, 4 lab hours)

COSMETOLOGY (COSME) 1120
License Review I
2 Credit Hours
Review all first-year curriculum to evaluate readiness for entry into the clinic portion of the cosmetology program. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. Prerequisite: Cosmetology 1117 with a grade of C or better, or equivalent. (1 lecture hour, 4 lab hours)

COSMETOLOGY (COSME) 1160
Nail Technology Theory I
3 Credit Hours
Introduction to the nail care profession. Topics include history of nail care, health and safety, basic nail care and introduction to nail enhancements. Prerequisite: Concurrent Enrollment is required in Cosmetology 1162. Reading Placement Test Score-Category Two is required. (3 lecture hours)

COSMETOLOGY (COSME) 1162
Nail Technology Lab I
3 Credit Hours
Instruction and supervised training in development of basic nail care skills. Topics include: manicuring, polish application, massage techniques, pedicuring, introduction to acrylic nail enhancements. Prerequisite: Concurrent Enrollment is required in Cosmetology 1160. Reading Placement Test Score-Category Two is required. (6 lab hours)

COSMETOLOGY (COSME) 1164
Nail Technology Professional Practice
2 Credit Hours
Nail technology professional best practices including: time management, personal and professional ethics, human resources, and communication skills. Prerequisite: Reading Placement Test Score-Category Two is required. (2 lecture hours)

COSMETOLOGY (COSME) 1166
Nail Salon Industry and Operations
2 Credit Hours
Examines key components of the nail salon industry and operations. Prepares student for state certification for the Nail Technology License from the Department of Financial and Professional Regulations. Prerequisite: Reading Placement Test Score-Category Two is required. (2 lecture hours)

COSMETOLOGY (COSME) 1168
Nail Technology Theory II
3 Credit Hours
Intermediate analysis of nail technology. Topics include anatomy and physiology, structure of the skin, disorders and diseases of the nail, and massage theory. Prerequisite: Cosmetology 1160 and Cosmetology 1162, both with a grade of B or better, or equivalent and concurrent enrollment in Cosmetology 1170 is required. Reading Placement Test Score-Category Two is required. (3 lecture hour)

COSMETOLOGY (COSME) 1170
Nail Technology Lab II
3 Credit Hours
Provides instruction and supervised training in development of skills in intermediate nail care. Topics includes specialty manicuring, pedicuring, sculptured nail enhancement, and application of nail fabrics. Prerequisite: Cosmetology 1160 and Cosmetology 1162, both with a grade of B or better, or equivalent and concurrent enrollment in Cosmetology 1168 is required. Reading Placement Test Score-Category Two is required. (1 lecture hour, 4 lab hours)

COSMETOLOGY (COSME) 1172
Nail Technology Theory III
2 Credit Hours
Advanced exploration of nail technology. Topics include: nail product chemistry, electricity, nail enhancements, nail artistry, and electric filing. Prepares student for Nail Technician Licensing Exam. Prerequisite: Cosmetology 1168 and Cosmetology 1170, both with a grade of B or better, or equivalent and Reading Placement Category Two is required. (2 lecture hours)

COSMETOLOGY (COSME) 1820
Selected Topics
1 to 4 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college course schedule. (1 to 4 lab hours).

COSMETOLOGY (COSME) 2201
Hair Styling III
3 Credit Hours
Principles of hair design including fingerwaving, skip waving and sculpture curls. Overview of hair composition, divisions, growth process, and loss. Clipper cutting techniques are also introduced. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. Prerequisite: Cosmetology 1117 with a grade of C or better, or equivalent and concurrent enrollment is required in Cosmetology 2203, Cosmetology 2205 and Cosmetology 2207 or consent of instructor. (1 lecture hour, 4 lab hours)

COSMETOLOGY (COSME) 2203
Chemical Services III
3 Credit Hours
Application of basic hair coloring, lightening and chemical texture on clients. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. Prerequisite: Cosmetology 1117 with a grade of B or better, or equivalent and concurrent enrollment is required in Cosmetology 2201, Cosmetology 2205 and Cosmetology 2207 or consent of instructor. (1 lecture hour, 4 lab hours)

COSMETOLOGY (COSME) 2205
Esthetics and Nail Technology II
3 Credit Hours
Application of manicures, pedicures, and facial massage in a salon with clients. Application of facial make-up and eyelash enhancement. Introduction to nail tips and wraps. Prepares student for state certification for the Cosmetology License

from the Department of Professional and Financial Regulations. Prerequisite: Cosmetology 1117 with a grade of B or better, or equivalent and concurrent enrollment is required in Cosmetology 2201, Cosmetology 2203 and Cosmetology 2207 or consent of instructor (1 lecture hour, 4 lab hours)

COSMETOLOGY (COSME) 2207
Salon Safety and Sanitation
2 Credit Hours
Application of safety and decontamination procedures in a salon with clients. Work in a clinic dispensary and take inventory of salon supplies. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. Prerequisite: Cosmetology 1117 with a grade of B or better, or equivalent and concurrent enrollment is required in Cosmetology 2201, Cosmetology 2203 and Cosmetology 2205 or consent of instructor (1 lecture hour, 2 lab hours)

COSMETOLOGY (COSME) 2221
Hair Styling IV
3 Credit Hours
Exploration of the various hairstyles, braiding techniques and uses and placement of artificial hair. Students will apply advanced techniques in hair cutting and wet hair styling on salon clients. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. Prerequisite: Cosmetology 2207 with a grade of C or better, or equivalent and concurrent enrollment is required in Cosmetology 2223, Cosmetology 2225 and Cosmetology 2227 or consent of instructor. (1 lecture hour, 4 lab hours)

COSMETOLOGY (COSME) 2223
Chemical Services IV
3 Credit Hours
Advanced procedures in chemical textures and hair removal. The role of chemistry, electricity and light therapy related to the field of cosmetology. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. Prerequisite: Cosmetology 2207 with a grade of B or better, or equivalent and concurrent enrollment is required in Cosmetology 2221, Cosmetology 2225 and Cosmetology 2227 or consent of instructor. (1 lecture hour, 4 lab hours)

COSMETOLOGY (COSME) 2225
Salon Operations II
3 Credit Hours
Management of salon routines and operations. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. Prerequisite: Cosmetology 2207 with a grade of B or better, or equivalent and concurrent enrollment is required in Cosmetology 2221, Cosmetology 2223 and Cosmetology 2227 or consent of instructor. (2 lecture hour, 2 lab hours)

COSMETOLOGY (COSME) 2227
Thermal Styling II
2 Credit Hours
Application of advanced thermal styling in a salon with clients. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. Prerequisite: Cosmetology 2207 with a grade of B or better, or equivalent and concurrent enrollment is required in Cosmetology 2221, Cosmetology 2223 and Cosmetology 2225 or consent of instructor. (1 lecture hour, 2 lab hours)

COSMETOLOGY (COSME) 2250
License Review
3 Credit Hours
Comprehensive review of cosmetology curriculum and skills in preparation for the Illinois State Board exam to complete the requirements for licensing. Prerequisite: Cosmetology 2227 with a grade of C or better, or equivalent and concurrent enrollment is required in Cosmetology 2253 or consent of instructor. (2 lecture hour, 2 lab hours)

COSMETOLOGY (COSME) 2253
Advanced Chemical Services II
2 Credit Hours
In depth study of the perming and hair color process. Prepares student for state certification for the Cosmetology License from the Department of Professional and Financial Regulations. Prerequisite: Cosmetology 2227 with a grade of C or better, or equivalent and concurrent enrollment is required in Cosmetology 2250 or consent of instructor. (1 lecture hour, 4 lab hours)

COSMETOLOGY (COSME) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

COSMETOLOGY (COSME) 2862
Internship (Career & Technical Ed)
2 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

COSMETOLOGY (COSME) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work

with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

CRIMINAL JUSTICE

CRIMINAL JUSTICE (CRIMJ) 1100 (IAI CRJ 901)
Introduction to Criminal Justice
3 Credit Hours
Students will study the development and principles of the American criminal justice system. An emphasis will be placed on the system's primary components of courts, police, and corrections and the relationship of these entities in the administration of criminal justice in the United States. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 1110
Police and Society
3 Credit Hours
Students will examine the role of police in a modern society including the functions, personnel systems, operations, management, and contemporary issues of municipal, county, state, and federal law enforcement. In addition, the historical and emerging roles of law enforcement as agents of formal social control will be discussed in addition to police and community relations. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 1112
Crime Prevention
3 Credit Hours
An overview of crime prevention strategies from an individual and community perspective, including a discussion and analysis of neighborhood watch programs, home security strategies and personal security tactics. School based and age-specific community crime prevention programs and the application of technology to crime prevention problems are discussed. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 1130 (IAI CRJ 911)
Introduction to Corrections
3 Credit Hours
An overview of the goals, structure and operations of correctional institutions; sentencing trends and alternatives to incarceration; probation and parole; inmate life, prisonization and institutionalization; jail administration and community correctional programs. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 1135
Gangs in Society
3 Credit Hours
Students will be provided an overview of the historic evolution of gangs in American society. An emphasis will be placed on theoretical explanations of why gangs exist and youth involvement in addition to society's and the criminal justice system's response to gang activities. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 1140
Principles of Security Administration
3 Credit Hours
An overview of security systems found in industrial, commercial, retail and governmental agencies; legal framework for security programs; internal business crime and its detection, apprehension and prevention. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 1141
Contemporary Issues in Private Security
3 Credit Hours
Theories, principles, and practices of private sector security and loss prevention in a post-9/11 world. Hazard and risk assessment methodology is addressed along with strategies for dealing with both internal and external threats. Industry best practices are incorporated throughout the course, while viewing the discipline of private security from both entry-level and management perspectives. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 1142
Private Security and Law Enforcement
3 Credit Hours
Theories and practices pertaining to the relationship between private security and public law enforcement. Exploration of how these professions share many of the same goals, such as preventing crime and disorder, identifying criminals, and ensuring the security of people and property. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 1145
Introduction to Homeland Security
3 Credit Hours
An overview of the evolution of the Department of Homeland Security (DHS) in the U.S. and surveys the major policies, practices, concepts and challenges confronting the field. An analysis of various organizations under the authority of DHS and an assessment of the current threats from international and domestic terrorism will be examined. Examination of government, private organizations, and citizens' involvement in protecting against and responding to terrorist threats. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 1146
Introduction to Border, Transportation,
3 Credit Hours
Forms of security including law enforcement that coincide with securing the United States from the potential threat of a terrorist attack. In particular, the areas of border security, transportation security, and overall physical security of persons and places will be emphasized. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 1147
Intro to Domestic & Internatl Terrorism
3 Credit Hours
Examination of the threat of domestic and international terrorism and the complex origins, motivations, ideologies, goals and tactics of various domestic and international terrorist groups. Cultural, religious and economic influences on terrorism will be considered. Topical issues including state, political, and revolutionary terrorism, religious and apocalyptic violence, weapons of mass destruction, and terrorist tactics and targeting, as well as the practical strategies and approaches of counterterrorism. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 1148
Emergency Management
3 Credit Hours
Examines theories, principles, and practices of emergency management, including the related processes of mitigation, preparedness, response, and recovery. Evolution of emergency management and its practical application within government and private sector will be addressed. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 1151
Constitutional Law
3 Credit Hours
Students explore the development and history of the Federal Constitution emphasizing the Bill of Rights. Students will be introduced to the substantive and procedural content of the federal amendments and corresponding state provisions with emphasis on recent court interpretations and trends. Prerequisite: Criminal Justice 1100 or equivalent or Criminal Justice 1152 or equivalent or consent of instructor. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 1152
Criminal Law
3 Credit Hours
Students will be introduced to the development of criminal law, its organizational components and processes, as well as its legal and public policy. Students will explore instruction on elements of a crime, substantive criminal law, criminal defenses, and accountability within the judicial process. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 1153
Rules of Evidence
3 Credit Hours
Students will explore physical and scientific evidence, witness competency, and the exclusionary rule. Students will be introduced to the rules governing the admissibility of evidence in Federal and state criminal courts. Prerequisite: Criminal Justice 1151 with a grade of C or better, or equivalent or concurrent enrollment in Criminal Justice 1151 or consent of instructor (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 1154
Substance Abuse and the Law
3 Credit Hours
Students will examine the most prevalent illicit and licit drugs through a historical, pharmacological, physiological assessment in order to understand their impact on the individual, their health, and society. Also reviewed are aspects of drug enforcement, adjudication, sentencing and treatment aspects as they relate to crimes involving substance abuse. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 1165
Computers and Criminal Justice
3 Credit Hours
A comprehensive overview of computer-related crimes, including related reactive and proactive investigative strategies; programs involving computer technologies developed and utilized by criminal justice investigators, analysts and other professionals. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 1210
Criminal Justice in the Media
3 Credit Hours
An examination of the intersection between criminality and justice and how public perception about criminal justice is influenced by mass media. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 1820
Selected Topics
3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 2030
Probation and Parole
3 Credit Hours
Study the history, development, organization, and operation of probation and parole and other community corrections methods as a strategy to address criminal offenders. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 2110
Continuity of Operations
3 Credit Hours
Explores the process for developing, implementing, exercising, and evaluating continuity of operations for government entities in the event of a disaster. Emphasis is on being able to continue to supply services to constituents and customers while supporting staff and initiating recovery operations. Prerequisite: Criminal Justice 1145 or Criminal Justice 1148 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 2120
Critical Incident Management
3 Credit Hours
Exploration of the role of various public safety personnel in managing disaster response operations. The nature of disaster, complexities of disaster response operations, and the roles and responsibilities of various emergency management personnel will be examined through case studies. Prerequisite: Criminal Justice 1145 with a grade of C or better, or equivalent or Criminal Justice 1148 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 2130
Disaster Management & Response
3 Credit Hours
Introduction to concepts, theories, principles, programs and requirements of emergency preparedness, governmental planning, practice, exercises, hazard and risk assessment, and team building. Students will also study the relationship of preparedness to response, emergency operations and incident command systems. Prerequisite: Criminal Justice 1145 with a grade of C or better, or equivalent or Criminal Justice 1148 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 2140
Intro to Intelligence-Homeland Security
3 Credit Hours
Overview of the history of intelligence for United States law enforcement officials who are charged with providing security for America to help prevent and respond to terrorist threats. Provides a basic understanding of the concepts, processes and disciplines associated with intelligence functions and operations in regards to Homeland Security. Prerequisite: Criminal Justice 1145 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 2150
Multiculturalism and Diversity
3 Credit Hours
Students will examine current issues and social problems relating to the administration of justice in a culturally diverse society. Emphasis will be placed on the development of new strategies for criminal justice personnel to meet the challenges presented by working within a diverse society. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 2160
Intro to Bio Security & Bio Terrorism
3 Credit Hours
Major biological and chemical agents used in bio terrorism including their warning signs and symptoms, the legal aspects of bio security, threats to the food supply, and the government's assets available to respond to such events. Prerequisite: Criminal Justice 1145 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 2230
Criminal Investigations
3 Credit Hours
Students will study the fundamentals of criminal investigations. The collection and preservation of evidence along with recording of crime scenes will be emphasized. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 2231
Criminology
3 Credit Hours
Students are introduced to theoretical explanations of crime, criminality, and society's response to antisocial and law violating behavior. Theories of crime causation are used to understand crime patterns, evaluate trends, and understand how social scientific inquiry impact research, theory, and public policy. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 2235
Basic Evidence Photography
3 Credit Hours
Basic police photographic techniques including legal and technical aspects of evidence photography. Application of photographic equipment, film and techniques to crime scene and evidence gathering problems. Additional emphasis placed on digital format photography, computer software and hardware, and digital video surveillance techniques. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 2240 (IAI CRJ 914)
Juvenile Delinquency
3 Credit Hours
Students will examine the historic context of juvenile delinquency in America. Theoretical perspectives of the causation of delinquency and criminal acts by juveniles will be studied and discussed. The overall treatment of juveniles as offenders and victims will be examined in addition to theoretical perspectives and prevention programs. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 2250
Police Organization and Administration
3 Credit Hours
Analysis of classical and current law enforcement organizational patterns, including an overview of the administrative processes within police agencies and management theories as applied to law enforcement administration. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 2260
Issues in Criminal Justice
3 Credit Hours
Contemporary critical issues related to crime and society; analysis and evaluation of recent studies and documents; methods of implementing research findings. Prerequisite: Criminal Justice 1100 or Sociology 1100. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 2310
Forensic Crime Scene Investigation
3 Credit Hours
Students will study techniques of forensic science as it relates to crime scene investigations. The procedures and practices of proper identification, collection, recording, preservation, and processing of evidence at crime scenes will be discussed. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 2410
Violent Crime
3 Credit Hours
Overview of theories to explain violence, methods used in the scientific study of violence, and important research findings about correlates, patterns, processes, and trends related to criminal violence. Exploration of case studies related to violence. Prerequisite: Criminal Justice 1100 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 2820
Selected Topics
3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Criminal Justice 1100 or consent of instructor. (3 lecture hours)

CRIMINAL JUSTICE (CRIMJ) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

CRIMINAL JUSTICE (CRIMJ) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

CULINARY ARTS

CULINARY ARTS (CULIN) 1101
Introduction to Culinary Arts
3 Credit Hours
Introduction to basic cooking methods. Identification and use of ingredients, handling of tools and equipment and cookery skills and techniques. Preparation of proteins, vegetables, grains, cold food items, stocks and soups. Prerequisite: Culinary Arts 1120 or equivalent or concurrent enrollment in Culinary Arts 1120 or consent of instructor. (6 lab hours)

CULINARY ARTS (CULIN) 1102
Regional American Cuisine
3 Credit Hours
Implementation of fundamental concepts and techniques of food preparation in a restaurant. Students learn stations in a commercial kitchen. Emphasis is on regional cuisine of the United States. Prerequisite: Culinary Arts 1101, or equivalent or consent of instructor. (6 lab hours)

CULINARY ARTS (CULIN) 1103
Fast Casual Dining Operations
2 Credit Hours
This course will teach students' techniques in a fast casual concept positioned between fast food and casual dining. Counter service will be emphasized through techniques: merchandising, up selling and customer service. Focus on front and back of the house positions in a fast casual restaurant. Prerequisite: Concurrent enrollment in Culinary Arts 1101 or Culinary Arts 1171 or consent of instructor. (4 lab hours)

CULINARY ARTS (CULIN) 1108
Culinary Measurements & Conversions
2 Credit Hours
Recipe costing and conversions for culinary applications. Yield tests and product assessments will also be covered. (2 lecture hours)

CULINARY ARTS (CULIN) 1109
Culinary and Baking Nutrition
1 Credit Hour
Introduction and application of basic nutrition concepts in menu planning. Emphasis is placed on the role of the culinary and baking professional in providing nutritious food. (1 lecture hour)

CULINARY ARTS (CULIN) 1110
Basic Nutrition
3 Credit Hours
Emphasis is placed on normal and clinical nutrition, including many aspects of diet therapy. Presents current information on the relationship of nutrition to health. (3 lecture hours)

CULINARY ARTS (CULIN) 1115
Foodservice Sanitation License
1 Credit Hour
Training in the management of sanitary methods of food handling in all segments of the food service industry. Recommended for Foodservice Industry professionals seeking the State of Illinois license for sanitation. This class will NOT meet the requirements for any of the Culinary & Hospitality Management degrees or certificates. (1 lecture hour)

CULINARY ARTS (CULIN) 1120
Sanitation
1 Credit Hour
Sanitation course provides training in sanitary methods of food handling in the hospitality industry. Prepares students for Illinois Department of Public Health manager certification. (1 lecture hour)

CULINARY ARTS (CULIN) 1170
Baking Science and Techniques
2 Credit Hours
Safe operation of baking equipment, proper food handling, identification and scaling units of measure are the focus of this course. Class topics will also include: heat transfer principles, ingredient function, methods, techniques and sensory properties of baked products. Prerequisite: Concurrent enrollment in Culinary Arts 1120 or consent of instructor. (4 lab hours)

CULINARY ARTS (CULIN) 1171
Baking Fundamentals
3 Credit Hours
Topics include baking techniques, terminology, ingredients, weights, measures and formula conversions. Focus will be on production techniques of breads, laminated doughs, quickbreads, cookies and pies. Prerequisite: Concurrent enrollment in Culinary Arts 1120 or consent of instructor. (6 lab hours)

CULINARY ARTS (CULIN) 1172
Pastry Fundamentals
3 Credit Hours
Focuses on methods and theory necessary for production of cake layers, buttercreams, tart doughs, tart fillings, custards, pate a choux, souffle's and piping skills. Prerequisite: Culinary Arts 1171, or equivalent or consent of instructor. (6 lab hours)

CULINARY ARTS (CULIN) 1173
Concept Development for Bakeries
2 Credit Hours
Examination of bakery business fundamentals. Concept identity, site selection, facility design, operations and merchandising will be discussed. Prerequisite: Concurrent enrollment in Culinary Arts 1172 or consent of instructor. (2 lecture hours)

CULINARY ARTS (CULIN) 1174
Cake Decorating Foundations
2 Credit Hours
Introduces techniques utilized in the decoration of cakes, pastries and confectionery items. Emphasis is placed on the skills required for cake decorating. (4 lab hours)

CULINARY ARTS (CULIN) 1175
Specialty Baking
3 Credit Hours
Introduces specialty baking for dietary restrictions. Emphasis on gluten free, low sugar and restricted diets. Students will bake and examine products specifically designed for dietary restrictions. Prerequisite: Culinary Arts 1171 or equivalent or consent of instructor. (6 lab hours)

CULINARY ARTS (CULIN) 1180
Introduction-Culinology and Food Science
2 Credit Hours
Introduction to the world of Culinology and Food Science for large food production. Emphasis will be placed on the blending of

taste and technology, the impact of food and food development processes. (1 lecture hour, 3 lab hours)

CULINARY ARTS (CULIN) 1185
Elements of Taste and Flavor
3 Credit Hours
An introduction to the five elements of taste: umami, sweet, salty, sour, and bitter. A variety of herbs, spices, vinegars, oils, and other products will be used in the research and development of recipes. Prerequisite: Culinary Arts 1101 or equivalent and Culinary Arts 1120 or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

CULINARY ARTS (CULIN) 1186
Food Manufacturing and Processing
2 Credit Hours
The study of ingredients and how they are used in the food manufacturing industry. Safety, sanitation and food preservation methods discussed. Prerequisite: Culinary Arts 1101 and Culinary Arts 1120 or equivalent or consent of instructor. (2 lecture hours)

CULINARY ARTS (CULIN) 1800
Special Project
1 to 3 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the catalogue for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30% but not to exceed 70% (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles, and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) This course may be taken four times for credit.

CULINARY ARTS (CULIN) 1822
Selected Topics
3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (1 lecture hour, 4 lab hours)

CULINARY ARTS (CULIN) 2000
Food Laws and Regulations
2 Credit Hours
Survey of federal regulations regarding labeling, additives, animal fabrication and preservatives for large food production. Food packaging standards are discussed. Prerequisite: Culinary Arts 1101 or equivalent and Culinary Arts 1120 or equivalent or consent of instructor. (2 lecture hours)

CULINARY ARTS (CULIN) 2152
Food, Beverage and Equipment Purchasing
3 Credit Hours
Standards of quality as applied to food, beverages, china, glassware, silver, linens, furnishings, equipment and supplies. Purchase specifications and the derivation of written standards are covered. (3 lecture hours)

CULINARY ARTS (CULIN) 2153
Garde Manger
2 Credit Hours
Proper techniques and procedures utilized in pantry and basic garde manger production. Preparation of salads, sandwiches, appetizers. Pickling and pate preparation. Prerequisite: Culinary Arts 1101 or equivalent or consent of instructor. (4 lab hours)

CULINARY ARTS (CULIN) 2154
Advanced Garde Manger
2 Credit Hours
Explores commercial meat fabrication, portion control and importance of safe sanitary butchery practice. Topics include terrine, fresh and fermented sausage preparation, and preservation techniques. Prerequisite: Culinary Arts 2153 with a grade of C or better, or equivalent or consent of instructor. (4 lab hours)

CULINARY ARTS (CULIN) 2176
Intermediate Baking & Pastry Production
4 Credit Hours
Techniques utilized in the production of advanced composed cakes including mousse, bavarian, entremet, verrine. Plated dessert will be emphasized. Prerequisite: Culinary Arts 1172 or equivalent or consent of instructor. (8 lab hours)

CULINARY ARTS (CULIN) 2177
Advanced Baking & Pastry Production
4 Credit Hours
This course will focus on the skills necessary to produce plated desserts, bonbon, candies and frozen desserts. Emphasis will be on methods and techniques, exploration of fruit and seasonality, flavor pairing, chocolate, sugar cookery, still frozen and churned frozen desserts. Prerequisite: Culinary Arts 2176 with a grade of C or better, or equivalent or consent of instructor. (8 lab hours)

CULINARY ARTS (CULIN) 2178
Artistic Chocolate and Sugar
3 Credit Hours
This course will introduce techniques utilized in the production of amenity and showpiece construction. Chocolate work, pastillage, blown and pulled sugar will be emphasized. Prerequisite: Culinary Arts 2176 with a grade of C or better, or equivalent or consent of instructor. (6 lab hours)

CULINARY ARTS (CULIN) 2179
Artisan Bread and Viennoiserie
3 Credit Hours
An exploration of the art, craft, and science of artisan breads and viennoiserie. Prerequisite: Culinary Arts 1171 with a grade of C or better, or equivalent or consent of instructor. (6 lab hours)

CULINARY ARTS (CULIN) 2180
Advanced Cake Decorating Techniques
2 Credit Hours
Development of advanced techniques utilized in the decoration of cakes and confectionery items. Techniques covered include: fondant, gum paste, royal icing, gelatin flowers, modeling chocolate flowers, airbrush and lace work. Prerequisite: Culinary Arts 1174 or equivalent or consent of instructor. (4 lab hours)

CULINARY ARTS (CULIN) 2205
International Cuisine
3 Credit Hours
Cuisines from around the world are researched, and prepared. Culture, history, and terminology of various international cuisines and their traditional and contemporary cooking techniques are covered. Prerequisite: Culinary Arts 1102 or equivalent or consent of instructor. (1 lecture hour, 4 lab hours)

CULINARY ARTS (CULIN) 2206
Asian Cuisine
3 Credit Hours
Research, planning, and preparation of menus based upon authentic Asian recipes and commercial styles of preparation. Emphasis on developing skills in the use of Asian hand tools and cooking equipment. The cuisines of Canton, Peking, Szechwan, Hunan, and Japan will be studied and prepared. (1 lecture hour, 4 lab hours)

CULINARY ARTS (CULIN) 2207
Culinary Arts: Mediterranean Cuisine
3 Credit Hours
Introduction to various cuisines of countries whose continents touch the Mediterranean Sea. Particular emphasis will be placed upon ingredient identification, cooking styles, and preparation techniques. Students will prepare numerous recipes of traditional foods with indigenous ingredients. Prerequisite: Culinary Arts 1120 or concurrent enrollment in Culinary Arts 1120 or consent of instructor. (6 lab hours)

CULINARY ARTS (CULIN) 2210
Contemporary a' la carte Cuisine
4 Credit Hours
Advanced culinary techniques including planning, preparation and execution of contemporary menu items. Students will rotate through stations in a traditional a' la carte kitchen. Prerequisite: Culinary Arts 1102 with a grade of C or better, or equivalent and Culinary Arts 2153 with a grade of C or better, or equivalent or consent of instructor. (8 lab hours)

CULINARY ARTS (CULIN) 2273
Pastry Arts: Baking and Patisserie III
4 Credit Hours
Advanced study of baking science, terminology, equipment, technology, ingredients, weights and measures, and formula conversions. Concentration on production techniques for advanced pastries, cakes, and tortes. Advanced decorating will also be stressed. Prerequisite: Culinary Arts 1172 or equivalent or consent of instructor. (8 lab hours)

CULINARY ARTS (CULIN) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

CULINARY ARTS (CULIN) 2863
Internship (Career & Technical Ed)
3 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 320 clock hours for two semester hours. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

CULINARY ARTS (CULIN) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

DANCE

DANCE (DANCE) 1100
Dance Appreciation
3 Credit Hours
Overview of various aspects of dance both as a concert theatre art form and as an entertainment. Emphasis placed on history, dancers, choreographers, trends, and major works of dance in the tradition of western civilization. Credit cannot be given for both Dance 1100 and Physical Education 1643. (3 lecture hours)

DANCE (DANCE) 1101
Ballet I
1 Credit Hour
Beginning ballet skills. Introduction to the movements and dance skills of classical and contemporary ballet, including basic positions, barre work, center floor work and simple dances. Credit cannot be given for both Dance 1101 and Physical Education 1611. (2 lab hours)

DANCE (DANCE) 1102
Ballet II
1 Credit Hour
A continuation of Ballet I. Further work on the movements and dance skills of classical and contemporary ballet with emphasis on intermediate and advanced skills. Credit cannot be given for both Dance 1102 and Physical Education 1612. Prerequisite: Dance 1101 or Physical Education 1611 with a grade of D or better or equivalent skill level or consent of instructor. (2 lab hours)

DANCE (DANCE) 1104
Modern Dance I
1 Credit Hour

Introduction to body awareness, and movement in space. Technique, placement, and creative experiences are included in this course. Concepts of dance composition are studied through improvisation, vocabulary, and special awareness. Credit cannot be given for both Dance 1104 and Physical Education 1624. (2 lab hours)

DANCE (DANCE) 1105
Modern Dance II
1 Credit Hour
A continuation of Modern Dance I. Further work on body awareness, and movement in space. Technique, placement, and creative experiences are included in this course. Concepts of dance composition are studied through improvisation, vocabulary, and spatial awareness. Credit cannot be given for both Dance 1105 and Physical Education 1625. Prerequisite: Dance 1104 or Physical Education 1624 with a grade of C or better, or equivalent skill level or consent of instructor. (2 lab hours)

DANCE (DANCE) 1107
Jazz I
1 Credit Hour
An introduction to the movements and dance skills characteristic of jazz dance. This course provides an opportunity to condition the body in the areas of muscle and cardiovascular endurance, coordination, rhythm and balance. Class consists of isolated body movements, technique work, basic steps, step combinations, and traveling movements across the floor. Credit cannot be given for both Dance 1107 and Physical Education 1621. (2 lab hours)

DANCE (DANCE) 1108
Jazz II
1 Credit Hour
A continuation of the movements and dance skills of Modern Jazz I. This course gradually adds advanced dance movements and step combinations. Increased opportunity for creative exploration and performance of jazz dance. Credit cannot be given for both Dance 1108 and Physical Education 1622. Prerequisite: Dance 1107 or Physical Education 1621 with a grade of C or better, or equivalent experience or consent of instructor. (2 lab hours)

DANCE (DANCE) 1110
Tap I
0.5 to 1 Credit Hours
An introduction to tap techniques and styles (including rhythm tap and Broadway tap) as well as historical origins and current trends. Emphasis on fundamental skills and rhythms, time steps, footwork, short combinations and styling. Credit cannot be given for both Dance 1110 and Physical Education 1623. (1 to 2 lab hours)

DANCE (DANCE) 1120
Dance Production and Performance
1 to 3 Credit Hours
Performance experiences as a dance company and practicum experience in production areas of theatre, dance, design technology, and theatre management. Students audition, rehearse, and perform dance in a college dance production. May be taken three times for credit. Credit cannot be given for both Dance 1120 and Physical Education 1644. This course may be taken four times for credit. Prerequisite: Consent of instructor is required. (2 to 6 lab hours)

DANCE (DANCE) 1122
Choreography and Composition of Dance
2 Credit Hours
Explores the process of using movement to give outward expression of inner sensations and feelings. Includes techniques for releasing tensions, developing imagery, improvisation, and discussion of aesthetic concepts. Credit cannot be given for both Dance 1122 and Physical Education 1642. Prerequisite: Dance 1101, Dance 1104, Dance 1107, Dance 1110, Dance 1120 or Physical Education 1611, Physical Education 1621, Physical Education 1623, Physical Education 1624 or Physical Education 1644 or equivalent, or consent of instructor. (1 lecture hour, 2 lab hours)

DANCE (DANCE) 1130
Dance Pedagogy
3 Credit Hours
Exploration of the key approaches to teaching dance. Provides practicum experience in the dance teaching process including study of instructional modes, dance learning styles, and factors affecting dance teaching and learning. Credit cannot be given for both Dance 1130 and Physical Education 1645. (2 lecture hours, 2 lab hours)

DENTAL HYGIENE

DENTAL HYGIENE (DEHYG) 1101
Principles in Dental Hygiene I
3 Credit Hours
Principles of disease transmission. Infection control policies, patient procedures, patient assessment and fundamental instrumentation for the dental hygienist. Foundation of knowledge and strategies of preventive dental hygiene practice. Emphasis on mechanical and chemical plaque control, use of fluoride and health promotion. Prerequisite: Admission into the Dental Hygiene program or consent of instructor. (3 lecture hours)

DENTAL HYGIENE (DEHYG) 1102
Principles in Dental Hygiene II
2 Credit Hours
Rationale for collection of assessment data and associated clinical procedures. Data collection. Use of instruments, dental sealants, topical fluorides, development of dental hygiene treatment plans. Introduction to direct patient care. Prerequisite: Admission to the Dental Hygiene program is required. Dental Hygiene 1101 with a grade of C or better or consent of instructor. (2 lecture hours)

DENTAL HYGIENE (DEHYG) 1105
Dental Materials/Expanded Functions
3 Credit Hours
Physical and chemical properties of dental materials, characteristics and manipulation of impression materials, gypsum products, investments, waxes, cements, resins, metallic and non-metallic restorative agents. Prerequisite: Admission to the Dental Hygiene program is required. Dental Hygiene 1101, 1115, 1120, 1125 and 1135; all with a grade of C or better or consent of instructor. (2 lecture hours, 3 lab hours)

DENTAL HYGIENE (DEHYG) 1112
Dental Radiology I
2 Credit Hours
Concepts of radiation history, radiation physics, radiation biology, radiation protection, dental X-ray equipment, film, image characteristics and film processing. Introduction to radiographic examination techniques. Prerequisite: Admission into the Dental

Hygiene program or consent of instructor. (1 lecture hour, 3 lab hours)

DENTAL HYGIENE (DEHYG) 1115
Dental Tooth Anatomy and Morphology
2 Credit Hours
Emphasis on clinical appearance of oral structures, dental terminology, morphology of the permanent and primary dentition, patterns, and the occlusion and malocclusion within and between the dental arches. Review of dental anomalies and other clinical appearances. Prerequisite: Admission into the Dental Hygiene program or consent of instructor. (1 lecture hour, 3 lab hours)

DENTAL HYGIENE (DEHYG) 1120
Preclinical Dental Hygiene I
1 Credit Hour
Integration of the scientific and clinical principles underlying the practice of dental hygiene. Clinical procedures and techniques for patient assessment, including: prevention of disease transmission, health history, extra and intraoral examination, gingival evaluation and periodontal examination. Operation of the dental unit and basic instrumentation techniques for the removal of plaque and calculus are presented. Prerequisite: Admission into the Dental Hygiene program or consent of instructor.

DENTAL HYGIENE (DEHYG) 1121
Clinical Dental Hygiene I
1 Credit Hour
Comprehensive examination procedures, charting and patient treatment. Adjunctive procedures are presented, dental caries preventive agent application and stain removal procedures. Integration of scientific and clinical principles underlying the practice of dental hygiene. Assessing, planning, implementing and evaluating dental hygiene care on patients in the clinical setting. Prerequisite: Admission into the Dental Hygiene program is required. Dental Hygiene 1120 with a grade of C or better or consent of instructor.

DENTAL HYGIENE (DEHYG) 1125
Head & Neck Anat: Histology & Embryology
2 Credit Hours
Organization, structure and function of the head and neck. Focus will be placed on histologic and embryologic development and structural microanatomy to gain an understanding of clinical and oral manifestations of the regions of the head and neck. Prerequisite: Admission into the Dental Hygiene program or consent of instructor. (2 lecture hours)

DENTAL HYGIENE (DEHYG) 1135
Applied Nutrition & Biochemistry
2 Credit Hours
Principles of nutrition and biochemistry applied to dental hygiene patient care. Skills in diet analysis and patient counseling. Prerequisite: Admission into the Dental Hygiene program or consent of instructor. (2 lecture hours)

DENTAL HYGIENE (DEHYG) 1136
General and Oral Pathology
2 Credit Hours
Pathology of the head and neck and oral structures. Specific pathologic processes, repair, healing and regressive changes. Developmental conditions, diseases of bacterial and viral origin, and neoplasms of the oral cavity. Prerequisite: Admission into the Dental Hygiene program is required. Dental Hygiene 1101, 1115, 1120, 1125 and 1135; all with a grade of C or better or consent of instructor. (2 lecture hours)

DENTAL HYGIENE (DEHYG) 1145
Medical Emergencies in a Dental Office
1 Credit Hour
Familiarity with critical steps in prevention, preparation, early recognition and appropriate management of common medical emergencies in the dental office. Prerequisite: Admission to the Dental Hygiene program is required. Dental Hygiene 1101, 1115, 1120, 1124 and 1135; all with grade of C or better or consent of instructor. (1 lecture hour)

DENTAL HYGIENE (DEHYG) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline, and methods of evaluation in coordination with, and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

DENTAL HYGIENE (DEHYG) 2201
Dental Hygiene Theory I
2 Credit Hours
Application of dental hygiene theory to direct patient care. Techniques and theory related to local anesthesia administration of local anesthetic agents. Emphasis of dental hygiene care of patients with various systemic, mental and physical disorders in the dental office setting. Introduction to use of heavy scaling hand instruments is included. Prerequisite: Admission into Dental Hygiene program is required. Dental Hygiene 1102 with grade of C or better or consent of instructor. (1 lecture hour, 3 lab hours)

DENTAL HYGIENE (DEHYG) 2202
Dental Hygiene Theory II
2 Credit Hours
Application of dental hygiene theory to direct patient care. Overview of dental hygiene care of patients with various systemic and mental disorders. Presentation of periodontal cases is included. Prerequisite: Admission into the Dental Hygiene program is required. Dental Hygiene 2201 with grade of C or better or consent of instructor. (2 lecture hours)

DENTAL HYGIENE (DEHYG) 2211
Periodontics I
2 Credit Hours
Periodontal anatomy. Physiology/etiology of periodontal diseases. Clinical, histopathogenesis of gingivitis/periodontitis. Role of genetics, tobacco use and systemic preventative/therapeutic procedures associated with diagnosis, prognosis, treatment and initial phase of periodontal therapy. Prerequisite: Admission into the Dental Hygiene Program is required. Dental Hygiene 1102, 1105, 1112, 1121, 1135 and 1145; all with a grade of C or better or consent of instructor. (2 lecture hours)

DENTAL HYGIENE (DEHYG) 2212
Periodontics II
2 Credit Hours
Description of clinical procedures associated with surgical phase of periodontal therapy. Evaluation of periodontal treatment, maintenance phase, and relationship between periodontics and other dental specialties. Discussion of clinical management of the

periodontum and adjunctive therapies. Prerequisite: Admission into the Dental Hygiene program is required. Dental Hygiene 2211 with a grade of C or better or consent of instructor. (2 lecture hours)

DENTAL HYGIENE (DEHYG) 2213
Dental Radiology II
2 Credit Hours
Advanced dental radiographic and related procedures including exposure and technique errors, occlusal and localization techniques, normal anatomy, panoramic films and radiography, extraoral radiography and digital radiography. Radiography for patients with special needs, introduction to radiographic interpretation: dental caries, periodontal disease, trauma and pulpal and periapical lesions. Introduction to forensic odontology. Prerequisite: Admission into the Dental Hygiene program is required. Dental Hygiene 1112 with a grade of C or better or consent of instructor. (1 lecture hour, 3 lab hours)

DENTAL HYGIENE (DEHYG) 2222
Clinical Dental Hygiene II
1 Credit Hour
Continuation of clinical dental hygiene practice. Includes assessment, planning and implementation of patient care. Adjunctive clinical services include dental sealants, ultrasonic scaling, air polishing, topical fluoride treatments and dental radiographs. Prerequisite: Admission into the Dental Hygiene Program is required. Dental Hygiene 1121 with a grade of C or better or consent of instructor.

DENTAL HYGIENE (DEHYG) 2223
Clinical Dental Hygiene III
2 Credit Hours
Continuation of clinical dental hygiene practice. Includes assessment, planning and implementation of patient care. Adjunctive clinical services include dental sealants, ultrasonic scaling, air polishing, topical fluoride treatments, amalgam polishing, application of desensitizing agents and dental radiographs. Introduction to outside rotational experiences. Prerequisite: Admission into the Dental Hygiene program is required. Dental Hygiene 2222 with grade of C or better or consent of instructor

DENTAL HYGIENE (DEHYG) 2224
Clinical Dental Hygiene IV
2 Credit Hours
Continuation of clinical dental hygiene practice. Includes assessment, planning and implementation of patient care. Adjunctive clinical services include dental sealants, ultrasonic scaling, air polishing, topical fluoride treatments, amalgam polishing, application of desensitizing agents and dental radiographs. Administration of topical and local anesthetic agents. Prerequisite: Admission into the Dental Hygiene program is required. Dental Hygiene 2223 with grade of C or better or consent of instructor.

DENTAL HYGIENE (DEHYG) 2225
Review of Dental Literature
1 Credit Hour
Review and evaluation of dental literature for the contemporary dental hygienist. Focus on research methodologies and statistical analysis as it applies to dentistry. Prerequisite: Admission into the Dental Hygiene Program is required or consent of instructor. (1 lecture hour)

DENTAL HYGIENE (DEHYG) 2232
Community Dental Health I
2 Credit Hours
Dental hygienist's role in community. Epidemiological concepts, trends in oral diseases, research assessment tools, and strategies to improve public access to oral health care. Review of biostatistics, federal and state agencies, and managed care. Prerequisite: Admission into the Dental Hygiene program is required. Dental Hygiene 2225 with grade of C or better or consent of instructor. (2 lecture hours)

DENTAL HYGIENE (DEHYG) 2233
Community Dental Health II
2 Credit Hours
Creation, implementation, and evaluation of a dental health care program in the community. Presentation of projects to faculty and peers. Prerequisite: Admission into the Dental Hygiene program is required. Dental Hygiene 2232 or grade of C or better or consent of instructor. (6 lab hours)

DENTAL HYGIENE (DEHYG) 2235
Dental Pharmacology & Local Anesthetics
2 Credit Hours
Classifications and varieties of drugs, pharmacologic effects, adverse reactions, usual indications and contraindications. Discussion of drugs utilized to treat common diseases. Pharmacokinetics of local and general anesthetic agents, and their use. Prerequisite: Admission into the Dental Hygiene program is required. Dental Hygiene 1115, 1125, 1135, 1136, 2211, and 2222; all with a grade of C or better or consent of instructor. (2 lecture hours)

DENTAL HYGIENE (DEHYG) 2245
Ethics and Jurisprudence: Practice Manag
2 Credit Hours
Preparation for professional role as health care provider and member of dental health team. Focus on ethical and legal responsibilities, dental practice act, malpractice issues, and scope of dental hygiene practice. Prerequisite: Admission into the Dental Hygiene program is required. Dental Hygiene 2201 with a grade of C or better and Dental Hygiene 2222 with a grade of C or better or consent of instructor. (2 lecture hours)

DENTAL HYGIENE (DEHYG) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

DENTAL HYGIENE (DEHYG) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of

employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE

DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE (DMIN) 1100
Basics of Nuclear Medicine
3 Credit Hours
History and evolution of Nuclear Medicine as an imaging modality. Radionuclide identification, radionuclide energies and half-lives, and commonly used radiopharmaceuticals for Diagnostic Nuclear Medicine procedures. Introduction to Diagnostic Nuclear Medicine procedures. Patient handling techniques and nursing and laboratory procedures relating to Nuclear Medicine. Introduction to professional medical ethics, legal issues and patient rights. Quality assurance procedures for the radiation protection of Nuclear Medicine personnel. Prerequisite: Admission to the Nuclear Medicine Technology program or consent of instructor. (3 lecture hours)

DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE (DMIN) 1101
Physics & Instrumentation Nuclear Medicn
6 Credit Hours
Principles of atomic structure, nomenclature and radiation. Introduction to radionuclides, physics of radiation (particulate and non-particulate), natural and artificial radiation, calculations of radioactive decay, exponential equations, calculation of radiation dosimetry, half-life equations, radionuclide production, radiopharmaceutical dose determinations, radiation interactions with matter, radiation protection and safety methodology, radiation shielding formulation and counting statistics. Basic aspects in imaging and non-imaging radiation detection instrumentation including: scintillation detectors, planar, SPECT (single photon emission computerized tomography), PET (positron emission tomography), multichannel analyzers, quality assurance testing for Nuclear Medicine instrumentation including G-M detectors, ionization chambers and scintillation detectors. Prerequisite: Admission to the Nuclear Medicine Technology program or consent of instructor. (4 lecture hours, 4 lab hours)

DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE (DMIN) 1102
Nuclear Medicine Radiopharmacy
6 Credit Hours
Nuclear Medicine radiopharmacy including: production of radionuclides, radiopharmaceutical chemistry, radiopharmaceuticals and methods of radiolabeling, characteristics of specific radiopharmaceuticals, biorouting and physiological mechanisms of tracer uptake, phamacokinetics, radiation units, specific activity, concentration determination, dose calculations, methods of dispensing, quality assurance of radiopharmaceuticals, and universal precautions. Specialized clinical radiopharmaceuticals include: monoclonal antibodies, peptides, receptors, Positron Emission Tomography, therapy, and current research. Radiopharmacy design, management and record keeping, radiation safety and Nuclear Regulatory Commission (NRC) and Illinois Emergency Management Agency (IEMA) radiopharmacy rules and regulations. Prerequisite: Admission to Nuclear Medicine Technology program and Diagnostic Medical Imaging Nuclear Medicine 1100, Diagnostic Medical Imaging Nuclear Medicine 1101, and Diagnostic Medical Imaging Nuclear Medicine 1111 or equivalent or consent of instructor. (4 lecture hours, 4 lab hours)

DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE (DMIN) 1103
Radiation Biology & Safety Bridge
2 Credit Hours
Topics in radiation biology will include qualitative and quantitative effects on the human body following exposure to various types of ionizing radiation, and the potential harmful effects and the benefits of the medical uses of radiation. Procedures for personnel and environmental monitoring, emergency management, decontamination, and proper methods of receiving, storing and disposing of radioactive materials. Basic concepts of radiation exposure reduction. Concepts of radiation safety for personnel, patients and the environment. Prerequisite: Admission to Nuclear Medicine Technology program or consent of instructor. (2 lecture hours, 1 lab hour)

DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE (DMIN) 1111
Clinical Nuclear Medicine I
3 Credit Hours
First in a three-course sequence of supervised clinical instruction in Nuclear Medicine Technology. Comprehensive study of imaging and non-imaging techniques, instrumentation quality control, patient care, radiopharmacy, computer analysis and quality assurance. Students are expected to demonstrate competency according to defined objectives at prospective clinical affiliates. Prerequisite: Admission to the Nuclear Medicine Technology program or consent of instructor.

DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE (DMIN) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Admission to the Nuclear Medicine Technology program and consent of instructor is required. (1 to 4 lecture hours)

DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE (DMIN) 2200
Nuclear Medicine Procedures II
4 Credit Hours
Applied anatomy and physiology of cardiovascular, skeletal, genitourinary, gastrointestinal, respiratory and endocrine systems. Diagnostic imaging techniques, radiopharmaceutical agents, indications and limitations of nuclear medicine procedures, normal and abnormal pathology, dosimetry. Computer acquisition and processing techniques. Case study critiques, journal review and case study presentations. Prerequisite: Admission to the Nuclear Medicine Technology program and Diagnostic Medical Imaging Nuclear Medicine 1100 and Diagnostic Medical Imaging Nuclear Medicine 1103 or consent of instructor. Admission to program is required. (3 lecture hours, 2 lab hours)

DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE (DMIN) 2202

Nuclear Medicine Procedures III

4 Credit Hours

Applied anatomy and physiology of the central nervous, immune, lymphatic, hematopoietic, exocrine, gastrointestinal systems. Non-imaging tests including Schilling's, Helibacter pylori and blood volume determination. Advanced topics in nuclear cardiology, tumor imaging, neurology, radioimmunoimaging, radioimmunotherapy and miscellaneous procedures. Diagnostic imaging techniques, radiopharmaceutical agents, indications and limitations of nuclear medicine procedures, normal and abnormal pathology, dosimetry. Computer acquisition and processing techniques. Case study critiques, journal review and case study presentations. Prerequisite: Admission to the Nuclear Medicine Technology program and Diagnostic Medical Imaging Nuclear Medicine 2200 or consent of instructor. (3 lecture hours, 2 lab hours)

DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE (DMIN) 2211

Clinical Nuclear Medicine II

3 Credit Hours

Second in a three-course sequence of supervised clinical instruction in Nuclear Medicine Technology. Comprehensive study of imaging and non-imaging techniques, instrumentation quality control, patient care, radiopharmacy, computer analysis and quality assurance. Students are expected to demonstrate competency according to defined objectives at prospective clinical affiliates. Prerequisite: Admission to the Nuclear Medicine Technology program and Diagnostic Medical Imaging Nuclear Medicine 1111 or consent of instructor.

DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE (DMIN) 2212

Clinical Nuclear Medicine III

3 Credit Hours

Third in a three-course sequence of supervised clinical instruction in Nuclear Medicine Technology. Comprehensive study of imaging and non-imaging techniques, instrumentation quality control, patient care, radiopharmacy, computer analysis and quality assurance. Students are expected to demonstrate competency according to defined objectives at prospective clinical affiliates. Prerequisite: Admission to the Nuclear Medicine Technology program and Diagnostic Medical Imaging Nuclear Medicine 2211 or consent of instructor.

DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE (DMIN) 2221

PET/CT

3 Credit Hours

Physics, instrumentation and radiochemistry of PET (Positron Emission Tomography). Quality assurance of the PET and PET-CT (computerized tomography) instrumentation. Physiological, biochemical and pharmacological mechanisms of PET radiopharmaceuticals. Radiation safety and protection. Clinical PET imaging in neurological, cardiovascular, oncological and psychiatric disorders. Image reconstruction and display protocols. Case study presentations and journal review. Prerequisite: Admission to the Nuclear Medicine Technology program and Diagnostic Medical Imaging Nuclear Medicine 2202 and Diagnostic Medical Imaging Nuclear Medicine 2211 or consent of instructor. (2 lecture hours, 2 lab hours)

DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE (DMIN) 2222

Nuclear Medicine Review Seminar

1 Credit Hour

Prepares students for the Nuclear Medicine Technology Certification Board Examination (NMTCB). Test taking tips and practice exams. Practical application of patient care, human anatomy and physiology, pathology, radiation biology, radiation protection, physics, instrumentation, radiopharmacy, in vivo and in vitro procedures, Diagnostic and Therapeutic Nuclear Medicine procedures, Positron Emission Tomography. Students will complete a registry review project and a mock registry. Prerequisite: Admission to the Nuclear Medicine Technology program and Diagnostic Medical Imaging Nuclear Medicine 2202 and Diagnostic Medical Imaging Nuclear Medicine 2211 or consent of instructor. (1 lecture hour)

DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE (DMIN) 2500

Sectional Anatomy and Pathology for Ct

3 Credit Hours

Students will be provided with a review of anatomy and pathology in Computed Tomography (CT) imaging planes. The characteristic appearance of each anatomical structure as it appears on CT images with pathologic and trauma processes is also covered. Prerequisite: Admission to the Computed Tomography Program is required or consent of instructor. (3 lecture hours)

DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE (DMIN) 2501

CT Principles & Patient Care

3 Credit Hours

Students are introduced to principles, procedures, and patient care specific to Computed Tomography (CT). Pediatric patient care and routine and emergency procedures are described. CT images are reviewed for quality, positioning, and illustration of anatomy. Prerequisite: Admission to the Computed Tomography Program is required or consent of instructor. (3 lecture hours)

DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE (DMIN) 2502

Physics and Instrumentation for Ct

3 Credit Hours

Students are provided with the physics and instrumentation principles specific to Computed Tomography (CT). CT image processing and display methods as well as patient factors affecting image quality are identified. Prerequisite: Diagnostic Medical Imaging Nuclear Medicine 2500 with a grade of C or better, or equivalent and Diagnostic Medical Imaging Nuclear Medicine 2501 with a grade of C or better, or equivalent. Admission to the Computed Tomography Program is required or consent of instructor. (2 lecture hours, 2 lab hours)

DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE (DMIN) 2503

Radiation SafetyQuality Mgmt. for CT

3 Credit Hours

Students will be introduced to necessary principles of radiation safety and quality management specific to Computed Tomography (CT). Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies, and health care organizations are described. Prerequisite: Diagnostic Medical Imaging Nuclear Medicine 2500 with a grade of C or better, or equivalent and Diagnostic Medical Imaging Nuclear Medicine 2501

with a grade of C or better, or equivalent. (2 lecture hours, 2 lab hours)

DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE (DMIN) 2511
Clinical Applications of CT I
3 Credit Hours
Students attend clinical rotations to connect theory with practice and performance of Computed Tomography (CT) procedures emphasizing proper patient care. Prerequisite: Admission to the Computed Tomography Program is required or consent of instructor. (6 lab hours)

DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE (DMIN) 2512
Clinical Applications of CT II
3 Credit Hours
Students complete clinical applications connecting theory with practice through the performance of advanced CT procedures. Prerequisite: Diagnostic Medical Imaging Nuclear Medicine 2511 with a grade of C or better, or equivalent. (6 lab hours)

DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE (DMIN) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

DIAGNOSTIC MEDICAL IMAGING NUCLEAR MEDICINE (DMIN) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 1100
Introduction to DMIR
2 Credit Hours
An introduction and overview of the field of radiography and radiation safety. This course requires a service learning component. (2 lecture hours)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 1111
Clinical Education I
1 Credit Hour
Applied radiography at assigned clinical education setting. Satisfies the clinical objectives and competency requirements listed in the Radiography program design for the first semester. Prerequisite: Admission to Diagnostic Medical Imaging Radiography program is required.

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 1112
Clinical Education II
2 Credit Hours
Applied radiography at assigned clinical education centers. Satisfies the clinical objectives and competency requirements as specified in the Radiologic program design for the second semester. Prerequisite: Diagnostic Medical Imaging Radiography 1111 and Diagnostic Medical Imaging Radiography 1131; all with grade of C or better, or equivalent or consent of instructor.

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 1113
Clinical Education III
2 Credit Hours
Applied radiography at assigned clinical education centers. Satisfies the clinical objectives and competency requirements as specified in the Radiography program design. Prerequisite: Admission to the Diagnostic Medical Imaging Radiography program is required. Diagnostic Medical Imaging Radiography 1112, Diagnostic Medical Imaging Radiography 1121 and Diagnostic Medical Imaging Radiography 1132; all with a grade of C or better, or equivalent or consent of instructor.

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 1121
Radiographic Equipment
4 Credit Hours
Elementary physical principles including systems of measurement, classical mechanics, structure of matter, electricity and magnetism, X-ray production, X-ray circuits, and radiographic and fluoroscopic systems. Prerequisite: Diagnostic Medical Imaging Radiography 1111 and Diagnostic Medical Imaging Radiography 1131; all with a grade of C or better, or equivalent or consent of instructor. (4 lecture hours)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 1122
Image Formation and Evaluation
5 Credit Hours
Advanced principles and applications of radiographic equipment. Radiographic image production, image quality, film processing, analog image receptors, digital image receptors, and production and control of scattered radiation. Prerequisite: Admission to the Diagnostic Medical Imaging Radiography program is required. Diagnostic Medical Imaging Radiography 1112, Diagnostic Medical Imaging Radiography 1121 and Diagnostic Medical Imaging Radiography 1132; all with a grade of C or better, or equivalent or consent of instructor. (4 lecture hours, 2 lab hours)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 1131
Radiographic Procedures I
4 Credit Hours
Radiographic patient care, terminology, routine radiographic positioning and radiographic image evaluation of the thorax, abdomen and urinary tract. Prerequisite: Admission to Diagnostic Medical Imaging Radiography Program or consent of instructor .(3 lecture hours, 2 lab hours)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 1132
Radiographic Procedures II
3 Credit Hours
Routine radiographic positioning and radiographic image evaluation of the upper and lower extremities, bony thorax, and digestive system. Prerequisite: Diagnostic Medical Imaging Radiography 1111 and Diagnostic Medical Imaging Radiography 1131; all with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 1133
Radiographic Procedures III
3 Credit Hours
Routine and special projections/methods of radiographic positioning and radiographic image evaluation of the head and neck, spine and pelvis. Prerequisite: Admission to the Diagnostic Medical Imaging Radiography program is required. Diagnostic Medical Imaging Radiography 1112, Diagnostic Medical Imaging Radiography 1121 and Diagnostic Medical Imaging Radiography 1132; all with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 1140
Ethics & Law Diagnostic Medical Imaging
1 Credit Hour
Provides a fundamental background in medical ethics and law specific to diagnostic medical imaging. Students will use actual case studies and clinical scenarios for application of topics discussed. Prerequisite: Admission to Diagnostic Medical Imaging Radiography program and Diagnostic Medical Imaging Radiography 1113, Diagnostic Medical Imaging Radiography 1122 and Diagnostic Medical Imaging Radiography 1133; all with a grade of C or better or equivalent or consent of instructor. (1 lecture hour)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 1145
Ethics, Law & Basic Pharmacology
1 Credit Hour
Provides the fundamentals in medical ethics, law, and pharmacology in Radiography Prerequisite: Diagnostic Medical Imaging Radiography 1113, Diagnostic Medical Imaging Radiography 1122 and Diagnostic Medical Imaging Radiography 1133; all with a grade of C or better or equivalent or consent of instructor. (1 lecture hour)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 1151
Basic Pharmacology
1 Credit Hour
Basic concepts of pharmacology, drug classification, indications and the types of reactions to diagnostic contrast agents and intravenous medications. Included are the theory of venipuncture and appropriate patient care during these procedures. Prerequisite: Admission to Diagnostic Medical Imaging Radiography program and Diagnostic Medical Imaging Radiography 1113, Diagnostic Medical Imaging Radiography 1122 and Diagnostic Medical Imaging Radiography 1133; all with a grade of C or better or consent of instructor. (1 lecture hour)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 2201
Radiation Physics, Biology & Protection
3 Credit Hours
Students will learn advanced radiological physics related to biological effects of ionizing radiation as well as principles in personal and patient radiation safety and protection. Prerequisite: Diagnostic Medical Imaging Radiography 1145 with a grade of C or better and Diagnostic Medical Imaging Radiography 2211 with a grade of C or better or consent of instructor. (3 lecture hours)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 2211
Clinical Education IV
1 Credit Hour
Applied radiography at assigned clinical education centers. Satisfies the clinical objectives and competency requirements as specified in the Radiography program design. Prerequisite: Admission to Diagnostic Medical Imaging Radiography program and Diagnostic Medical Imaging Radiography 1113, Diagnostic Medical Imaging Radiography 1122 and Diagnostic Medical Imaging Radiography 1133; all with a grade of C or better, or equivalent or consent of instructor.

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 2212
Clinical Education V
3 Credit Hours
Students will apply acquired skills in radiography at assigned clinical education centers. Students must satisfy the clinical objectives and competency requirements as specified in the Radiography program design. Prerequisite: Diagnostic Medical Imaging Radiography 1145 with a grade of C or better and Diagnostic Medical Imaging Radiography 2211 with a grade of C or better or consent of instructor.

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 2213
Clinical Education VI
3 Credit Hours
Applied radiography at assigned clinical education centers. Satisfies the clinical objectives and competency requirements as specified in the Radiography program design. Prerequisite: Admission to the Diagnostic Medical Imaging Radiography program is required. Diagnostic Medical Imaging Radiography 2201, Diagnostic Medical Imaging Radiography 2212 and Diagnostic Medical Imaging Radiography 2225; all with a grade of C or better or consent of instructor.

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 2220
Sectional Anatomy for Diagnostic Imaging
2 Credit Hours
Study of human anatomy as demonstrated in sectional planes seen in Computed Tomography (CT), Positron Emission Tomography (PET) and Magnetic Resonance Imaging (MRI). Comparison of planar anatomy to sectional anatomy through the use of diagrams and radiologic images. Emphasis is on anatomy of the head, neck, spine, thorax, abdomen, pelvis, and musculoskeletal system. Prerequisite: American Registry of Radiologic Technologists Certification and/or Nuclear Medicine Certification or consent of instructor. (2 lecture hours)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 2225
Basic Pathophysiology
3 Credit Hours

Students will learn basic concepts of pathology and the causes of disease in the body systems as illustrated by various diagnostic medical imaging disciplines. Prerequisite: Diagnostic Medical Imaging Radiography 1145 with a grade of C or better and Diagnostic Medical Imaging Radiography 2211 with a grade of C or better or consent of instructor. (3 lecture hours)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 2226
Advanced Pathophysiology
1 Credit Hour
Advanced study of pathophysiology in diagnostic medical imaging of the heart and vascular system, the hematopoietic system, central nervous system and the endocrine system. Included are radiographic interpretation, imaging techniques using the disciplines of Radiography primarily with new digital imaging systems, Computed Tomography, Magnetic Resonance Imaging, and also pathology illustrated using Diagnostic Medical Sonography, Nuclear Medicine Technology, and Positron Emission Tomography. Prerequisite: Admissdion to the program and consent of instructor is required. (1 lecture hour)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 2235
Quality Management in Diagnostic Imaging
2 Credit Hours
Teaches the student the advanced technical aspects of quality assurance and quality management. Includes analog film processing, digital image processing as well as radiographic equipment. Focus is on practical applications in the radiology department. Prerequisite: Admission to the Diagnostic Medical Imaging Radiography program is required. Diagnostic Medical Imaging Radiography 1151, Diagnostic Medical Imaging Radiography 2201, Diagnostic Medical Imaging Radiography 2211, and Diagnostic Medical Imaging Radiography 2225; all with a grade of C or better or consent of instructor. (1 lecture hour, 2 lab hours)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 2240
Radiographic Image Analysis
3 Credit Hours
Systematic approach for evaluating radiographic images to determine diagnostic quality. Review and correlation of previous subjects. Prerequisite: Admission to the Diagnostic Medical Imaging Radiography program is required. Diagnostic Medical Imaging Radiography 1151 and Diagnostic Medical Imaging Radiography 2201 and Diagnostic Medical Imaging Radiography 2212 and Diagnostic Medical Imaging Radiography 2225; all with a grade of C or better or consent of instructor. (3 lecture hours)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 2280
Radiography Review Seminar
1 Credit Hour
Overview of Radiography coursework in preparation for the national certification examination of the American Registry of Radiologic Technologists (ARRT) based on the content specifications. Content areas included are: radiation protection, equipment operation and maintenance, image production and evaluation, radiographic procedures, and patient care. Strategies in testing, test anxiety, and the computer-based test are included in the course. Prerequisite: Admission to Diagnostic Medical Imaging Radiography program, graduate of a Radiologic Technology program or consent of instructor. (1 lecture hour)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 2400
Clinical Applications of Mammography
2 Credit Hours
Experience in the performance of mammography exams, including patient preparation and education, interventional procedures and the required quality control tests described by the American College of Radiology (ACR) Mammography Quality Control Manual. Designed to meet or exceed the minimum competency requirements for certification by the American Registry of Radiologic Technologists (ARRT). Prerequisite: Admission to Diagnostic Medical Imaging Radiography program and ARRT certification or consent of instructor.

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 2402
Breast Anatomy, Physiology and Pathology
1 Credit Hour
Establishment of baseline knowledge in breast anatomy and physiology. Correlation between breast anatomic structures and mammographic anatomic structures. Introduction to breast viability, benign and cancerous pathology, and mammographic appearance. Prerequisite: Admission to Diagnostic Medical Imaging Radiography program or consent of instructor. (1 lecture hour)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 2403
Mammography Principles and Procedures
2 Credit Hours
Introduction to technologist-performed physical breast assessment. Preliminary patient assessment, physical breast assessment, and documentation of findings required for a comprehensive examination for imaging correlation of the breasts. A knowledge base of the various positions and projections in mammography along with the clinical data needed to perform the exam and positioning techniques for both screening and diagnostic mammography, including interventional procedures. Prerequisite: Admission to Diagnostic Medical Imaging Radiography program or consent of instructor. (1 lecture hour, 2 lab hours)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 2404
Mammography Quality Mgmt & Instrmentatn
2 Credit Hours
Introduction to mammography equipment along with mandated requirements governing use and factors that influence the production and recording of mammographic images. Accreditation and service delivery standards included. Prerequisite: Admission to Diagnostic Medical Imaging Radiography program or consent of instructor. (2 lecture hours)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 2600
Cardiac IV Procedures & Patient Care
3 Credit Hours
Overview of diagnostic, therapeutic, and conduction cardiac studies and percutaneous coronary intervention procedures. Hemodynamics and c calculations related to cardiac studies. Basic concepts of patient care and management for cardiac procedures and infection prevention. Prerequisite: Admission into the Cardiac Interventional Radiography Specialist Program or consent of instructor. (3 lecture hours)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 2602
Equipment & Instrumentation in CIVR
1 Credit Hour
Equipment and instrumentation utilized in cardiac interventional radiography studies. Prerequisite: Admission into the Cardiac Interventional Radiography Specialist Program or consent of instructor. (1 lecture hour)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 2604
Clinical Experience in CIVR
3 Credit Hours
Clinical experience in a dedicated cardiac catheterization laboratory setting. Students will perform the fundamental procedures required for certification in cardiac-interventional radiography. Prerequisite: Admission into the Cardiac Interventional Radiography Specialist program certified by the American Registry of Radiologic Technologists (ARRT) and licensed by Illinois Emergency Management Agency (IEMA) or consent of instructor. (6 lab hours)

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

DIAGNOSTIC MEDICAL IMAGING RADIOGRAPHY (DMIR) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 1100
Intro to Diagnostic Medical Sonography
3 Credit Hours
History of ultrasound including medical applications. Description of the roles, responsibilities and rules of the diagnostic medical sonographer. Introduction to the fundamental principles of the use and maintenance of ultrasound equipment. Indications of diagnostic sonography procedures, positioning, safety and image processing. Legal and ethical issues in an ultrasound department. Prerequisite: Admission to the Diagnostic Medical Imaging Sonography program or consent of instructor. (2 lecture hours, 2 lab hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 1101
Sonographic Physics & Instrumentation I
3 Credit Hours
Introduction to physics of acoustics and sonographic instrumentation. Production and types of sound waves discussed. Demonstration of propagation of ultrasound through tissues, transducers, pulse-echo instruments and display methods. Prerequisite: Admission to the Diagnostic Medical Imaging Sonography program or consent of instructor. (2 lecture hours, 2 lab hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 1102
Sonographic Physics & Instrumentation II
3 Credit Hours
Continuation of pulse-echo instrumentation including harmonics, image artifacts and color flow imaging with Doppler instrumentation. Bioeffects and safety in ultrasound imaging. Quality management applied to Sonography. Prerequisite: Admission to Diagnostic Medical Imaging Sonography program and Diagnostic Medical Imaging Sonography 1100 and Diagnostic Medical Imaging Sonography 1101 or consent of instructor. (2 lecture hours, 2 lab hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 1105
Intro to Pathophysiology for Sonographer
2 Credit Hours
Student will be introduced to physiological processes associated with disease and/or injury in the body systems. Pathology cases are illustrated with review of diagnostic medical imaging studies including Sonography, Computed Tomography, Magnetic Resonance Imaging, Radiography, and Nuclear Medicine. Prerequisite: Health Sciences 1110 with a grade of B or better, or equivalent and Anatomy and Physiology 1552 with a grade of B or better, or equivalent or Anatomy and Physiology 1572 with a grade of B or better, or equivalent or consent of instructor. (2 lecture hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 1110
Patient Care Skills for Sonographers
2 Credit Hours
Students will be introduced to patient care skills applied to the role of a Sonographer in an imaging department. Topics will include patient care skills, scanning ergonomics, patient confidentiality, and communication skills with hospital personnel as applied to all areas of sonography. Prerequisite: Health Sciences 1110 with a grade of B or better, or equivalent or concurrent enrollment in Health Sciences 1110 and Anatomy and Physiology 1552 with a grade of B or better, or equivalent or concurrent enrollment in Anatomy and Physiology 1552 or Anatomy and Physiology 1572 with a grade of B or better, or equivalent or concurrent enrollment in Anatomy and Physioloy 1572. (1 lecture hour, 2 lab hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 1112
Clinical Education II
3 Credit Hours
Students will participate in a clinical experience in Sonography at a health care institution. Students will apply concepts and skills learned in DMIS courses at the health care institution. Prerequisite: Admission to Diagnostic Medical Imaging Sonography program is required. Diagnostic Medical Imaging Sonography 1100 with a grade of C or better, or equivalent and Diagnostic Medical Imaging Sonography 1101 with a grade of C or better, or equivalent and Diagnostic Medical Imaging Sonography 1120 with a grade of C or better or equivalent. Clinical Education Sonography courses from other colleges under approved cooperative agreements.

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 1113
Clinical Education III
3 Credit Hours
Students will continue Sonography clinical experience in a health care institution. Students will continue applying concepts and skills

learned in DMIS courses at the health care institution. Prerequisite: Admission to program is required and Diagnostic Medical Imaging Sonography 1102, Diagnostic Medical Imaging Sonography 1112, Diagnostic Medical Imaging Sonography 1121 and Diagnostic Medical Imaging Sonography 1131 or consent of instructor or Clinical Education Sonography courses from other colleges under approved cooperative agreements.

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 1114
Clinical Education IV
3 Credit Hours
Students will continue Sonography clinical experience in a health care institution. Students will continue applying concepts and skills learned in DMIS courses at the health care institution. Prerequisite: Admission to the program is required and Diagnostic Medical Imaging Sonography 1113,with a grade of C or better, or equivalent or Clinical Education Sonography courses from other colleges under approved cooperative agreements.

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 1120
Sonographic Cross-Sectional Anatomy
3 Credit Hours
Introduction to the basics of cross-sectional anatomy as interpreted on diagnostic sonographic images. Sectional human anatomy in the transverse, sagittal and coronal planes. Correlation of anatomy with cadavers and ultrasound images. Prerequisite: Admission to the Diagnostic Medical Imaging Sonography program or consent of instructor. (2 lecture hours, 2 lab hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 1121
Fundamentals of OB/GYN I
3 Credit Hours
Students will be introduced to the female reproductive system as it relates to Sonography. Topics will include imaging in the first trimester of pregnancy and non-gravid uterus, review of ultrasound images of normal anatomy and pathology, ultrasound appearance of the cervix, uterus, fallopian tubes, ovaries, placenta, and fetus. Management of gynecologic infertility and post menopausal women will also be discussed. Prerequisite: Admission to program is required or consent of instructor. (2 lecture hours, 2 lab hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 1122
Fundamentals of OB/GYN II
3 Credit Hours
Students will be introduced to fetal ultrasound techniques in the second and third trimester. Topics will include multiple gestation pregnancies, antenatal syndromes, congenital fetal disorders, placenta, umbilical cord, and membrane conditions. Fetal growth assessment and management of growth disorders will also be discussed. Prerequisite: Admission to program is required and Diagnostic Medical Imaging Sonography 1121 wit a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 1131
Abdomen/Superficial Structures I
3 Credit Hours
Students will be introduced to abdominal cross-sectional anatomy with the use of ultrasound. Topics will include vascular and abdominal organ systems with normal and pathologic conditions. Ultrasound evaluations will include upper abdominal organs such as liver, and gallbladder and biliary tree, spleen, pancreas, great vessels, scrotum, prostate, and urinary tract. Prerequisite: Admission to program is required and Diagnostic Medical Imaging Sonography 1100 with a grade of C or better, or equivalent and Diagnostic Medical Imaging Sonography 1101 with a grade of C or better, or eqeuivalent and Diagnostic Medical Imaging Sonography 1120 with a grade of C or better, or equivalent. (2 lecture hours, 2 lab hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 1132
Abdomen/Superficial Structures II
2 Credit Hours
Continuation of anatomy and pathology of the abdominal and superficial structures in ultrasound imaging. Areas include: thyroid, parathyroid, breast, neck, thorax, gastrointestinal tract, musculoskeletal system, extracranial vessels and neonatal brain. Introduction of color flow Doppler techniques. Prerequisite: Admission to Diagnostic Medical Imaging Sonography program and Diagnostic Medical Imaging Sonography 1121, Diagnostic Medical Imaging Sonography 1131 and Diagnostic Medical Imaging Sonography 1141 or consent of instructor. (2 lecture hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 1140
Fundamentals of Breast Sonography
2 Credit Hours
Students will be introduced to the fundamentals of breast Sonography. This course reviews the identification of sonographic physics-related artifacts in normal and abnormal breast tissue and anatomy. Correlation with other imaging modalities and surgical techniques in breast pathology are also included. Prerequisite: Admission to program is required. Diagnostic Medical Imaging Sonography 1102 with a grade of C or better, or equivalent or Registered Diagnostic Medical Sonographer (ARDMS) or Registered Sonographer in ARDMS or ARRT. (2 lecture hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 1141
Case Study Critique I
1 Credit Hour
Students will present diagnostic medical ultrasound cases of normal and abnormal anatomy. Students will discuss imaging techniques and image quality of cases presented. Prerequisite: Admission to program is required and Diagnostic Medical Imaging Sonography 1100 with a grade of C or better, or equivalent and Diagnostic Medical Imaging Sonography 1101 with a grade of C or better, or equivalent or consent of instructor. (1 lecture hour)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 1142
Case Study Critique II
1 Credit Hour
Students will present advanced diagnostic medical ultrasound cases of normal and abnormal anatomy. Students will discuss imaging techniques and image quality of cases presented. Prerequisite: Admission to program is required and Diagnostic Medical Imaging Sonography 1131 with a grade of C or better, or equivalent and Diagnostic Medical Imaging Sonography 1132 with a grade of C or better, or equivalent and Diagnostic Medical Imaging Sonography 1141 with a grade of C or better, or equivalent or consent of instructor. (1 lecture hour)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 1151
Hands-On Scanning Lab 1
1 Credit Hour
Overview and emphasis of principles taught in DMIS-1100 in Abdominal/Superficial Structures and Obstetrics/Gynecology. Students perform hands-on scanning techniques in the scanning lab. Various scanning techniques are demonstrated on fellow students under the guidance of the instructor. Proper techniques in manipulating the transducer probe are demonstrated. Identification of organ systems and corresponding ultrasound images.

Prerequisite: Admission to Diagnostic Medical Imaging Sonography Program or consent of instructor. (2 lab hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 1152
Hands-On Scanning Lab 2
1 Credit Hour
Course will expand on principles of Abdominal/Superficial Structures and Obstetrics/Gynecology. Students will perform advanced hands-on scanning techniques utilizing proper manipulation of transducer probes. Prerequisite: Admission to program is required. Concurrent enrollment is required in Diagnostic Medical Imaging Sonography 1151 or consent of instructor. (2 lab hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 1153
Hands-On Scanning Lab 3
1 Credit Hour
Continuation of principles taught in Diagnostic Medical Imaging Sonography 1152 in Abdominal/Superficial Structures and Obstetrics/Gynecology. Emphasis placed on advanced skills in obstetrical scanning. Students perform hands-on scanning techniques on volunteer patients under the guidance of the instructor. Proper techniques in manipulating the transducer probe are demonstrated. Identification of organ systems and corresponding ultrasound images. Prerequisite: Admission to Diagnostic Medical Imaging Sonography program and Diagnostic Medical Imaging Sonography 1152 or consent of instructor (2 lab hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 1154
Hands-On Scanning Lab 4
1 Credit Hour
The course will expand on principles of Abdominal and Superficial Structures and Obstetrics and Gynecology. Students will perform advanced hands-on scanning techniques utilizing proper manipulation of transducer probes. Emphasis will be placed on students demonstrating their scanning skills on patient volunteers. Prerequisite: Admission to the program is required. Diagnostic Medical Imaging Sonography 1153 with a grade of C or better, or equivalent or consent of instructor. (2 lab hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 1160
Legal Issues of Health Care-Sonography
1 Credit Hour
Students will be introduced to the legal system as it applies to the medical field. Medical malpractice cases will be reviewed and discussed. Students will be taught how to protect themselves from becoming involved in a medical malpractice case. Prerequisite: Admission to the program is required. Diagnostic Medical Imaging Sonography 1121 with a grade of C or better, or equivalent and Diagnostic Medical Imaging Sonography 1131 with a grade of C or better, or equivalent or consent of instructor. (1 lecture hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 1820
Selected Topics I
1 to 3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Currently enrolled in the Diagnostic Medical Imaging Sonography Program or consent of instructor. (1 to 3 lecture hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 1822
Selected Topics III
1 to 3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Currently enrolled in the Diagnostic Medical Imaging Sonography Program or consent of instructor. (1 lecture hour, 2 to 4 lab hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 1823
Selected Topics IV
1 to 3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Admission to Diagnostic Medical Imaging Sonography program or consent of instructor. (2 to 6 lab hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 1824
Selected Topics V
1 to 2 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Currently enrolled in the Diagnostic Medical Imaging Sonography program or consent of instructor. (1 to 2 lecture hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 1826
Selected Topics VII
1 Credit Hour
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in the college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Currently enrolled in the Diagnostic Medical Imaging Sonography program or consent of instructor. (2 lab hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 2200
Vascular Hemodynamics and Physics
2 Credit Hours
A review of the circulatory system blood as fluid, and how blood circulates. A description of the various forms of energy and how they affect blood movement will be covered. The principles of blood movement, conduits and circulation will be examined along with laboratory demonstration of these principles. The Doppler effect and the Doppler will be explained and applied. Various Doppler Instruments used to assess blood flow in vascular ultrasound will be reviewed and utilized in class and lab. Prerequisite: Admission to Diagnostic Medical Imaging Sonography program is required. (1 lecture hour, 2 lab hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 2201
Abdominal and Peripheral Arterial
3 Credit Hours
Evaluation of blood vessels, their purpose and composition, detailed physiology of the arterial blood flow system and ultrasound testing with direct and indirect methods. Arterial anatomy of the abdomen, pelvic, and upper extremities as well as the lower extremities will be reviewed. Diseases of the arterial system and their effects will be addressed with indications for ultrasound arterial examinations and treatments. Prerequisite: Admission to Diagnostic Medical Imaging Sonography program and concurrent enrollment required in Diagnostic Medical Imaging Sonography 2221 or consent of instructor. (3 lecture hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 2203
Cerebrovascular Ultrasound
2 Credit Hours
Overview of the purpose and composition of blood vessels and the physiology of the cerebrovascular system. Cerebrovascular anatomy are reviewed. Disease of the cerebrovascular system are addressed with the indications for ultrasound cerebrovascular examinations. A review and demonstration of cerebrovascular ultrasound testing and findings and other laboratory modalities. Treatments for various diseases of the cerebrovascular system are addressed. Cerebrovascular testing as a part of ongoing, post-intervention patent management are included. Prerequisite: Admission to Diagnostic Medical Imaging Sonography program and concurrent enrollment required in Diagnostic Medical Imaging Sonography 2223 or consent of instructor. (2 lecture hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 2204
Abdominal and Peripheral Venous
2 Credit Hours
Overview of the purpose and composition of blood vessels and the physiology of the venous blood flow system. Venous anatomies of the abdomen, pelvis, upper extremities, as well as the lower extremities are addressed. Diseases of the venous system, their effects and indications for ultrasound venous examinations are included. An overview of the abdominal and peripheral venous ultrasound testing, their findings and other laboratory modalities. Treatments for various diseases of abdominal and peripheral venous systems are reviewed. Prerequisite: Admission to Diagnostic Medical Imaging Sonography program and concurrent enrollment required in Diagnostic Medical Imaging Sonography 2224 or consent of instructor. (2 lecture hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 2212
Clinical Education - Vascular Imaging 1
3 Credit Hours
Students will participate in a clinical experience in vascular sonography at a health care institution. Students will apply concepts and skills learned in DMIS vascular courses at the health care institution. Prerequisite: Admission to the program is required. Clinical Education Vascular Sonography courses from other colleges under approved cooperative agreements.

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 2213
Clinical Education - Vascular Imaging 2
3 Credit Hours
Students will continue vascular sonography clinical experience in a health care institution. Students will continue applying concepts and skills learned in DMIS vascular courses at the health care institution. Prerequisite: Admission to the program is required and Diagnostic Medical Imaging Sonography 2212 with a grade of C or better, or equivalent or Clinical Education Vascular Sonography courses from other colleges under approved cooperative agreements.

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 2221
Abdominal & Peripheral Arterial Hands-On
1 Credit Hour
An overview of abdominal and peripheral arterial ultrasound testing that offers hands-on training in the classroom with vascular ultrasound equipment. Application of principles taught in DMIS-2201. Various arterial testing techniques and scanning are demonstrated and performed on fellow students under the guidance of the instructor. Proper techniques in these testing modalities are reviewed along with proper identification of the arterial system. Prerequisite: Admission to Diagnostic Medical Imaging Sonography program and concurrent enrollment in Diagnostic Medical Imaging Sonography 2201. (2 lab hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 2223
Cerebrovascular Ultrasound Hands-On Scan
1 Credit Hour
Continuation of Diagnostic Medical Imaging Sonography 2203 that provides a further understanding of cerebrovascular ultrasound testing by offering hands-on training in the classroom with vascular ultrasound equipment. Various cerebrovascular testing techniques and scanning are demonstrated to the students. Under the guidance of the instructor, students will practice these techniques on fellow students. Proper techniques in these testing modalities will be reviewed along with proper identification of the cerebrovascular system. Prerequisite: Admission to Diagnostic Medical Imaging Sonography program and concurrent enrollment required in Diagnostic Medical Imaging Sonography 2203. (2 lab hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 2224
Abdominal & Peripheral Venous Hands-On
1 Credit Hour
Continuation of Diagnostic Medical Imaging Sonography 2204 that provides an understanding of abdominal and peripheral venous ultrasound testing by offering hands-on training in the classroom with vascular ultrasound equipment. Various venous testing techniques and scanning are demonstrated to the students. Under the guidance of the instructor the students will practice these techniques on fellow students. Proper techniques in these testing modalities are reviewed along with proper identification of the venous system. Prerequisite: Admission to Diagnostic Medical Imaging Sonography program and concurrent enrollment required in Diagnostic Medical Imaging Sonography 2204. (2 lab hours)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 2280
Sonographic Physics Registry and Review
1 Credit Hour
Intensive review of topics taught in Diagnostic Medical Imaging 1101 and 1102. Preparation for taking the American Registry of Diagnostic Medical Sonography certificate examination. Review of physical principles of sound and sonographic instrumentation. Principles of propagation of ultrasound through tissues, transducers, pulse-echo instruments, image storage and display. Review of Doppler ultrasound, image artifacts and quality management. This course can only be taken on a pass/fail basis. Prerequisite: Admission to Diagnostic Medical Imaging Sonography program and Diagnostic Medical Imaging Sonography 1102 or consent of instructor. (1 lecture hour)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 2285
Clinical Sonographic Registry and Review
1 Credit Hour
Intensive review of topics taught in Diagnostic Medical Imaging Sonography 1121, 1122, 1131 and 1132. Preparation for taking the American Registry of Diagnostic Medical Sonography certification examination. Review of Diagnostic Medical Sonography applications in the specialties of abdominal/ superficial structures and obstetrics/gynecology. This course can only be taken on a pass/fail basis. Prerequisite: Admission to Diagnostic Medical Imaging Sonography program and Diagnostic Medical Imaging Sonography 1121, 1122, 1131, and 1132 or consent of instructor. (1 lecture hour)

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

DIAGNOSTIC MEDICAL IMAGING SONOGRAPHY (DMIS) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

EARLY CHILDHOOD EDUCATION & CARE

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 1100
Intro to the Early Childhood Profession
3 Credit Hours
Students will be introduced to the field of early childhood education and care. History and philosophies of early childhood education, types of early childhood programs, considerations for diversity, current licensing requirements, professional roles and responsibilities of highly qualified early childhood educators, and developmentally appropriate practice (DAP) are emphasized. Students will also explore various ways early childhood programs support children's overall development. A lab component is required. Prerequisite: Course requires Reading Placement Test-Category One. (2 lecture hours, 2 lab hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 1101
Growth & Development of the Young Child
3 Credit Hours
An overview of all aspects of child growth and development from conception through adolescence. Child development theory, principles of sequential growth with emphasis on the significance of family, peers, school and culture. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 1102
Child Guidance Practices
3 Credit Hours
Students will examine theories, research, and best practices related to healthy social and emotional development of young children ages 0-8. Students will also learn the strategies to identify, assess, and promote heathy social and emotional development. Emphasis will be placed on positive guidance strategies that support the establishment of respectful reciprocal relationships with young children and their families. A lab component is required. Prerequisite: Early Childhood Education and Care 1100 with a grade of C or better, or equivalent and Early Childhood Education and Care 1101 with a grade of C or better, or equivalent. (2 lecture hours, 2 lab hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 1110
Parenting and the Young Child
2 Credit Hours
A practical analysis of parent-child interaction with emphasis on understanding developmental tasks of the early childhood years. Motivation and guidance as applied to child and parent are explored. (2 lecture hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 1116
Care Infant Toddler & Two-Year Child I
3 Credit Hours
Introduction to theories and research related to the development of infant, toddler and two-year-old children. Ways of providing a safe, stimulating and nurturing environment that fosters the optimum growth and development of the individual child are examined. Thirty hours laboratory work of group care of children aged six weeks to 36 months are required. (2 lecture hours, 2 lab hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 1117
Care Infant, Toddler & Two-Year Child II
3 Credit Hours
Continuation of the study of development, education and care of infant, toddler and two-year-old children. The teacher's role in providing an environment that fosters the optimum growth and development of the individual child is examined. Thirty hours of laboratory work in group care of children aged six weeks to 36 months are required. Prerequisite: Early Childhood Education and Care 1101 or Early Childhood Education and Care 1116. (2 lecture hours, 2 lab hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 1120
Family Child Care Management
2 Credit Hours
This course includes the practical consideration of issues and responsibilities in providing family child care for infants and young children. (1 lecture hour, 2 lab hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 1121
Family Child Care Curriculum & Guidance
2 Credit Hours
Specialized knowledge and skills for family child care providers. Curriculum and guidance skills appropriate for the multi-age groups of children in family child care. (1 lecture hour, 2 lab hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 1130
Methods: Discovery & the Physical World
3 Credit Hours
Students will be introduced to a variety of methods for facilitating children's development in physical and logical-mathematical knowledge. Emphasis is on the early childhood educator's responsibilities in the implementation of science, technology, engineering, mathematics, blocks, and physical development and fitness. A lab component is required. Prerequisite: Early Childhood Education and Care 1100 with a grade of C or better, or equivalent and Early Childhood Education and Care 1101 with a grade of C or better, or equivalent and Early Childhood Education and Care 1102 with a grade of C or better, or equivalent and Early Childhood Education and Care 2211 with a grade of C or better, or equivalent and Early Childhood Education and Care 2251 with a grade of C or better, or equivalent or cosent of instructor.(2 lecture hours, 2 lab hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 1140
Methods: Self-Expression & Social World
3 Credit Hours
Students will be introduced to a wide variety of experiences and methods for developing children's self-expression and exposing them to a variety of aspects of the social world. Emphasis is on the early childhood educator's responsibility in the implementation of developmentally appropriate literacy, dramatic play, art, social studies, and music and movement experiences. A Lab component is required. Prerequisite: Early Childhood Education and Care 1100 with a grade of C or better, or equivalent and Early Childhood Education and Care 1101 with a grade of C or better, or equivalent and Early Childhood Education and Care 1102 with a grade of C or better, or equivalent and Early Childhood Education and Care 2211 with a grade of C or better, or equivalent and Early Childhood Education and Care 22511 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 1151
Lang & Literacy Development Young Child
3 Credit Hours
An introduction to speech and language development of young children and teaching practices that support language and literacy development. Typical and atypical language development and the factors that influence that development will be emphasized. Planning and implementing developmentally appropriate activities and instructional materials is included. Prerequisite: Early Childhood Education and Care 1100 with a grade of C or better or equivalent and Early Childhood Education and Care 1101 with a grade of C or better or equivalent. (2 lecture hours, 2 lab hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 1161
Multicultural Curriculum for Young Child
2 Credit Hours
Introduction to multicultural curriculum activities, materials and environments for young children. Special emphasis on applying multicultural education principles to curriculum planning. (1 lecture hour, 2 lab hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 1162
Multicultural Perspectives Child Devlpmt
2 Credit Hours
Exploration of multicultural perspectives of child care and development. Emphasis on cultural and family factors that shape and influence the contexts in which young children develop. (2 lecture hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 1163
Practicum: At-Risk Early Childhood Prog
1 Credit Hour
Daily participation in an at-risk early childhood program for young children. Students will assist teachers in the program under the supervision of a faculty supervisor. Students apply knowledge and practice skills gained in child care classes. Seventy-five hours of practicum required. Prerequisite: Early Childhood Education and Care 1102, 1161 and 1162 or consent of instructor .(5 lab hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 1820
Selected Topics
1 Credit Hour
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: This course is designed for students nearing completion of the Early Childhood Education and Care program or for child care practitioners. Students should have attained minimum Department of Children and Family Services credit hours for a child care director position before enrolling in the course. (1 lecture hour)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within Early Childhood Education and Care to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 2201
Creative Art Activities for the Young Ch
2 Credit Hours
Introduction to a variety of materials and experiences suitable for creative artistic expression of the young child. The use of various media to provide opportunities for expression and exploration is emphasized. (2 lecture hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 2203
Music and Movement for the Young Child
2 Credit Hours
An introduction to music and movement experiences for the young child. The relationship of children's developmental needs to the music and movement curriculum is explored. Students will compile resources of music and movement activities. (2 lecture hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 2204
Child Care Environment
2 Credit Hours
This course explores indoor and outdoor environments in child care centers that support the development of young children. Materials and equipment selection and room arrangement are included. (1 lecture hour, 2 lab hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 2206
Science and Nature for the Young Child
2 Credit Hours
Introduction to theories and practice of science and nature curriculum for young children. Emphasis is placed on the planning, implementation and evaluation of developmentally appropriate activities and instructional materials. (2 lecture hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 2208
Mathematics for the Young Child
3 Credit Hours
Students will be introduced to basic mathematical concepts and terminology, as well as the theories and practices, for teacher preparation in early childhood education for children ages 0-6. Students will be exposed to strategies to identify, assess, and promote mathematical understanding in young children. Emphasis will be placed on mathematical thinking, foundational mathematic skills, and the following concepts: numbers, measurement, shapes, patterns, spatial relations, and analysis of data. A lab component is required. Prerequisite: Early Childhood Education and Care 1100 with a grade of C or better, or equivalent and Early Childhood Education and Care 1101 with a grade of C or better, or equivalent. (2 lecture hours, 2 lab hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 2209
Developmentally Appropriate Technology
2 Credit Hours
Students will explore developmentally appropriate uses of technology for young children through age 8. Emphasis will be placed on best practice and using technology as a tool for curriculum enhancement, communication, assessment, documentation, and inclusion. (2 lecture hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 2210
The Young Child With Special Needs
2 Credit Hours
An introduction to child care services for young children (under 8 years of age) with special needs. Descriptions of special needs, curriculum, programs, services and current issues are included. (2 lecture hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 2211
Child Health, Safety and Nutrition
3 Credit Hours
A comprehensive overview of current health, safety and nutritional needs of growing children. Appropriate methods to meet the needs of young children in group care settings are emphasized. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 2220
Early Childhood Education Practicum
4 Credit Hours
Practicum experience in the field of Early Childhood Education. Emphasizes the practical application of principles, practices, and theories of early childhood education while working with young children in a professional setting. Students will also participate in a weekly practicum seminar. Prerequisite: Early Childhood Education and Care 1100, 1101, 1102, 1130, 1140, 2211 and 2251; all with a grade of C or better or equivalent and consent of instructor.

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 2221
Early Childhood Administration Practicum
4 Credit Hours
Students will gain practical experience in early childhood administration while working with a child care center director, staff, young children, and families in a professional setting. Emphasis will be placed on the practical application of principles, practices, and theories of early childhood education and care. Students will complete the 300 documented hours required for the State of Illinois Director Credential-Level 1. Prerequisite: Consent of instructor and Early Childhood Education and Care 1100, 1101, 1102, 1130, 1140, 2211, 2251, 2254, 2255, and 2256; all with a grade of C or better, or equivalent. (20 lab hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 2226
Development of the School-Age Child
2 Credit Hours
A study of physical, cognitive and affective domains of the 6 to 12 year old child's growth and development. (2 lecture hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 2227
Guidance of the School-Age Child
2 Credit Hours
A study of guidance practices that support the development of school-age children in group settings. (2 lecture hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 2228
Activities for School-Age Children
2 Credit Hours
This course introduces students to the process of planning, implementing and evaluating activities for school-age children in a group setting. (1 lecture hour, 2 lab hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 2230
Foundations of Early Childhood Education
3 Credit Hours
Early childhood education and childcare trends and issues including a historical and philosophical review of research. Includes a study of theories of early childhood education as reflected in program models. (2 lecture hours, 2 lab hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 2250
Play and Learning of the Young Child
3 Credit Hours
An exploration of the significance of play experiences that promote growth and learning. Emphasis is placed on the relationship between the adult and the child at play. Prerequisite: Early Childhood Education and Care 1101. (2 lecture hours, 2 lab hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 2251
Curriculum Planning for the Young Child
3 Credit Hours
Students will be exposed to a comprehensive overview of developmentally appropriate curriculum for young children from birth through age eight. Planning, implementing, and evaluating curriculum based on the needs and interests of young children will be emphasized. A lab component is required. Prerequisite: Early Childhood Education and Care 1100 with a grade of C or better, or equivalent and Early Childhood Education and Care 1101 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 2252
Child/Family/Commu Relations & Resources
3 Credit Hours
Students are introduced to the knowledge and skills early childhood professionals need to build effective interrelationships with the child, family, and community by applying course content through in-class experiences and service learning. Emphasis will be placed on diverse family and community characteristics, legislation, supporting families, building partnerships, and encouraging family involvement. Programs and services for children and their families will be explored. A service learning component is required. Prerequisite: Early Childhood Education and Care 1100 with a grade of C or better or equivalent and Early Childhood Education

and Care 1101 with a grade of C or better or equivalent. (3 lecture hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 2254
Adm of EC Center-Program Operations
3 Credit Hours
An overview of early childhood program operations including legal and professional standards. Students explore licensing and accreditation standards in relation to an existing early childhood center. Design and management as well as storage and maintenance of indoor and outdoor environments are included. (3 lecture hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 2255
Adm of EC Center-Practices & Procedures
3 Credit Hours
Information about the management processes of early childhood programs. Fiscal and legal structures, community outreach programs, and early childhood program marketing, public relations and promotional strategies are included. (3 lecture hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 2256
Adm EC Center-Staff,/Families/Children
3 Credit Hours
Exploration of the knowledge and skill application of early childhood program staff management and supervision. Development of effective human relations with diverse groups is described. Early childhood leadership skills and child advocacy are included. (3 lecture hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 2260
Early Childhood Professional
3 Credit Hours
Explores the dimensions of becoming an early childhood professional including ethics, relationships with colleagues, time management, advocacy, critical reflection, and career development. Prerequisite: Early Childhood Education and Care 1100 or equivalent, or consent of instructor. (3 lecture hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 2821
Advanced Selected Topics I
2 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: This course is designed for students nearing completion of the Early Childhood Education and Care program or for child care practitioners. Students should have attained minimum Department of Children and Family Services credit hours for a child care director position before enrolling in the course. (2 lecture hours)

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

EARLY CHILDHOOD EDUCATION & CARE (ECEC) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

EARTH SCIENCE

EARTH SCIENCE (EARTH) 1101 (IAI P1 907L)
Physical Geology of Earth's Interior
4 Credit Hours
Processes important in understanding Earth's interior. Planetary segregation, heat flow, Earth's magnetic field, earthquakes, continental drift, paleomagnetism, seafloor spreading, mantle plumes, and crustal deformation are investigated in light of the unifying theory of plate tectonics. Physical and chemical properties of minerals and the genesis of igneous, sedimentary and metamorphic rocks, and their relationship to the rock and tectonic cycles. Prerequisite: Mathematics 0465 or Mathematics 0481 (or college equivalent) with a grade of C or better or qualifying score on the mathematics placement test or a qualifying A.C.T. math score. Course requires Reading Placement Test Score-Category One. (3 lecture hours, 3 lab hours)

EARTH SCIENCE (EARTH) 1102 (IAI P1 907L)
Physical Geology of Earth's Surface
4 Credit Hours
Geological processes involved in the creation of a variety of landform systems and sedimentary deposits. Weathering, mass wasting, transport, deposition, depositional environments, sediment lithification, analysis and interpretation of topographic maps, cross-sections, and aerial photographs. Plate tectonic theory, volcanism, and rock and mineral forming processes are integrated. Prerequisite: Mathematics 0465 or Mathematics 0481 (or college equivalent) with a grade of C or better or qualifying score on the mathematics placement test or a qualifying A.C.T. math score. Course requires Reading Placement Test Score-Category One. (3 lecture hours, 3 lab hours)

EARTH SCIENCE (EARTH) 1105 (IAI P1 908L)
Environmental Geology
4 Credit Hours
A study of the impact of geological processes on society and the environmental consequences of the use of Earth resources by humans. Includes analyses of geologic hazards (including earthquakes, volcanic eruptions, groundwater contamination, flooding) and the attempts made to evaluate and mitigate their risks to human populations. Special attention will be focused on environmental impacts of land-use and economic resource development. Recommended course: Mathematics 0465 or Mathematics 0481. Successful completion of high school algebra

is assumed. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours, 2 lab hours)

EARTH SCIENCE (EARTH) 1110 (IAI P1 905L)
Introduction to Meteorology
4 Credit Hours
A first look at various aspects of meteorology, including solar radiation, global circulation, environmental issues, winds, stability, precipitation processes, weather systems and severe weather. Basic physical principles, meteorological terminology, societal impacts, and weather analysis will be explored. Prerequisite: Mathematics 0465 or Mathematics 0481 (or college equivalent) with a grade of C or better or qualifying score on the mathematics placement test or a qualifying A.C.T. math score. Course requires Reading Placement Test Score-Category One. (3 lecture hours, 2 lab hours)

EARTH SCIENCE (EARTH) 1111 (IAI P1 905)
Climate and Global Change
3 Credit Hours
Introduction to the earth's climate, climate change and the interactions between climate and the global environment. Physical, chemical, biological and social factors contributing to climate and global change are investigated. Topics explored are: climate classifications, global warming and greenhouse effect, acid rain, ozone depletion, regional drought and cataclysmic climate change. Man-made climate change as opposed to natural variability, along with human responses to potential climate change are debated. Prerequisite: Mathematics 0465 or Mathematics 0481 (or college equivalent) with a grade of C or better or qualifying score on the mathematics placement test or a qualifying A.C.T. math score. Course requires Reading Placement Test Score-Category One. (3 lecture hours)

EARTH SCIENCE (EARTH) 1115 (IAI P1 905L)
Severe and Unusual Weather
4 Credit Hours
In-depth study of meteorological phenomena relating to thunderstorms, El Nino/Southern Oscillation events, and tropical storms. Topics will include severe weather spotting, weather radar, atmospheric soundings, tornado genesis, El Nino, tropical meteorology, hurricanes and an introduction to numerical weather prediction. Basic physical principles, their relation to weather events, and weather's impact on society are also explored. Prerequisite: Mathematics 0465 or Mathematics 0481 (or college equivalent) with a grade of C or better or qualifying score on the mathematics placement test or a qualifying A.C.T. math score. Course requires Reading Placement Test Score-Category One. (3 lecture hours, 2 lab hours)

EARTH SCIENCE (EARTH) 1116
Weather Analysis and Forecasting I
1 Credit Hour
A study of day-to-day weather patterns with an emphasis on understanding the basics of meteorological processes and forecasting. Students learn to read weather reports and weather maps needed to analyze current conditions and forecast weather. Taking advantage of a fully operational weather laboratory, students monitor current weather conditions locally and across the nation. Prerequisite: Course requires Reading Placement Test Score-Category One. (2 lab hours)

EARTH SCIENCE (EARTH) 1117
Weather Analysis and Forecasting II
1 Credit Hour
A continuation of Weather Analysis and Forecasting I. Students continue investigating sources of data, learn to analyze raw images, and interpret numerical weather forecasts. Taking advantage of a fully-operational weather laboratory, students monitor current weather conditions locally and across the nation. Prerequisite: Earth Science 1116 or equivalent. Course requires Reading Placement Test Score-Category One. (2 lab hours)

EARTH SCIENCE (EARTH) 1119 (IAI P1 905)
Weather Impacts and Preparedness
3 Credit Hours
An investigation of weather and climate impacts that affect various populations within the United States including snow, drought, floods, severe weather, and temperature extremes among other phenomena. Sociological impacts, preparedness, and warning and mitigation strategies will be discussed. (3 lecture hours)

EARTH SCIENCE (EARTH) 1120 (IAI P1 906)
Introduction to Astronomy
3 Credit Hours
Examines the history of astronomy, observations of astronomical phenomena and concepts, the structure and evolution of the solar system, the birth, life, and death of stars, properties of galaxies and main concepts of cosmology. Provides a basic understanding of matter and radiation. Recommended course: Mathematics 0465 or Mathematics 0481; successful completion of high school algebra is assumed. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

EARTH SCIENCE (EARTH) 1122 (IAI P1 906L)
Astronomy: The Solar System
4 Credit Hours
An introduction to the solar system using recently available astronomical data. Major topics include scale models, planetary properties, earth-sun relationships, lunar geology, terrestrial planets, jovian planets, natural satellites and ring systems, asteroids, comets, meteoroids, meteors, meteorites, interplanetary space probes and formation theories. Prerequisite: Mathematics 0465 or Mathematics 0481 (or college equivalent) with a grade of C or better or qualifying score on the mathematics placement test or a qualifying A.C.T. math score. Course requires Reading Placement Test Score-Category One. (3 lecture hours, 3 lab hours)

EARTH SCIENCE (EARTH) 1124 (IAI P1 906L)
Astronomy: Stars and Galaxies
4 Credit Hours
A study of stars, galaxies, deep space objects and cosmology utilizing the latest astronomical discoveries. Major topics include constellations, the Sun, stellar types, motions, parallax, magnitudes, luminosity, spectra, classifications, clusters, evolution, quasars, nebula, galaxy classification and composition, the Big Bang, inflation and cosmology. Prerequisite: Mathematics 0465 or Mathematics 0481 (or college equivalent) with a grade of C or better or qualifying score on the mathematics placement test or a qualifying A.C.T. math score. Course requires Reading Placement Test Score-Category One. (3 lecture hours, 3 lab hours)

EARTH SCIENCE (EARTH) 1126 (IAI P1 906L)
Observational Astronomy
3 Credit Hours
Students will be introduced to observational astronomy. This will include observing the sky with the use of telescopes and other instruments, locating and viewing astronomical objects visually and electronically, and using astronomical databases. Students will learn how to explore the universe to better understand

planets, stars, and galaxies. Prerequisite: Mathematics 0465 or Mathematics 0481 (or college equivalent) with a grade of C or better, or qualifying score on the mathematics placement test or a qualifying A.C.T. math score. Course requires Reading Placement Test Score-Category One. (2 lecture hours, 2 lab hours)

EARTH SCIENCE (EARTH) 1130 (IAI P1 905L)
Introduction to Oceanography
4 Credit Hours
An introduction to oceanography that focuses on the dominating influence the World Ocean has upon earth processes. Topics include ocean basin evolution, sea water chemistry and physics, interrelationships between the ocean and atmosphere, waves, currents, tides, coastal development, marine communities and human impacts. Prerequisite: Mathematics 0465 or Mathematics 0481 (or college equivalent) with a grade of C or better or qualifying score on the mathematics placement test or a qualifying A.C.T. math score. Course requires Reading Placement Test Score-Category One. (3 lecture hours, 2 lab hours)

EARTH SCIENCE (EARTH) 1135 (IAI P1 905L)
Water Science-Fundamentals of Hydrology
4 Credit Hours
An introduction to the water cycle, the dynamic processes of surface water, and ground water. Students investigate and analyze the impacts of population growth, urbanization, weather, and climate upon hydrological processes and water resource sustainability. One field trip is required. For any student concerned about water resources and those with intended majors in geology, hydrology, meteorology, environmental sciences/ engineering, or resource management. Prerequisite: Mathematics 0465 or Mathematics 0481 (or college equivalent) with a grade of C or better or qualifying score on the mathematics placement test or a qualifying A.C.T. math score. Course requires Reading Placement Test Score-Category One. (3 lecture hours, 3 lab hours)

EARTH SCIENCE (EARTH) 1140 (IAI P1 905L)
Fundamentals of Earth Science
4 Credit Hours
An introduction to the study of the Earth as a planet. Topics from the disciplines of astronomy, meteorology, oceanography and geology are explored to develop an appreciation of our planet as an integrated system. Includes analyses of the dynamic processes of the Earth's interior, surface, oceans, atmosphere and astronomical surroundings. Students receive credit for either Earth Science 1140 or 1141 but not both. Prerequisite: Mathematics 0465 or Mathematics 0481 (or college equivalent) with a grade of C or better or qualifying score on the mathematics placement test or a qualifying A.C.T. math score. Course requires Reading Placement Test Score-Category One. (3 lecture hours, 2 lab hours)

EARTH SCIENCE (EARTH) 1141 (IAI P1 905)
Introduction to Earth Science
3 Credit Hours
A non-laboratory introduction to the study of the Earth as a planet intended for non-science majors. Topics from the disciplines of astronomy, meteorology, oceanography, and geology are explored to develop an appreciation of our planet as an integrated system. Includes analyses of the dynamic processes of the Earth's interior, surface, oceans, atmosphere, and astronomical surroundings. Students receive credit for either Earth Science 1140 or 1141 but not both. Prerequisite: Mathematics 0465 or Mathematics 0481 (or college equivalent) with a grade of C or better, or qualifying score on the mathematics placement test or a qualifying A.C.T. math score. (3 lecture hours)

EARTH SCIENCE (EARTH) 1800
Special Project
1 to 3 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the Earth Science discipline. These courses require direct experience and focused reflection in an in-depth study of a specific earth science topic and/or the critical analysis of contemporary issues in earth science. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of earth science concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) This course may be taken four times for credit. Prerequisite: Course requires Reading Placement Test Score-Category One.

EARTH SCIENCE (EARTH) 1820
Selected Topics I
1 to 3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 3 lecture hours)

EARTH SCIENCE (EARTH) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. Course requires Reading Placement Test Score-Category One. (1 to 4 lecture hours)

EARTH SCIENCE (EARTH) 2102
Origin and Evolution of the Earth
4 Credit Hours
Processes and geologic events that are important in understanding the origin and evolution of the earth. Origin of the solar system, planetary segregation, absolute and relative age dating methods, the sedimentary record, evolution of the continents, oceans, and atmosphere. Plate tectonics, crustal evolution and biologic development over the course of geologic time will be a unifying theme. Prerequisite: Earth Science 1101, 1120, 1130 or 1140, with a grade of C or better or equivalent. (3 lecture hours, 2 lab hours)

EARTH SCIENCE (EARTH) 2103
Geologic Field Investigations
3 Credit Hours
Geologic field investigation involving the stratigraphy, structural geology and economic geology of a selected region within the United States or abroad. Basic methods of geologic field work including rock and outcrop description, sampling methods, measurement of stratigraphic sections, strike and dip measurements, orienteering and map interpretation. A supervised field investigation involving 10 to 14 days of outdoor field work and pre- and post-trip class meetings. Prerequisite: Earth Science 1101, 1102 or 1140, or equivalent. (1 lecture hour, 4 lab hours)

EARTH SCIENCE (EARTH) 2110
Intermediate Meteorology
4 Credit Hours
A quantitative first look at the science of meteorology. Physical concepts will be examined using algebraic methods to prepare students for material using higher mathematics. Operational, physical and dynamical meteorology are discussed to give students an overall understanding of atmospheric science. Equations of motion, thermodynamics and the primitive equations will be among the topics covered. Prerequisite: Mathematics 1431 (or college equivalent) or qualifying score on the mathematics placement test or a qualifying A.C.T. math score and either Earth Science 1110 or Earth Science 1115 or consent of instructor. (4 lecture hours)

EARTH SCIENCE (EARTH) 2115
Mesoscale Meteorology
4 Credit Hours
In-depth study of meteorological phenomena with short temporal and small spatial scales. Topics will include tools for mesoscale analysis, mesoscale modeling, thermally-forced circulations, fog, mesoscale winter events, and the morphology of convective systems including squall lines, mesoscale convective systems and supercells and their associated threats including flash floods and tornadoes. Other topics of current research interest will also be covered. Prerequisite: Earth Science 1115 or equivalent or consent of instructor. (4 lecture hours)

EARTH SCIENCE (EARTH) 2116
Adv Weather Analysis & Forecasting I
1 Credit Hour
A continuation of Weather Analysis and Forecasting II, Earth Science 1117. Emphasis is on independent analysis of weather events, forecast preparation and mastery of hand data analysis. Taking advantage of a fully operational weather laboratory, students monitor current weather conditions locally and across the nation. Prerequisite: Earth Science 1117 and Mathematics 0465 or Mathematics 0481 (or college equivalent) with a grade of C or better, or qualifying score on the mathematics placement test or a qualifying A.C.T. math score. (2 lab hours)

EARTH SCIENCE (EARTH) 2117
Adv Weather Analysis & Forecasting II
1 Credit Hour
A continuation of Advanced Weather Analysis and Forecasting I. Students prepare a weekly forecast for the Chicago metropolitan area generally and DuPage County specifically, and track and evaluate their forecasting accuracy. Taking advantage of a fully operational weather laboratory, students monitor current weather conditions locally and across the nation. Prerequisite: Earth Science 2116 or equivalent. (2 lab hours)

EARTH SCIENCE (EARTH) 2118
Severe Weather Lab
2 Credit Hours
An in-depth study of severe weather forecasting and analysis. An emphasis is placed on hand analysis of raw data, assessing short term numerical weather models, and nowcasting. Students monitor events prior to and during severe weather events using real time radar and other data sources. Students gain a better understanding of severe weather initiation and evolution. Local field trips to observe severe weather first-hand may be included. This course may be taken four times for credit. Prerequisite: Earth Science 1115 with a grade of C or better or consent of instructor. (4 lab hours)

EARTH SCIENCE (EARTH) 2800
Special Project
1 to 3 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the Earth Science discipline, while building upon academic knowledge and skills acquired in introductory-level Earth Science classes. These courses require direct experience and focused reflection in an in-depth study of a specific Earth Science topic and/or the critical analysis of contemporary issues in Earth Science. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning, and/or the practical applications of more complex earth science concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) Prerequisite: At least one course in the discipline or consent of the instructor.

EARTH SCIENCE (EARTH) 2820
Advanced Selected Topics I
1 to 3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: At least one course in the discipline or consent of instructor. (1 to 3 lecture hours)

EARTH SCIENCE (EARTH) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

EARTH SCIENCE (EARTH) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

EARTH SCIENCE (EARTH) 2870
Internship (Transfer)
1 to 4 Credit Hours

Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

EARTH SCIENCE (EARTH) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ECONOMICS

ECONOMICS (ECONO) 1110
Consumer Economics and Personal Finance
3 Credit Hours
An overview of personal and family financial planning. Emphasis is placed on financial recordkeeping, consumer spending, tax planning, making buying decisions, purchasing insurance, selecting investments, and retirement and estate planning. (3 lecture hours)

ECONOMICS (ECONO) 1800
Special Project
1 to 3 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates and experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.)

ECONOMICS (ECONO) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

ECONOMICS (ECONO) 2200 (IAI S3 900)
Principles of Economics
3 Credit Hours
A survey course addressing macroeconomics and microeconomics. A study of product and resource markets, market structures, interactions between government and firms, the determinants of economic activity, money and banking, monetary and fiscal policy implications, international trade, and international finance. This course is not recommended for Economics majors or those pursuing a baccalaureate degree in any field of business. Not for credit if credit earned in Economics 2201 or Economics 2202 or their equivalent. (3 lecture hours)

ECONOMICS (ECONO) 2201 (IAI S3 901)
Macroeconomics and the Global Economy
3 Credit Hours
A study of the major factors that determine levels of economic activity. Emphasis is placed on resource allocation, national production, demand and supply, income levels, government, money and the banking system, policy implications, economic growth, international finance and exchange rates. A score of 53 or higher in algebra domain of Math Placement Test is recommended. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ECONOMICS (ECONO) 2202 (IAI S3 902)
Microeconomics and the Global Economy
3 Credit Hours
A study of consumer behavior, supply and demand, price determination, market structures, factor pricing, international trade and finance, and economic development. Special topics may include agricultural economics, the economics of risk, environmental economics and alternative economic systems. A score of 53 or higher in algebra domain of Math Placement Test and successful completion of Economics 2201 are recommended. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ECONOMICS (ECONO) 2210
Money and Banking
3 Credit Hours
A descriptive, historical and analytical introduction to the role of money, monetary policy, financial institutions and central banks in the United States and internationally. Prerequisite: Economics 2201. Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ECONOMICS (ECONO) 2220
Comparative Economic Systems
3 Credit Hours
A comparison of the principal economic systems, their theoretical foundations and historical backgrounds. Economic analysis of the strengths and weaknesses of the capitalist, socialist and communist systems. Developing nations are studied within their own unique paradigm and with current strategies for economic development. Prerequisite: Economics 2201 or consent of instructor. Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ECONOMICS (ECONO) 2800
Special Project
1 to 4 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline, while building upon academic knowledge and skills

acquired in introductory-level classes. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporated an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of more complex discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) Prerequisite: At least one course in the discipline or consent of the instructor

ECONOMICS (ECONO) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ECONOMICS (ECONO) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ECONOMICS (ECONO) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ECONOMICS (ECONO) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

EDUCATION

EDUCATION (EDUCA) 1100
Introduction to Education
3 Credit Hours
Students will be provided an introduction to teaching as a profession in the American education system, offering a variety of perspectives on education including historical, philosophical, social, legal, and ethical issues in a diverse society. The course includes organizational structure and school governance. A 20 hour field experience is required. (2 lecture hours, 2 lab hours)

EDUCATION (EDUCA) 1101
School Procedure
3 Credit Hours
Students will examine various policies, procedures, and routine activities that are part of the teacher's role. This is a field experience course with each student spending a minimum of twenty clock hours in a classroom. Weekly seminars focus on the development of human relations and problem solving skills necessary for an effective classroom. Education 1100 is strongly recommended. (2 lecture hours, 2 lab hours)

EDUCATION (EDUCA) 1102
Educational Assessment
3 Credit Hours
Students will be introduced to the different types of assessments, implications of those assessments at the classroom, state, national, and international levels. Students will also be introduced to the art of writing quality assessments. (3 lecture hours)

EDUCATION (EDUCA) 1105
Career Development
2 Credit Hours
Focus on integrating career development into important life choices. Emphasis will be given to helping students learn the skills involved in developing career awareness, making career decisions and taking career action in a changing work environment. (2 lecture hours)

EDUCATION (EDUCA) 1110
Interpersonal Skills for Life and Work
2 Credit Hours
Emphasizes understanding the student's style of communicating, exploring options and decreasing self-defeating behaviors. Includes awareness of communication variances among ethnic, racial and gender groups. Through an experiential approach, students have an opportunity to develop more satisfying and effective interpersonal skills for enhancing personal and work relationships, self-esteem, and understanding of behavior differences among persons from diverse backgrounds. (2 lecture hours)

EDUCATION (EDUCA) 1115
College Success Skills
2 Credit Hours
An introduction to academic success skills necessary for meeting the challenge of a college education. Students explore and apply note-taking strategies, listening skills, test preparation, test-anxiety strategies, time management, goal setting, and awareness of potential that can assist in achieving their goals in higher education. (2 lecture hours)

EDUCATION (EDUCA) 1150
Technology Integration in K-12 Schools
3 Credit Hours
Students will be introduced to integrating instructional technology into K-12 schools. Emphasis is on current and emerging theories of learning with instructional technology and how to best integrate, utilize, and adapt technology as a resource in teaching and learning. A variety of technology will be incorporated, and practical application of technology in traditional and e-learning environments will be addressed. Prerequisite: Education 1100 with a grade of C or better, or equivalent. (3 lecture hours)

EDUCATION (EDUCA) 1800
Special Project
1 to 3 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) This course may be taken four times for credit.

EDUCATION (EDUCA) 1820
Selected Topics I
1 to 3 Credit Hours
Introductory exploration and analysis of selected education topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (1 to 3 lecture hours)

EDUCATION (EDUCA) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

EDUCATION (EDUCA) 2201
Education for Exceptional Children
3 Credit Hours
Students will be introduced to children with exceptionalities, including the historical, legal, and philosophical foundations of special education as identified by the Individuals with Disabilities Education Act (IDEA). The primary focus will be on children with disabilities and children at-risk. Students will spend a minimum of 20 hours observing and assisting in special education settings. A background check will be required. (2 lecture hours, 2 lab hours)

EDUCATION (EDUCA) 2202
Introduction to Learning Disabilities
3 Credit Hours
Students will be introduced to an overview of learning disabilities, which includes the etiology and diagnostic procedures, classification, characteristic, and teaching strategies. Coursework also includes discussion of service delivery models and strategies for meeting the needs of students with learning disabilities in the least restrictive environment. Education 2201 is recommended prior to enrollment. (2 lecture hours, 2 lab hours)

EDUCATION (EDUCA) 2211
Survey of Literature for Children
3 Credit Hours
A study of children's literature representing a range of literary types. The literature is evaluated for age and interest appropriateness. Students may do a concentrated study of a specific age group within the 1 to 12 years age range. A 10-hour service learning component is required. (3 lecture hours)

EDUCATION (EDUCA) 2220
Instructional Psychology
3 Credit Hours
Students will be introduced to psychological principles underlying educational practice with emphasis on application for instruction and assessment. Learner-centered instruction and diversity will also be discussed. Prerequisite: Psychology 1100 with a grade of C or better, or equivalent and Education 1100 with a grade of C or better, or equivalent or concurrent enrollment in Education 1100. (3 lecture hours)

EDUCATION (EDUCA) 2230
Diversity in K-12 Schools
3 Credit Hours
Students will be introduced to aspects of diversity in K-12 schools. The course will emphasize home-school communication and culturally responsive teaching. Learning to support students from diverse populations will be addressed. (3 lecture hours)

EDUCATION (EDUCA) 2250
Practicum: Paraprofessional/K-12 Classrm
3 Credit Hours
Students will participate on a regular basis in a K-12 school. Students will assist K-12 students under the supervision of a licensed teacher. 150 hours of practicum are required. Prerequisite: Consent of instructor is required. (6 lab hours)

EDUCATION (EDUCA) 2700
Best Practices in Online Education
3 Credit Hours
Distance education and an online learning experience from a student and faculty perspective, including learning management systems, principles and theories of online education, key competencies, and best practices for successful distance education. (3 lecture hours)

EDUCATION (EDUCA) 2720
Course Design for Online Education
4 Credit Hours
Practical experience designing, managing and facilitating a unit of instruction online using a learning management system. Learners will focus on principles of instructional design, assessment methods, and online tools that promote active, collaborative learning. (4 lecture hours)

EDUCATION (EDUCA) 2740
Multimedia for Online Teaching
3 Credit Hours
Principles of visual literacy and multimedia theory as they produce a variety of multimedia projects to be used in an online environment. (3 lecture hours)

EDUCATION (EDUCA) 2760
Teach W/Social Media & Collaboratn Tools
3 Credit Hours
Examination of collaborative pedagogies, tools, and theory to enhance student learning in an online environment. Learners will experience and evaluate a variety of online social networking tools, apply appropriate tools to a unit of instruction, and create an online professional learning network. (3 lecture hours)

EDUCATION (EDUCA) 2780
Video Applications in Education
3 Credit Hours
Use of video applications and research to enhance student learning in an online environment. Students will use video cameras and editing software to create and publish a variety of video projects appropriate to educational applications. Special focus will be given to the benefits and concerns of video sharing in the learning environment. (3 lecture hours)

EDUCATION (EDUCA) 2800
Special Project
1 to 3 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) Prerequisite: At least one course in the discipline or consent of the instructor.

EDUCATION (EDUCA) 2820
Advanced Selected Topics I
1 to 3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: At least one course in the discipline or consent of instructor. (1 to 3 lecture hours)

EDUCATION (EDUCA) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

EDUCATION (EDUCA) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

EDUCATION (EDUCA) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

EDUCATION (EDUCA) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ELECTRO-MECHANICAL TECHNOLOGY

ELECTRO-MECHANICAL TECHNOLOGY (ELMEC) 1101
Survey of Automation
3 Credit Hours
Automation technology, including robotics, programmable controllers (PLC), process control instrumentation, industrial electricity, plastics, motion controls, vision systems, and automatic guided vehicles. (2 lecture hours, 2 lab hours)

ELECTRO-MECHANICAL TECHNOLOGY (ELMEC) 1110
Motor & Generator Fundamentals
3 Credit Hours
Basic principles for Alternating Current (AC) and Direct Current (DC) motors and generators. Motor and generator theory, operation, ratings, speeds, and enclosures. Analysis of efficiency, power service factors, and frame sizes. Motor control concepts, including ladder and wiring drawings. Control devices, including sensors, control transformers, and starters. (2 lecture hours, 2 lab hours)

ELECTRO-MECHANICAL TECHNOLOGY (ELMEC) 1120
Residential Wiring
3 Credit Hours
All facets of correct wiring methods and techniques, based on the National Electrical Code (NEC). Room by room, circuit by circuit, installation and inspection with an emphasis on symbols, branch circuits, service drops, ground-fault circuit-interrupters (GFCI), low voltage circuits, and security system circuitry. (2 lecture hours, 2 lab hours)

ELECTRO-MECHANICAL TECHNOLOGY (ELMEC) 1130
Industrial Electricity
3 Credit Hours
Industrial electricity, circuits, devices, and power. The use of instruments on circuit analysis and test equipment. (2 lecture hour, 2 lab hours)

ELECTRO-MECHANICAL TECHNOLOGY (ELMEC) 1140
Commercial and Industrial Wiring
3 Credit Hours
Designed to provide the electrician with tips and techniques for wiring in commercial buildings, offices, stores, manufacturing and other industrial environments. High voltage branch feeders, motors, appliance service, special systems and overcurrent protection are covered. Emphasis is on the National Electrical Code (NEC), minimum requirements pertaining to high and medium voltage motors, wiring, switchgear and power distribution. (2 lecture hours, 2 lab hours)

ELECTRO-MECHANICAL TECHNOLOGY (ELMEC) 1141
Hydraulics and Pneumatics
3 Credit Hours
Principles of fluids at rest and in motion. Hydraulic and pneumatic pumps, motors, cylinders, boosters, valves, regulators, and circuitry to transmit and control power. (3 lecture hours)

ELECTRO-MECHANICAL TECHNOLOGY (ELMEC) 1150
National Electrical Code
3 Credit Hours
An overview of the current national electrical code (NEC) with emphasis on reading, interpretation and revisions. Definitions and terminology are covered. (3 lecture hours)

ELECTRO-MECHANICAL TECHNOLOGY (ELMEC) 1171
Introduction to Robotic Technology
3 Credit Hours
Introduction to the basic theory and operation of robots in industrial automation. Basic robot and work-place design, safety procedures, and robotic applications are studied. (2 lecture hours, 2 lab hours)

ELECTRO-MECHANICAL TECHNOLOGY (ELMEC) 1190
Intro to Programmable Logic Controllers
3 Credit Hours
A survey of programmable logic controllers (PLC). Terminology, basic memory structure, I/O's (input/outputs), processors, and programming devices. Basics of programming and applications. (2 lecture hours, 2 lab hours)

ELECTRO-MECHANICAL TECHNOLOGY (ELMEC) 1400
Maintenance Management Systems
3 Credit Hours
Overview of various computerized maintenance management systems. Topics include storeroom inventory, preventive maintenance procedures and scheduling, predictive maintenance costs, records and tracking, International Standards Organization (ISO) certification; training and vendor records. (3 lecture hours)

ELECTRO-MECHANICAL TECHNOLOGY (ELMEC) 1410
Preventive and Predictive Maintenance
3 Credit Hours
Fundamentals of preventive and predictive maintenance using vibration analysis, equipment history, repair records and tracking systems. Procedures for identifying and implementing maintenance practices. Scheduled maintenance vs. predictive maintenance, charts and predictive maintenance, analysis of dimension signatures for bearings, motors and pumps, and development of anticipatory failure analysis. (2 lecture hours, 2 lab hours)

ELECTRO-MECHANICAL TECHNOLOGY (ELMEC) 1420
Drive Components
2 Credit Hours
A hands-on approach to gears and gearing systems, chains and sprockets, belts and sheaves, brakes and clutches, couplings and coupling alignment, bearings and lubrication. (1 lecture hour, 3 lab hours)

ELECTRO-MECHANICAL TECHNOLOGY (ELMEC) 1820
Selected Topics I
1 to 4 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. May be taken 3 times for credit. (1 to 3 lecture hours, 2 to 4 lab hours)

ELECTRO-MECHANICAL TECHNOLOGY (ELMEC) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline, and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (8 lab hours)

ELECTRO-MECHANICAL TECHNOLOGY (ELMEC) 2410
Programmable Controller II (PLC II)
3 Credit Hours
Data manipulation within programmable controllers (PLC) including data transfer, arithmetic functions, shift registers and sequencers. Topics such as analog to digital conversion, operator interface input/output (I/O) bus systems, advanced PLC cards, factory information systems, and troubleshooting of applications. Prerequisite: Electro-Mechanical Technology 1190 with a grade of C or better or consent of instructor. (2 lecture hours, 2 lab hours)

ELECTRO-MECHANICAL TECHNOLOGY (ELMEC) 2420
Programmable Controller III
3 Credit Hours
Advanced topics in programmable controllers (PLCs) such as data highways, programming modules, and on-line programming using manufacturer's advanced software, process conversions to programmable controls and critical areas of process controls. Simulated applications of real-time processes comprise the majority of the course work, such as injection molding machines, and transfer pad printing. Prerequisite: Electro-Mechanical Technology 2410 with a grade of C or better or consent of instructor. (2 lecture hours, 2 lab hours)

ELECTRO-MECHANICAL TECHNOLOGY (ELMEC) 2510
Process and Automation Controls
3 Credit Hours
Introduction to language, symbols and principles of process control instrumentation with emphasis on temperature, pressure, level and flow measurement, including calibration of transmitters, process feedback and feedforward loops. Discussion of hazardous area classifications. Introduction to controllers, controller modes and tuning processes. Included are deadband adjustments, proportional (gain), integral (reset), and derivative (rate) calibration. (2 lecture hours, 2 lab hours)

ELECTRO-MECHANICAL TECHNOLOGY (ELMEC) 2520
Advanced Process and Automation Controls
3 Credit Hours
An in-depth study of force, stress, strain, linear position, weight and mass measurement. Also included are analytical process measurements such as pH, conductivity and resistivity. Major emphasis is given to control elements in process loops and electrical, pneumatic and hydraulic actuators. Introduction to digital process controllers and in-depth study of piping and instrumentation drawings (P&ID). Additionally, a comprehensive study of intrinsic safety and instrument purging is included. Prerequisite: Electro-Mechanical Technology 1190 and Electro-Mechanical Technology 2510 with a grade of C or better or consent of instructor. (2 lecture hours, 2 lab hours)

ELECTRO-MECHANICAL TECHNOLOGY (ELMEC) 2600
Motion Control: Servo & Stepper Motor
2 Credit Hours
An introduction to motion control, including: servo motors, DC servo drivers with control circuits, alternating current (AC) motors, steppers, actuators, sensors, fundamentals of basic control principles, and industrial and engineering applications of motion control systems. Prerequisite: Electronics Technology 1100 with a grade of C or better, or equivalent and Electro-Mechanical Technology 1110 with a grade of C or better, or equivalent or consent of instructor. (1 lecture hour, 3 lab hours)

ELECTRO-MECHANICAL TECHNOLOGY (ELMEC) 2620
Critical Thinking in Tech Applications
2 Credit Hours
Manufacturing processes and parameters that contribute to the system troubleshooting procedures. Through case studies and practical application, a system of thinking is developed to determine fault isolation and failure. (1 lecture hour, 2 lab hours)

ELECTRO-MECHANICAL TECHNOLOGY (ELMEC) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ELECTRO-MECHANICAL TECHNOLOGY (ELMEC) 2863
Internship (Career & Technical Ed)
3 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 225 clock hours for three semester credit hours. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ELECTRO-MECHANICAL TECHNOLOGY (ELMEC) 2864
Internship (Career & Technical Ed)
4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 300 clock hours for four semester credit hours. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ELECTRO-MECHANICAL TECHNOLOGY (ELMEC) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the

Dean from the academic discipline where the student is planning to earn credit.

ELECTRONICS TECHNOLOGY

ELECTRONICS TECHNOLOGY (ELECT) 1100
Electricity and Electronics Fundamentals
3 Credit Hours
Basic concepts in electronics are studied. An overview of direct and alternating current, circuit laws, components, troubleshooting, and use of test equipment. Hands-on experience, projects, and practical applications are included. (2 lecture hours, 2 lab hours)

ELECTRONICS TECHNOLOGY (ELECT) 1101
Circuits I
3 Credit Hours
Introduction to basic concepts in electronics and electricity. Topics include direct and alternating current, circuit laws, components, troubleshooting, and use of test equipment. Teamwork, critical thinking, and problem solving are emphasized. Hands-on experience and practical applications are included. Prerequisite: Electronics Technology 1100 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

ELECTRONICS TECHNOLOGY (ELECT) 1102
Circuits II
4 Credit Hours
Advanced concepts in circuit electronics. Topics include filtering, resonance, time and frequency response, troubleshooting, and use of test equipment. Hands-on experience, practical applications, and projects are included. Teamwork, critical thinking, and problem solving are emphasized. Prerequisite: Electronics Technology 1101 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours, 2 lab hours)

ELECTRONICS TECHNOLOGY (ELECT) 1110
Introduction to Technology
2 Credit Hours
Students will develop an understanding of the fields of technology such as computers, telecommunications, electronics, mechanics and other related fields. Through project based hands-on learning activities, students will have an opportunity to apply theory to real problems as they develop skills in solving technological problems. (1 lecture hour, 2 lab hours)

ELECTRONICS TECHNOLOGY (ELECT) 1111
Introduction to Robotics
3 Credit Hours
Introduction to fundamental robotic concepts, basic robot characteristics, and review of robotic applications. Hands-on experience, practical applications and projects. Teamwork, critical thinking and problem solving are emphasized. Prerequisite: Electronics Technology 1100 or equivalent, or consent of instructor. (2 lecture hours, 2 lab hours)

ELECTRONICS TECHNOLOGY (ELECT) 1118
Calculus for Electronics
2 Credit Hours
Basic principles of differential and integral calculus and differential equations applicable to circuit analysis. Prerequisite: Mathematics 1432 (or college equivalent) or qualifying score on the mathematics placement test or qualifying A.C.T. math score and Electronics Technology 1102 or consent of instructor. (2 lecture hours)

ELECTRONICS TECHNOLOGY (ELECT) 1120
Electronic Documentation
2 Credit Hours
Introduction to electronic drafting and documentation. Electronic schematics and documentation, printed circuit board documentation, and drafting techniques using computer assisted drafting and design (CADD). Components, symbols, and diagrams. (1 lecture hour, 2 lab hours)

ELECTRONICS TECHNOLOGY (ELECT) 1130
Electronics Materials and Fabrication
2 Credit Hours
Electronic equipment construction, assembly, repair, cable soldering techniques and fabrication. Coverage of the fundamentals of electronic design, fabrication and documentation, delineating various troubleshooting and test procedures, hands-on experience with connectors, fasteners, troubleshooting and testing of electronic systems. Testing of integrated circuits and personal computer boards. Concepts reinforced through student projects. Prerequisite: Electronics Technology 1100 with a grade of C or better or equivalent or consent of instructor. (1 lecture hour, 2 lab hours)

ELECTRONICS TECHNOLOGY (ELECT) 1141
Digital Fundamentals
3 Credit Hours
Introduction to basic concepts in digital electronics. Basic discrete electronics, digital logic, circuit laws, components, troubleshooting and use of test equipment. Hands-on experience, practical applications and projects. Teamwork, critical thinking and problem solving are emphasized. (2 lecture hours, 2 lab hours)

ELECTRONICS TECHNOLOGY (ELECT) 1151
Electronic Devices and Applications
4 Credit Hours
Basic concepts in electronic devices. Topics include diode and transistor fundamentals and applications, operational amplifier circuits, measurement and control circuits troubleshooting, and use of test equipment. Hands-on experience, practical applications, and projects. Teamwork, critical thinking, and problem solving are emphasized. Prerequisite: Electronics Technology 1101 or equivalent, or consent of instructor. (2 lecture hours, 4 lab hours)

ELECTRONICS TECHNOLOGY (ELECT) 1152
Electronic Devices and Applications 2
4 Credit Hours
A continuation of Electronic Devices and Applications I. Advanced concepts in electronic devices. Topics include diode and transistor applications, troubleshooting and use of test equipment. Hands-on experience, practical applications and projects. Teamwork, critical thinking and problem solving are emphasized. Prerequisite: Electronics Technology 1151 with a grade of C or better or equivalent, or consent of instructor. (2 lecture hours, 4 lab hours)

ELECTRONICS TECHNOLOGY (ELECT) 1161
Electronic Communications
4 Credit Hours
Basic concepts in telecommunication electronics and circuits. Fundamentals of analog communications, such as amplitude modulation (AM), frequency modulation (FM), television and radio fundamentals, troubleshooting and use of test equipment. Hands-on experience, practical applications and projects. Teamwork, critical thinking and problem solving are emphasized. Prerequisite: Electronics Technology 1151 or equivalent, or consent of instructor. (2 lecture hours, 4 lab hours)

ELECTRONICS TECHNOLOGY (ELECT) 1162
Electronic Communication 2
4 Credit Hours
A continuation of Electronic Communication 1. Advanced concepts in analog and digital communications and digital telecommunication circuits. Transmission lines, antennas, cell systems, networks, fiber-optics, troubleshooting and use of telecommunication test equipment. Hands-on experience, practical applications and projects. Teamwork, critical thinking and problem solving are emphasized. Prerequisite: Electronics Technology 1161 or equivalent, or consent of instructor. (2 lecture hours, 4 lab hours)

ELECTRONICS TECHNOLOGY (ELECT) 1201
Renewable Energy Fundamentals
2 Credit Hours
Survey of renewable energy technology including wind turbines and solar photovoltaic (PV) power technology. (1 lecture hour, 3 lab hours)

ELECTRONICS TECHNOLOGY (ELECT) 1221
Intro- Biomedical Instrumentn Technology
3 Credit Hours
Introduction to operation and maintenance of biomedical equipment and instrumentation. Basic terminology, fundamental measurements, recording and monitoring of medical instrumentation will be covered. Recommended: Electronics Technology 1100 with a grade of C or better, or equivalent. (2 lecture hours, 2 lab hours)

ELECTRONICS TECHNOLOGY (ELECT) 1820
Selected Topics I
1 to 4 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (1 to 3 lecture hours, 2 to 4 lab hours)

ELECTRONICS TECHNOLOGY (ELECT) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

ELECTRONICS TECHNOLOGY (ELECT) 2001
Green Energy Systems
3 Credit Hours
Advanced study of principles of operation, testing, and diagnosis of green energy systems. These systems are evaluated both with discussion of theory, hands-on lab analysis and alternative energy systems feasibility study will be included of actual green energy systems. Prerequisite: Electronics Technology 1100 with a grade of C or better, or equivalent or Electronics Technology 1201 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

ELECTRONICS TECHNOLOGY (ELECT) 2112
Motor Control
3 Credit Hours
Introduction to fundamental motor control concepts, basic control characteristics and review of control strategies. Hands-on experience, practical applications and projects. Teamwork, critical thinking and problem solving are emphasized. Prerequisite: Electronics Technology 1151 or equivalent, or consent of instructor. (2 lecture hours, 2 lab hours)

ELECTRONICS TECHNOLOGY (ELECT) 2201
Applied Electronics
5 Credit Hours
A continuation of Electronic Devices and Applications II course. Advanced semiconductor circuits, linear and nonlinear op-amps, analog signal conditioning, and linear power supplies. Hands-on experience, practical applications and projects. Teamwork, critical thinking and problem solving are emphasized. Prerequisite: Electronics Technology 1152 or equivalent, or consent of instructor. (3 lecture hours, 4 lab hours)

ELECTRONICS TECHNOLOGY (ELECT) 2215
Smart Grid Fundamentals
3 Credit Hours
Course covers fundamentals of smart grid technology including basic functions, design criteria, tools, techniques, and technology need for building a smart grid. Electric power systems, power and control system engineering, and power electronics are integrated into the study of modeling and control of smart grid renewal energy systems. Prerequisite: Electronics Technology 1100, 1101, 1151 and 1201; all with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

ELECTRONICS TECHNOLOGY (ELECT) 2220
Elect Instruments Measurements & Control
3 Credit Hours
Methods of measurements of basic electric and electronic parameters. Study of circuits and characteristics of major electronic instruments. Basic control circuits. Prerequisite: Electronics Technology 1141 and Electronics Technology 1151 or equivalent, or consent of instructor. (2 lecture hours, 2 lab hours)

ELECTRONICS TECHNOLOGY (ELECT) 2221
Electronic Instruments, Measurements and
3 Credit Hours
A continuation of the study of biomedical instrumentation. Students will learn how to inspect, repair, and maintain biomedical instrumentation and equipment. Internal electronic circuitry and typical clinical environments are discussed. Prerequisite: Electronics Technology 1221 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

ELECTRONICS TECHNOLOGY (ELECT) 2241
Wireless Telecommunications 1
3 Credit Hours
Basic concepts in wireless electronics and circuits. Fundamentals of wireless telecommunication systems, frequency spectrum, cellular radio, troubleshooting, and use of telecommunication test equipment. Hands-on experience, practical applications and projects. Teamwork, critical thinking and problem solving are emphasized. Prerequisite: Electronics Technology 1162 or consent of instructor. (2 lecture hours, 2 lab hours)

ELECTRONICS TECHNOLOGY (ELECT) 2245
Programmable Logic Devices
4 Credit Hours
Introduction to digital systems programming. Field Programmable Gate Arrays (FPGA) and Complex Programmable Logical Devices (CPLD) are used in this course to develop sample applications.

These state-of-the-art devices are programmed using the Verilog and VHDL (Very High Density Programming Language) languages, popular in science and industry today. Hands-on experience, practical applications and projects. Prerequisite: Electronics Technology 1141 or equivalent, or consent of instructor. (2 lecture hours, 4 lab hours)

ELECTRONICS TECHNOLOGY (ELECT) 2255
Industrial Controls
3 Credit Hours
Introduction of basic concepts in industrial electronics. Topics include an overview of transducers and signal conditioning. Troubleshooting and use of test equipment. Principles and fundamental laws of control technology and industrial electronics are included. Prerequisite: Electronics Technology 1141 and Electronics Technology 1151 or consent of instructor. (2 lecture hours, 2 lab hours)

ELECTRONICS TECHNOLOGY (ELECT) 2262
Introduction to Microprocessors
4 Credit Hours
Introduction to basic concepts in microprocessor systems. Architecture of microprocessor systems, and investigation of all phases of troubleshooting and implementation of reliable microprocessor systems. Hands-on experience, practical applications and projects. Teamwork, critical thinking and problem solving are emphasized. Prerequisite: Electronics Technology 1101 and Electronics Technology 1141 or equivalent, or consent of instructor. (2 lecture hours, 2 lab hours)

ELECTRONICS TECHNOLOGY (ELECT) 2273
Embedded Systems & Microcntrlr Program
3 Credit Hours
Introduction to embedded systems applications involving real-time programming of microcontrollers and digital to analog conversion. Hands-on experience includes programming Reduced Instruction Set Computing (RISC) microcontrollers, Field Programmable Gate Arrays (FPGA) circuits, and digital signal processing using Operation Amplifiers, Digital Signal Processing (DSP), and Phase Locked Loop (PLL) chips. Prerequisite: Electronics Technology 1141 with a grade of C or better, or equivalent, or consent of instructor. (2 lecture hours, 2 lab hours)

ELECTRONICS TECHNOLOGY (ELECT) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ELECTRONICS TECHNOLOGY (ELECT) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ENGINEERING

ENGINEERING (ENGIN) 1100
Engineering Orientation
1 Credit Hour
This orientation course explores career options and requirements for various engineering fields. The course covers the interrelationships within and between engineering, technology, and science to allow differentiation between various career choices. It is intended for engineering majors. Prerequisite: Consent of instructor is required. (1 lecture hour)

ENGINEERING (ENGIN) 1101 (IAI EGR 941)
Engineering Graphics and Design
3 Credit Hours
This is an introductory-level course in engineering graphics and design intended for mechanical, civil, and industrial engineering majors. It provides students with skills in basic drafting, spatial visualization, conceptual design, and the latest engineering software. The course's graphics topics include orthographic projection, pictorials, dimensioning, sectioning, tolerances, and assembly drawings utilizing free hand sketching, two-dimensional computer aided design, and solid modeling. The course's design topics include problem definition, functional analysis, generation of design alternatives, and evaluation. Basic shop operations are introduced. Prerequisite: Mathematics 0482 with a grade of C or better, or equivalent or a qualifying score on the mathematics placement test or a qualifying A.C.T. math score. (2 lecture hour, 3 lab hours)

ENGINEERING (ENGIN) 1820
Selected Topics I
1 to 3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 3 lecture hours)

ENGINEERING (ENGIN) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

ENGINEERING (ENGIN) 2201 (IAI EGR 942)
Statics
3 Credit Hours
This course studies the internal forces that develop inside a structure or machine in equilibrium due to applied external forces. The course's topics begin with force vectors, moment vectors,

distributed loads, particle equilibrium, and rigid body equilibrium in two and three dimensions. These concepts are applied toward the analysis of trusses, frames, machines, and beams. The course's topics conclude with a study of centroids, moments of inertia, friction, and virtual work. This course is intended for mechanical, civil, and industrial engineering majors. Prerequisite: Mathematics 2231 with a grade of C or better or equivalent and concurrent enrollment in Physics 2111 is required. (3 lecture hours)

ENGINEERING (ENGIN) 2202 (IAI EGR 943)
Dynamics
3 Credit Hours
This is an advanced course that studies the motion of an object or system under the action of forces. The course's topics include kinematics and kinetics of particles and rigid bodies in two and three dimensions, non-Cartesian coordinate systems, absolute and relative motion, force, mass, acceleration, work, energy, impulse, momentum, and vibration. This course is intended for mechanical, civil, and industrial engineering majors. Prerequisite: Engineering 2201 with a grade of C or better or equivalent and Physics 2111 with a grade of C or better or equivalent. (3 lecture hours)

ENGINEERING (ENGIN) 2203 (IAI EGR 945)
Mechanics of Materials
3 Credit Hours
Analysis of stress, strain and deflection in machine and structural elements (axial, shear, torsion and bending loads). Stress and strain transformation using Mohr's Circle. Combined loading, repeated loading, theories of failure, related mechanical properties, and column buckling. Design of shafts, beams and columns. Elementary stress measurement devices. Prerequisite: Engineering 2201. (3 lecture hours)

ENGINEERING (ENGIN) 2205
Engineering Thermodynamics
3 Credit Hours
Analysis of thermodynamic processes and systems. Engineering implications of the properties of ideal and real gases and vapors in thermal systems. Zeroth, first and second laws of thermodynamics, power and refrigeration systems, entropy and vapor power systems. Prerequisite: Mathematics 2233 or college equivalent. (3 lecture hours)

ENGINEERING (ENGIN) 2207
Engineering Economy
3 Credit Hours
Introduction to the economic aspects of engineering decisions. Topics include present and annual worth analysis, rate of return analysis, depreciation, inflation, income tax considerations, break-even analysis, sensitivity analysis, and financial decision making. Intended for mechanical, civil, and industrial engineering majors. Prerequisite: Mathematics 2232 with a grade of C or better, or equivalent. (4 lecture hours)

ENGINEERING (ENGIN) 2210 (IAI EGR 931L)
Circuit Analysis I
4 Credit Hours
This is an introduction to engineering circuit analysis and design. The topics include concepts of electricity and magnetism; circuit variables (units, voltage, inductance, power and energy); circuit elements (R, L, C and operational amplifiers); simple resistive circuits; circuit analysis (node-voltage, mesh-current, equivalents and superposition); transient analysis; and sinusoidal steady state (analysis and power). This course includes a lab component and is intended for electrical and computer engineering majors. Prerequisite: Mathematics 2233 with a grade of C or better, or equivalent and Physics 2112 with a grade of C or better, or equivalent. (3 lecture hours, 3 lab hours)

ENGINEERING (ENGIN) 2213 (IAI EGR 932)
Introduction to Digital Systems
4 Credit Hours
This is an introduction to digital circuit logic and design. The topics include representation of information, binary systems, Boolean algebra, Karnaugh maps, Quine-McClusky method, combinational switching circuits, multiplexers, decoders, encoders, latches, flip flops, registers, counters, sequential switching circuits, wired and stored program processor concepts(e.g. ROM), and VHDL. This course includes a lab component and is intended for computer engineering and electrical engineering students. Prerequisite: Mathematics 1431 with a grade of C or better, or equivalent or a qualifying score on the mathematics placement test or a qualifying A.C.T. math score. (3 lecture hours, 3 lab hours)

ENGINEERING (ENGIN) 2220
Circuit Analysis II
4 Credit Hours
This is an advanced course in circuit analysis and design. The topics include three phase circuits, magnetically coupled circuits, frequency response of AC circuits, Laplace transforms, Fourier series, Fourier transforms, active filters, and two port networks. This course includes a lab component and is intended for electrical and computer engineering majors. Prerequisite: Engineering 2210 with a grade of C or better, or equivalent and Mathematics 2270 with a grade of C or better, or equivalent. (3 lecture hours, 3 lab hours)

ENGINEERING (ENGIN) 2223
Microcontrollers
4 Credit Hours
This is an introduction to the structure of microprocessors. The topics include architecture, instruction set, assembly language programming, assembler directives, input/output operations, C language programming for an embedded device, timers, analog-to-digital conversion, interrupts, and timing analysis. The course includes a lab component and is intended for electrical and computer engineering students. Prerequisite: Engineering 2213 with a grade of C or better, or equivalent. (3 lecture hours, 3 lab hours)

ENGINEERING (ENGIN) 2820
Advanced Selected Topics I
1 to 3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: At least one course in the discipline or consent of instructor. (1 to 3 lecture hours)

ENGINEERING (ENGIN) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the

internship by the Dean from the academic discipline where the student is planning to earn credit.

ENGINEERING (ENGIN) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ENGINEERING (ENGIN) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ENGINEERING (ENGIN) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ENGLISH

ENGLISH (ENGLI) 0480
Preparation for College Reading
4 Credit Hours
Builds the foundational reading skills necessary to prepare for college-level reading. Develops active reading habits that lead to comprehension and that introduce critical reading. Students read a wide variety of texts and show how the texts relate to their own lives as well as enhance their understanding of the world. This course may require use of academic support services. This course may be taken four times for credit. Prerequisite: Appropriate score on the Reading Placement Test(s). (4 lecture hours)

ENGLISH (ENGLI) 0481
Approaches to College Reading I
4 Credit Hours
Continues to develop the reading skills necessary for college-level reading. Emphasizes the role reading plays in acquiring new information and extends literal comprehension to more complex reading tasks required for difficult texts. This course may require use of academic support services. This course may be taken four times for credit. Prerequisite: English 0480 with a grade of C or better or appropriate score on the Reading Placement Test. (4 lecture hours)

ENGLISH (ENGLI) 0482
Approaches to College Reading II
4 Credit Hours
Focuses primarily on content area reading to prepare students for the challenges of reading in college. Students begin to read critically to determine the purpose, point of view, audience, and message conveyed by an author, to trace the development of the line of reasoning, and to identify and evaluate the rhetorical devices used to convey a point. Also includes vocabulary development and reader-response activities. This course may require use of academic support services. This course may be taken four times for credit. Prerequisite: English 0481 with a grade of C or better or appropriate score on the Reading Placement Test. (4 lecture hours)

ENGLISH (ENGLI) 0490
Basic Writing
4 Credit Hours
Build confidence and fluency in writing and the ability to generate well-developed texts. Students will understand how their texts fit in with a larger text-based world by developing a sense of audience and purpose. Classes are workshop-intensive sessions. Because of the strong relationship between writing and reading, students are immersed in reading activities. This course may be taken three times for credit. Prerequisite: Appropriate score on the Writing Placement Test. (4 lecture hours)

ENGLISH (ENGLI) 0491
Approaches to College Writing I
4 Credit Hours
The second of three developmental writing courses designed to prepare students for English Composition 1101. Focuses on creating effective sentences and paragraphs within the context of writing short (250 to 350-word) essays, and on developing critical thinking skills. This course may be taken three times for credit. Prerequisite: Appropriate score on the Writing Placement Test. (4 lecture hours)

ENGLISH (ENGLI) 0492
Approaches to College Writing II
4 Credit Hours
The third of three developmental writing courses designed to prepare students for English Composition 1101. Focuses on composing longer (500-word) essays and on further developing critical thinking skills. This course may be taken three times for credit. Prerequisite: English 0491 with a grade of C or better or an appropriate score on the Writing Placement Test. (4 lecture hours)

ENGLISH (ENGLI) 1060
Reading & Writing in the Disciplines
1 Credit Hour
Students will practice reading strategies and writing techniques that help them be successful in a specific discipline at the college level. Assignments will be based on content-area course materials. A

specific content-area course must be identified as the focus for this course. This course may be taken four times for credit. Prerequisite: Course requires Reading Placement Test Score-Category One. (1 lecture hour)

ENGLISH (ENGLI) 1070
ESL Composition Supplement
1 Credit Hour
Allows students who are currently enrolled in a composition course to identify areas of writing development that will help them succeed in their course. Focuses on the writing process, grammar, and vocabulary. Designed for students whose first or primary language is not English. This course may be taken four times for credit. (1 lecture hour)

ENGLISH (ENGLI) 1080
Effective Workplace Writing
1 Credit Hour
Improves workplace writing skills. Emphasizes techniques that produce clear, effective communication. Assignments and materials will be based on the tasks the student must complete in his/her workplace. This course may be taken four times for credit. (1 lecture hour)

ENGLISH (ENGLI) 1090
Style Development
1 Credit Hour
Provides support in developing style, tone, and clarity of expression. Guides students to choose words to avoid cliches, wordiness, informality, and confusion. Emphasizes clear, consistent and direct writing for a variety of tasks, especially for academic purposes. This course may be taken four times for credit. Prerequisite: Course requires Reading Placement Test Score-Category One. (1 lecture hour)

ENGLISH (ENGLI) 1101 (IAI C1 900)
English Composition 1
3 Credit Hours
The first of two courses in the one-year composition sequence. Introduces students to college-level writing as a process of developing and supporting a thesis in an organized essay. Requires students to read and think critically. Emphasizes using appropriate style and voice as well as the conventions of standard English and citation. Prerequisite: English 0492 with a grade of C or better or English Language Studies 0553 with a grade of C or better or appropriate score on the Writing Placement Test. Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 1102 (IAI C1 901R)
English Composition 2
3 Credit Hours
Second course in two-course composition sequence. Students continue to develop experience in reading, thinking and writing critically by writing essays that demonstrate ability to analyze and evaluate the ideas of others and integrate them into their own writing. Reinforces student experience with the conventions of standard written English and the conventions of documentation while developing student ability to carry out independently the proper method and responsibilities of research. Prerequisite: English 1101 with a grade of C or better. (3 lecture hours)

ENGLISH (ENGLI) 1105
Workplace Writing
3 Credit Hours
Course focuses on the processes and strategies for creating various modes of communication within a workplace setting. Students will gain skills in assessing and addressing various audiences, observing stylistic conventions, and using appropriate elements of document design to communicate effectively. The course emphasizes the preparation of a variety of documents, such as resumes, letters of application, internal and external correspondence, descriptions, proposals, summaries, and reports. It also introduces strategies for conducting research and observing copyright. Prerequisite: English 0492 with a grade of C or better, or equivalent or English Language Studies 0553 with a grade of C or better, or equivalent or appropriate score on the Writing Placement Test and Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 1110
Technical Writing
3 Credit Hours
An introduction to technical writing with an overview of key issues such as usability, audience analysis, designing pages and digital screens, effective collaboration with peers, researching, interpreting and ethically presenting data, and writing clearly and persuasively. Also includes instruction in writing, revising, and presenting common technical writing genres, which could include emails, instructions, tutorials, manuals, reports, product/process descriptions, proposals, and presentations using visual aids. Prerequisite: English 0492 with a grade of C or better, or equivalent or English Language Studies 0553 with a grade of C or better, or equivalent or appropriate score on the Writing Placement Test(s). Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 1115
Digital Writing
3 Credit Hours
Concentrates on writing techniques that combine elements of digital composition, accessible grammar, and appropriate prose to develop an effective style suitable for various modes of digital communication. This course explores the ever-evolving landscape of digital rhetoric, preparing students for delivering content fitting for a range of audiences, from individuals to the global stage. Prerequisite: English 0492 with a grade of C or better, or equivalent or English Language Studies 0553 with a grade of C or better, or equivalent or appropriate score on the Writing Placement Test(s). Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 1125
Linguistics
3 Credit Hours
The first course in the scientific study of language. Includes a systematic analysis of word formation, syntax and semantics in the English language and a study of the often universal ways that humans make meaning through language. Also includes study of related issues of language variation, particularly historical development and child language acquisition. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 1130 (IAI H3 900)
Introduction to Literature
3 Credit Hours
This course develops students' understanding of the elements of literature, including character, theme, point of view, symbol, imagery, tone and rhythm. Reading selections include short fiction,

poetry and drama. The course emphasizes students' appreciation of literature as an art form. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 1135 (IAI F2 908)
Introduction to Film Art
3 Credit Hours
Introduces the basic elements of film as an art form, including cinematography, mise-en-scene, movement, editing and sound. The historical development and social impact of film are also considered. Through screening, discussion and critical evaluation of selected films, students develop their knowledge of film as an art form. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 1150 (IAI H3 901)
Short Fiction
3 Credit Hours
A study of selected short stories. The stories are read and discussed to increase students' understanding and enjoyment of this literary form. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 1151 (IAI H3 901)
Novel
3 Credit Hours
A study of selected novels. The novels are read and analyzed to increase students' understanding and enjoyment of this literary form. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 1152 (IAI H3 903)
Poetry
3 Credit Hours
Introduces students to the nature and elements of poetry through reading, analysis and discussion. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 1153 (IAI H3 902)
Drama
3 Credit Hours
A study of selected plays. At least one of the plays will be currently in production in the area, and students will attend a performance. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 1154 (IAI HF 908)
Film As Literature
3 Credit Hours
Introduces methods of analyzing and interpreting the literary aspects of film in order to enhance enjoyment and understanding. Includes the comparison of literary and film techniques. Through the study of a selected variety of motion pictures, the course builds sensitivity to the uses of verbal and visual language and to the characteristics of various genre and non-genre films. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 1156
Science Fiction
3 Credit Hours
Study of science fiction as a literary genre and as a means of exploring contemporary concerns. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 1157
Children's Literature
3 Credit Hours
Introduction to literature for and by children, with emphasis upon imaginative literature, including fantasy, fairy tales, myths and legends, poetry and nonsense rhymes, adventure-quest narratives, as well as children's original poetry and fiction. Examines critical views of children's books. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 1158 (IAI H5 901)
Bible As Literature
3 Credit Hours
An analysis, interpretation and evaluation of such basic types of literature found in the Bible as the short story, ballad and song, drama, fantasy, poetry, and the worlds of satire and humor. Emphasizes the development of individual understanding and enjoyment. Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 1159 (IAI H9 901)
Greek Mythology
3 Credit Hours
An introduction to the mythology of Classical Greece (fifth century BCE) as it appears in narrative and dramatic forms. The myths and the ideas underpinning them are studied in relation to modern culture. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 1160 (IAI H3 910D)
Native American Literature
3 Credit Hours
Survey of Native American mythology, oratory, poetry, short fiction, nonfiction and the novel. Develops reading skills in analysis, interpretation and evaluation and examines values and themes common to Native American experiences. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 1161 (IAI H3 910D)
Multicultural Literatures of the U.S.
3 Credit Hours
Examines literary texts representative of one or more multicultural groups in the U.S., including but not limited to Hispanic, African-American, Asian-American, Middle Eastern, etc. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 1165 (IAI H3 911D)
Literature and Gender
3 Credit Hours
Studies literature centering on women's experience, identity construction, gender epistemology, and feminist philosophy and scholarship. The course also examines subject-boundaries of traditional discipline and literary canonization from interdisciplinary and culturally inclusive perspectives. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 1800
Special Project
1 to 3 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline. These courses require direct experience and focused

reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) This course may be taken four times for credit. Prerequisite: Course requires Reading Placement Test Score-Category One.

ENGLISH (ENGLI) 1820
Selected Topics I
3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 1824
Selected Topics in English
2 Credit Hours
Introductory exploration and analysis of selected topics in English with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Course requires Reading Placement Test Score-Category One. (2 lecture hours)

ENGLISH (ENGLI) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Course requires Reading Placement Test Score-Category One. Consent of instructor is required. (1 to 4 lecture hours)

ENGLISH (ENGLI) 2100
Intro to Writing/Reading Center Theory
3 Credit Hours
Experiential course designed to train students to tutor other writers and readers and to engage in self-reflective and meta-cognitive activities on their writing and reading. Includes writing, reading, observing, and practicing tutoring in the Writing and Reading Center. This course may be taken four times for credit. Prerequisite: English 1101 with a grade of B or better or equivalent and concurrent enrollment in English 1102 or consent of instructor. (3 lecture hours)

ENGLISH (ENGLI) 2105
Writing in the Professions
3 Credit Hours
An in-depth study of writing in the professions, exploring the structure and format of professional writing documents and how these documents function as a communicative tool. Provides a solid foundation upon which students can build as they develop specializations in their professional fields. Special attention will be paid to the rhetoric of professional writing and professional writing issues in professional settings. Includes instruction in rhetoric, research, and writing professional documents such as reports, proposals, and presentations. Prerequisite: English 1102 with a grade of C or better, or equivalent or concurrent enrollment in English 1102 or consent of instructor. (3 lecture hours)

ENGLISH (ENGLI) 2110
Professional Editing
3 Credit Hours
Focuses on the basic principles of editing professional documents, including editing for content, organization, style, layout, and mechanics. Topics may include documentation formats, readability, usability testing, digital publishing, and proofreading. Prerequisite: English 1102 with a grade of C or better, or equivalent or concurrent enrollment in English 1102 or consent of instructor. (3 lecture hours)

ENGLISH (ENGLI) 2115
Writing in the Community
3 Credit Hours
An in-depth study of the content, form, and function of the professional writing used in community organizations. Provides a solid foundation for students currently working or planning on working at a community organization. Special attention will be paid to public rhetoric for the purposes of communicating the missions of the community organization, such as attaining grants, fundraising, and establishing goodwill in the community. Includes instruction in rhetoric, research, and writing professional texts, such as grants, reports, proposals, advertisements, research requests, and presentations. Prerequisite: English 1102 with a grade of C or better, or equivalent or concurrent enrollment in English 1102 or consent of instructor. (3 lecture hours)

ENGLISH (ENGLI) 2126
Modern English Grammar
3 Credit Hours
A systematic and rigorous survey of the structure of contemporary English. Also explored are usage issues (including problems with the sentence, punctuation and agreement) and their underlying sources (language change, language attitudes, and the notion of Standard English). Traces the effects of stylistic, regional and social variation on English usage. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 2210
Literary Journal: Prairie Light Review
2 Credit Hours
An experiential course that applies editorial and publication techniques to produce college district literary journal. Includes acquisitions, copy editing, and marketing aspects of publishing. This course may be taken four times for credit. Prerequisite: Course requires Reading Placement Test Score-Category One. (1 lecture hour, 2 lab hours)

ENGLISH (ENGLI) 2220 (IAI H3 912)
British Literature to 1800
3 Credit Hours
A survey of representative works illustrating the development of British literature from its beginnings to roughly 1800, with an emphasis on major literary movements understood in relation to their intellectual, social, and political contexts. Prerequisite: English 1101 with a grade of C or better or consent of instructor. (3 lecture hours)

ENGLISH (ENGLI) 2221 (IAI H3 913)
British Literature From 1800 Through the
3 Credit Hours
A survey of representative works illustrating the development of British literature from roughly 1800 to the present, with an emphasis on major literary movements understood in relation to their intellectual, social and political contexts. Prerequisite: English 1101 or consent of instructor. (3 lecture hours)

ENGLISH (ENGLI) 2223 (IAI H3 914)
American Lit From Colonial Period to Civ
3 Credit Hours
Surveys works of representative American authors in their literary, intellectual, social and political contexts from the earliest periods to the Civil War. Prerequisite: English 1101 with a grade of C or better or consent of instructor. (3 lecture hours)

ENGLISH (ENGLI) 2224 (IAI H3 915)
Amer Literature From Civil War-Present
3 Credit Hours
Surveys works of representative American authors in their literary, intellectual, social and political contexts from the Civil War through the present. Prerequisite: English 1101 with a grade of C or better or consent of instructor. (3 lecture hours)

ENGLISH (ENGLI) 2226 (IAI H3 907)
Masterpieces of World Literature
3 Credit Hours
Reading of novels, drama and short stories from different cultural backgrounds and from different historical periods. Emphasis is on fictional literary masterpieces important to a liberal education. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 2227 (IAI H3 907)
Modern European Literature
3 Credit Hours
Reading of major European writers of the 20th century in their individual and national contexts with emphasis on European thought and themes. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 2228 (IAI H3 905)
Shakespeare
3 Credit Hours
Involves reading and discussing various Shakespearean works, including six to nine plays. Lecture, discussion, recordings, films, oral readings or occasional student performances may be used to illuminate the material. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 2250
Introduction to Creative Writing
3 Credit Hours
Students discover and develop their writing talent in several genres. Students create original fiction, poetry, creative non-fiction, and drama; experiment with various forms and styles; criticize and revise their own work; and read and examine the works of well-known writers for insight and inspiration. (3 lecture hours)

ENGLISH (ENGLI) 2251
Fiction Writing
3 Credit Hours
A fiction writing course for students who want to develop their writing talents. Students examine elements of various forms of fiction and select and employ applicable techniques to their writing projects. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 2252
Poetry Writing
3 Credit Hours
A creative writing course for students who want to explore, discover and develop their poetic talents. Students write their own poetry, experiment with various poetic forms and styles, criticize and revise their own work, receive critical feedback, and read and examine the works of well-known poets for insight and inspiration. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 2253
Creative Nonfiction Writing
3 Credit Hours
An introductory writing course for students who wish to write free-lance articles, memoirs, essays or other nonfiction prose. Students work on one or more projects with the editorial assistance of the instructor. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 2254
Playwriting
3 Credit Hours
Introduces students to invention, criticism, and revision strategies that will encourage them to discover and develop their own voice and style in drama. Students write their own dramatic pieces, learn industry standards for play formats, experiment with various forms and styles, criticize and revise their own work, and receive critical feedback from others. Students read and examine the works of well-known playwrights for insight and inspiration. (3 lecture hours)

ENGLISH (ENGLI) 2255
Screenwriting for Short Forms
3 Credit Hours
This writing course will engage students with invention, criticism, and revision strategies that will encourage them to discover and develop their own voice and style in screenwriting. Students write individual, isolated scenes and acts for various forms of screen formats; learn industry standards for screenplay formats; experiment with various forms and styles; criticize and revise their own work; receive critical feedback from others; and read and examine the works of well-known screenwriters for insight and inspiration. Credit cannot be given for both English 2255 and Motion Picture/Television 2022. (3 lecture hours)

ENGLISH (ENGLI) 2261
Writing for Publication
3 Credit Hours
This course offers instruction in analyzing the publishing market including such publications as educational journals, business and industrial journals, general interest magazines, and book-length publications. Students aim their writing projects toward a particular market. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 2262 (IAI H3 908N)
Non-Western Literature
3 Credit Hours

Examines and analyzes literary texts representative of the Non-Western world, including but not limited to Latin America, South America, the Caribbean, Africa, Asia, the Middle East, and/or Oceania. Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 2271
Postmodern Fiction and Film
3 Credit Hours
An introduction to the conflicting ideas, texts, and products that define Postmodern fiction and film. Prerequisite: English 1101 with a grade of C or better, or equivalent. Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 2300
Advanced Composition
3 Credit Hours
Builds upon the rhetoric and writing skills developed in Composition I and II. Students will study and apply rhetorical theory, from the classical through the postmodern periods, in order to read and write within a variety of rhetorical situations. They will also investigate and incorporate research methodologies and prose styles used in different academic and professional discourse communities. Students will create a portfolio of work tailored to their academic and professional goals, which will include multimodal elements. Prerequisite: English 1102 with a grade of C or better, or equivalent. (3 lecture hours)

ENGLISH (ENGLI) 2800
Special Project
1 to 3 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline, while building upon academic knowledge and skills acquired in introductory-level classes. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of more complex discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) Prerequisite: At least one course in the discipline or consent of instructor. Course requires Reading Placement Test Score-Category One.

ENGLISH (ENGLI) 2820
Topics in Literature
3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken three times for credit as long as different topics are selected. Prerequisite: At least one course in the discipline or consent of instructor. Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ENGLISH (ENGLI) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ENGLISH (ENGLI) 2863
Internship (Career & Technical Ed)
3 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 225 clock hours for three semester credit hours. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ENGLISH (ENGLI) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ENGLISH (ENGLI) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ENGLISH (ENGLI) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits.

Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

ENGLISH LANGUAGE ACQUISITION

ENGLISH LANGUAGE ACQUISITION (ELA) 0950
ESL Literacy I
1 to 6 Credit Hours
Introduces basic ESL Literacy communication skills including listening, speaking, reading, and writing. Emphasis is on aural/oral skills. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. Prerequisite: Consent of instructor is required. (1 to 6 lecture hours)

ENGLISH LANGUAGE ACQUISITION (ELA) 0951
ESL Literacy II
1 to 6 Credit Hours
Completes basic ESL Literacy communication skills including listening, speaking, reading, and writing. Emphasis is on aural/oral skills. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. Prerequisite: Consent of instructor is required. (1 to 6 lecture hours)

ENGLISH LANGUAGE ACQUISITION (ELA) 0952
Low Beginning ESL
1 to 6 Credit Hours
Introduces beginning ESL communication skills, including listening, speaking, reading and writing. Grammar concepts introduced. Emphasis continues on aural/oral skills. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. Prerequisite: Consent of instructor is required. (1 to 6 lecture hours)

ENGLISH LANGUAGE ACQUISITION (ELA) 0953
High Beginning ESL
1 to 6 Credit Hours
Continues Beginning ESL communication skills including expanded basic listening, speaking, reading and writing. Continues the study of grammar and structure. Emphasis primarily on aural/oral skills. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass fail basis. Prerequisite: Consent of instructor is required. (1 to 6 lecture hours)

ENGLISH LANGUAGE ACQUISITION (ELA) 0954
Beginning ESL III
1 to 5 Credit Hours
Completes beginning ESL communication skills necessary to function in the United States. Continues the development of listening, speaking, reading and writing skills. Introduces grammar and structure. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. Prerequisite: Consent of instructor is required. (1 to 5 lecture hours)

ENGLISH LANGUAGE ACQUISITION (ELA) 0955
Low Intermediate ESL
1 to 6 Credit Hours
Introduces Intermediate ESL communication skills necessary to function in the U.S. including listening, speaking, reading and writing. Continues the study of grammar and structure. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. This class can only be taken on a pass/fail basis. Prerequisite: Consent of instructor is required. (1 to 6 lecture hours)

ENGLISH LANGUAGE ACQUISITION (ELA) 0956
High Intermediate ESL
1 to 6 Credit Hours
Completes Intermediate ESL communication skills necessary to function in the U.S. including listening, speaking, reading, and writing. Continues the study of grammar and structure. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. This class can only be taken on a pass/fail basis. Prerequisite: Consent of instructor is required. (1 to 6 lecture hours)

ENGLISH LANGUAGE ACQUISITION (ELA) 0957
Advanced ESL I
1 to 5 Credit Hours
Introduces advanced ESL communication skills necessary to function in the United States, including listening, speaking, reading and writing. Continues the study of grammar and structure. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. Prerequisite: Consent of instructor is required. (1 to 5 lecture hours)

ENGLISH LANGUAGE ACQUISITION (ELA) 0958
Advanced ESL II
1 to 5 Credit Hours
Completes advanced ESL communication skills necessary to function in the United States, including listening, speaking, reading and writing. Continues the study of grammar and structure. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. Prerequisite: Consent of instructor is required. (1 to 5 lecture hours)

ENGLISH LANGUAGE STUDIES

ENGLISH LANGUAGE STUDIES (ELS) 0441
Academic ESL Reading I
4 Credit Hours
Beginning-level academic/professional reading and comprehension skills and strategies for students whose first or primary language is not English. Emphasizes skills/strategies to improve reading comprehension and speed, expand vocabulary and use reference resources. Course is intended for students who hold a high school certificate or its equivalent and have previously studied English in the United States or their native countries. This course may be taken four times for credit; course does not count toward GPA/graduation and is non transferable. Prerequisite: Appropriate score on mandatory placement test. (4 lecture hours)

ENGLISH LANGUAGE STUDIES (ELS) 0442
Academic ESL Reading II
4 Credit Hours

Intermediate-level academic/professional reading comprehension skills and strategies for students whose first or primary language is not English. Emphasizes developing the critical reading and academic skills required to satisfy students' academic or professional needs. Course is primarily intended for students who hold a high school certificate or its equivalent and have previously studied English in the United States or their native countries. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. Prerequisite: English Language Studies 0441 with a grade of C or better or equivalent or appropriate score on mandatory placement test. (4 lecture hours)

ENGLISH LANGUAGE STUDIES (ELS) 0443
Academic ESL Reading III
4 Credit Hours
Advanced-level academic/professional reading skills and comprehension strategies for students whose first or primary language is not English. Emphasizes using authentic texts to develop the critical reading and academic skills required to satisfy students' academic or professional needs. Intended for students who hold a high school certificate or its equivalent and have previously studied English in the United States or their native countries. For exit purposes, a grade of C or better is required for students to be placed in Reading Category 1. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. Prerequisite: English Language Studies 0442 with a grade of C or better, or equivalent or appropriate score on mandatory placement test. (4 lecture hours)

ENGLISH LANGUAGE STUDIES (ELS) 0551
Academic ESL Writing I
4 Credit Hours
Beginning-level academic/professional writing skills for students whose first or primary language is not English. Emphasizes writing well-formed, grammatical sentences and studying paragraph development. Focuses on recognizing spelling patterns for verbs and nouns, expanding vocabulary, generating original sentences in the six basic sentence patterns with correct punctuation, distinguishing topic sentences from supporting ideas and concluding sentences, and learning pre-writing techniques for paragraph development. Intended for students who hold a high school certificate or its equivalent and have previously studied English in the United States or their native countries. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. Prerequisite: Appropriate score on mandatory placement test. (4 lecture hours)

ENGLISH LANGUAGE STUDIES (ELS) 0552
Academic ESL Writing II
4 Credit Hours
Intermediate-level academic/professional writing skills for students whose first or primary language is not English. Emphasizes writing well-formed, grammatical paragraphs. Focuses on expanding the six basic sentence patterns through modification and compounding, using the writing process, organizing ideas into paragraph form, understanding elements of unity and coherence, and producing narrative, descriptive and expository paragraphs. Intended for students who hold a high school certificate or its equivalent and have previously studied English in the United States or their native countries. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. Prerequisite: English Language Studies 0551 with a grade of C or better, or equivalent or appropriate score on mandatory placement test. (4 lecture hours)

ENGLISH LANGUAGE STUDIES (ELS) 0553
Academic ESL Writing III
4 Credit Hours
Advanced-level academic/professional writing skills for students whose first or primary language is not English. Emphasizes writing well-formed, grammatical essays. Focuses on a review of sentence expansion and modification, the four steps of the writing process, developing research skills, and writing essays in a variety of rhetorical styles. Intended for students who hold a high school certificate or its equivalent and have previously studied English in the United States or their native countries. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. Prerequisite: English Language Studies 0552 with a grade of C or better, or equivalent or appropriate score on mandatory placement test. (4 lecture hours)

ENGLISH LANGUAGE STUDIES (ELS) 0661
Academic ESL Grammar I
4 Credit Hours
Beginning-level academic/professional English grammar and sentence structure for students whose first or primary language is not English. Emphasizes the formal properties of the English language integrated with writing skills. Focuses on identifying sentence parts, complete sentences and fragments; subject/verb agreement; basic statement, imperative and question patterns; and simple present, present continuous, simple past and past continuous tenses. Intended primarily for students who hold a high school certificate or its equivalent and have previously studied English in the United States or their native countries. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. Prerequisite: Appropriate score on mandatory placement test. (4 lecture hours)

ENGLISH LANGUAGE STUDIES (ELS) 0662
Academic ESL Grammar II
4 Credit Hours
Intermediate-level academic/professional English grammar and sentence structure for students whose first or primary language is not English. Emphasizes the formal properties of the English language integrated with writing skills. Focuses on the English system of articles, phrasal verbs, constructions of coordination and modification, and future and perfect tenses. Intended primarily for students who hold a high school certificate or its equivalent and have previously studied English in the United States or their native countries. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. Prerequisite: English Language Studies 0661 with a grade of C or better, or equivalent or appropriate score on mandatory placement test. (4 lecture hours)

ENGLISH LANGUAGE STUDIES (ELS) 0663
Academic ESL Grammar III
4 Credit Hours
Advanced-level academic/professional English grammar and sentence structure for students whose first or primary language is not English. Emphasizes the formal properties of the English language integrated with writing skills. Focuses on conditionals, passive voice, reported speech, verbals, emphatic constructions, performing multiple coordinating and embedding combinations, and varying tenses in discourse. Intended primarily for students who hold a high school certificate or its equivalent and have previously studied English in the United States or their native countries. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. Prerequisite: English Language Studies 0662 with a grade of C or

better, or equivalent or appropriate score on mandatory placement test. (4 lecture hours)

ENGLISH LANGUAGE STUDIES (ELS) 0771
Academic ESL Listening/Speaking I
4 Credit Hours
Beginning-level academic/professional listening and speaking skills necessary for formal contexts for students whose first or primary language is not English. Emphasizes aural/oral discourse used in decision-making and problem-solving tasks. Focuses on such areas as listening to college lectures and taking notes, participating in group discussions, pronouncing English sounds correctly, producing English stress and intonation patterns, and preparing short oral presentations. Intended primarily for students who hold a high school certificate or its equivalent and have previously studied English in the United States or their native countries. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. Prerequisite: Appropriate score on mandatory placement test. (4 lecture hours)

ENGLISH LANGUAGE STUDIES (ELS) 0772
Academic ESL Listening/Speaking II
4 Credit Hours
Intermediate-level academic/professional listening and speaking skills necessary for more formal contexts for students whose first or primary language is not English. Emphasizes longer aural/oral discourse used in decision-making and problem-solving tasks. Focuses on areas such as listening to extended college lectures and taking notes, applying a range of strategies for participating in group discussions, pronouncing English sounds correctly, producing English stress and intonation patterns, and incorporating techniques to enhance oral presentations. Intended primarily for students who hold a high school certificate or its equivalent and who have previously studied English in the United States or their native countries. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. Prerequisite: English Language Studies 0771 with a grade of C or better, or equivalent or appropriate score on mandatory placement test. (4 lecture hours)

ENGLISH LANGUAGE STUDIES (ELS) 0773
Academic ESL Listening/Speaking III
4 Credit Hours
Advanced-level listening and speaking skills and strategies for professional contexts for students whose first or primary language is not English. Emphasizes analytical skills necessary for assessing alternatives, finding creative solutions, and presenting outcomes effectively. Intended primarily for students who hold a high school certificate or its equivalent and have previously studied English in the United States or their native countries. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. Prerequisite: English Language Studies 0772 with a grade of C or better, or equivalent or appropriate score on mandatory placement test. (4 lecture hours)

ENGLISH LANGUAGE STUDIES (ELS) 0820
Selected Topics
2 to 4 Credit Hours
Academic/professional English skills for students whose first or primary language is not English. Emphasizes critical thinking in reading, writing, listening and speaking. Develops language and research skills necessary for success in the academic or professional setting. Intended for students who hold a high school certificate or its equivalent and have previously studied English. Topics will vary by term offerings. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Appropriate score on mandatory placement test or consent of instructor. (2 to 4 lecture hours)

ENGLISH LANGUAGE STUDIES (ELS) 0881
Academic ESL Language and Culture I
2 to 4 Credit Hours
Beginning-level academic/professional aural/oral skills and strategies for students whose first or primary language is not English. Emphasizes developing the skills and strategies necessary for social conversations and formal transactions, building an understanding and appreciation of U.S. culture, and enhancing cross-cultural communication. Focuses on such areas as making introductions, initiating, sustaining and ending conversations, explaining personal tastes and preferences, and using the telephone. Addresses the linguistic and cultural instructional needs of non-English-language-background students. Intended primarily for students who hold a high school certificate or its equivalent and have previously studied English in the United States or their native countries. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. Prerequisite: Appropriate score on mandatory placement test or consent of instructor. (2 to 4 lecture hours)

ENGLISH LANGUAGE STUDIES (ELS) 0882
Academic ESL Language and Culture II
2 to 4 Credit Hours
Intermediate-level academic/professional aural/oral skills and strategies for students whose first or primary language is not English. Emphasizes open-ended and problem-solving tasks to generate original conversation within the context of real-life, authentic situations. Focuses on such areas as communicating cross-culturally; making suggestions, expressing feelings, making inquiries, offering/accepting invitations, gifts and apologies; explaining problems; and agreeing/disagreeing. Addresses the linguistic and cultural instructional needs of non-English-language-background students. Intended primarily for students who hold a high school certificate or its equivalent and have previously studied English in the United States or their native countries. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. Prerequisite: English Language Studies 0881 with a grade of C or better, or equivalent or appropriate score on mandatory placement test. (2 to 4 lecture hours)

ENGLISH LANGUAGE STUDIES (ELS) 0883
Academic ESL Language and Culture III
2 to 4 Credit Hours
Advanced-level academic/professional oral/aural skills and strategies for students whose first or primary language is not English. Emphasizes more complex transactions and conversation management skills in the context of decision-making and problem-solving tasks based on real-life, authentic situations. Focuses on such areas as communicating cross-culturally; agreeing, disagreeing and compromising; participating in discussions; explaining complex situations, and reporting sequences of events. Addresses the linguistic and cultural instructional needs of non-English-language-background students. Intended primarily for students who hold a high school certificate or its equivalent and have previously studied English in the United States or their native countries. May be taken up to three times for credit; course does not count toward GPA/graduation and is non-transferable. Prerequisite: English Language Studies 0882 with a grade of C or better, or equivalent or appropriate score on mandatory placement test. (2 to 4 lecture hours)

EYE CARE ASSISTANT

EYE CARE ASSISTANT (EYE) 1101
Principles of Eye Care Assistant I
8 Credit Hours
Students will be introduced to the profession of eye care assistant, including education on career options in optometry/ophthalmology. Concepts such as medical ethics, regulatory, and legal issues, communication skills, safety, general and ocular anatomy and physiology, pharmacology, microbiology, and history taking will be introduced. Prerequisite: Anatomy & Physiology 1500 with a grade of C or better, or equivalent and Health Sciences 1110 with a grade of C or better or equivalent. (5 lecture hours, 3 lab hours, 8 clinical hours)

EYE CARE ASSISTANT (EYE) 1102
Principles of Eye Care Assistant II
8 Credit Hours
Students will build upon the concepts learned in Eye Care Assistant I. Additionally, the role of the eye care assistant in ocular surgery will be emphasized. Teachings include other topics such as ocular imaging procedures, optometrist/ophthalmic photography and visual aids for the partially sighted. Prerequisite: Eye Care Assistant 1101 with a grade of C or better, or equivalent. (5 lecture hours, 3 lab hours, 8 clinical hours)

EYE CARE ASSISTANT (EYE) 1103
Principles of Eye Care Assistant III
9 Credit Hours
Eye Care Assistant III will reinforce concepts and expand upon clinical experiences. Differentiation between blindness and partial blindness, impact of sight and potential reading problems in children, and tests used to evaluate vision will be presented. Preparation for the certification examination is included. Prerequisite: Eye Care Assistant 1102 with a grade of C or better, or equivalent. (4 lecture hours, 3 lab hours, 16 clinical hours)

FACILITY MANAGEMENT

FACILITY MANAGEMENT (FACM) 1100
Introduction to Facility Management
3 Credit Hours
An overview of facility and property management techniques. Topics include the organization of the facilities and property industries, budgeting, standards, labor relations, safety, personnel administration, maintenance (exterior and interior), energy conservation, HVAC systems and space planning. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

FACILITY MANAGEMENT (FACM) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor. Course requires Reading Placement Test Score-Category One. (1 to 4 lecture hours)

FACILITY MANAGEMENT (FACM) 2202
Facility Systems - Electrical
3 Credit Hours
An overview of the electrical systems within a facility and their integration within the total structure. Systems reviewed are lighting distribution, power sources, motor controls and distribution, alarm systems, interior communications, and applicable codes and standards. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

FACILITY MANAGEMENT (FACM) 2203
Facility Systems - Mechanical
3 Credit Hours
An overview of the mechanical systems within a facility and their integration within the total structure. Systems reviewed are interior and exterior plumbing, waste disposal, heating, ventilation, air conditioning, refrigeration, fire protection, and applicable codes and standards. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

FACILITY MANAGEMENT (FACM) 2204
Interior Space Planning
3 Credit Hours
An overview of interior design principles and methods including the basics of space planning, real estate transactions, systems furniture, and the processes of an interior project (renovation and new construction), hiring an outside interiors consultant, and Computer-Aided Facility Management (CAFM). Prerequisite: Course requires Reading Placement Test Score-Category One. (2 lecture hours, 2 lab hours)

FACILITY MANAGEMENT (FACM) 2215
Facility and Property Management
3 Credit Hours
Application of master planning, space standards, renovation, and relocation of existing facilities with emphasis on major problems confronting professional planners, managers and designers. Prerequisite: Facility Management 1100 or equivalent. Course requires Reading Placement Test Score-Category One. (3 lecture hours)

FASHION STUDIES

FASHION STUDIES (FASHI) 1100
Introduction to Fashion Design
3 Credit Hours
This course is ideal for the fashion novice. Students are introduced to the types of skills needed to succeed in Fashion Design. Techniques covered include: sketching, pattern making and clothing construction. Prerequisite: Course requires Reading Placement Test Score-Category Two. (6 lab hours)

FASHION STUDIES (FASHI) 1105
Design Principles in Apparel
3 Credit Hours
Basic design principles as applied to apparel. The relationship of form to function, analysis of garment design, interpretation of fashion trends, and expression of individuality are emphasized. Prerequisite: Course requires Reading Placement Test Score-Category Two. (2 lecture hours, 2 lab hours)

FASHION STUDIES (FASHI) 1110
Machine Knitting I
1.5 Credit Hours
Principles and techniques knitting on the single-bed knitting machine. Basic skills are introduced with emphasis on the creative use of color, pattern, texture and fibers in the production of knitted fabrics. Prerequisite: Course requires Reading Placement Test Score-Category Two. (3 lab hours)

FASHION STUDIES (FASHI) 1112
Machine Knitting II
1.5 Credit Hours
Intermediate and advanced techniques on knitting machines. Knit-weave, lace, jacquard, double bed techniques, garment design, and knitting software are introduced. Prerequisite: Fashion Studies 1110 or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Two. (3 lab hours)

FASHION STUDIES (FASHI) 1114
Weaving I
1.5 Credit Hours
Introduction to the loom as a tool for design and personal expression. Includes selecting yarns, making warps, dressing the loom, designing fabrics, and producing a variety of cloth structures. Prerequisite: Course requires Reading Placement Test Score-Category Two. (3 lab hours)

FASHION STUDIES (FASHI) 1115
Fashion Illustration
3 Credit Hours
Fundamentals of female fashion figure drawing, with emphasis on apparel and accessory illustration. Prerequisite: Course requires Reading Placement Test Score-Category Two. (6 lab hours)

FASHION STUDIES (FASHI) 1116
Weaving II
1.5 Credit Hours
Development of intermediate and advanced weaving skills on the loom. Twill variations, double weave, lace weave, and overshot are introduced. Prerequisite: Fashion Studies 1114 or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Two. (3 lab hours)

FASHION STUDIES (FASHI) 1120
Fashion Promotion
3 Credit Hours
Introductory course in preparation, production and merchandising of fashion shows with traditional and creative contemporary approaches. Emphasis on creative use of media in presentation. Prerequisite: Course requires Reading Placement Test Score-Category Two. (2 lecture hours, 2 lab hours)

FASHION STUDIES (FASHI) 1125
Digital Fashion Presentation
3 Credit Hours
Fashion presentation skills for Fashion and Visual Merchandising students. Use of vector and raster software to create professional quality trend and visual reports. (2 lecture hours, 2 lab hours)

FASHION STUDIES (FASHI) 1151
Principles of Textiles
3 Credit Hours
Identification of yarns, weaves, coloring methods and primary finishes. Analysis of physical and chemical properties of fibers. Prerequisite: Course requires Reading Placement Test Score-Category Two. (2 lecture hours, 2 lab hours)

FASHION STUDIES (FASHI) 1180
Bus Practices - Fashion Entrepreneur
3 Credit Hours
Fundamental decision making for the person in the business of sewing, arts or crafts, includes acquisition of equipment and supplies, legalities, taxes, zoning, insurance, establishing price structures, customer relations, record keeping, financing, trade publications, organizations, advertising and time scheduling. Prerequisite: Course requires Reading Placement Test Score-Category Two. (3 lecture hours)

FASHION STUDIES (FASHI) 1183
Felting and Fusing
1.5 Credit Hours
Concepts and techniques related to dimensional felt-making through the study of felting fibers, their characteristics and manipulation as a fiber medium. Experimentation in contemporary fusing techniques. Prerequisite: Course requires Reading Placement Test Score-Category Two. (3 lab hours)

FASHION STUDIES (FASHI) 1201
Clothing Construction I
3 Credit Hours
Emphasis is on basic sewing construction skills, including fundamentals in the selection of fabrics, fit, and construction techniques. Prerequisite: Course requires Reading Placement Test Score-Category Two. (6 lab hours)

FASHION STUDIES (FASHI) 1202
Clothing Construction II
3 Credit Hours
Clothing construction course designed for those who are familiar with the operation of a sewing machine, fabric and pattern selection, and basic sewing techniques. Emphasis on professional quality construction including fit techniques for pants and advanced garments. Prerequisite: Fashion Studies 1201 with a grade of C or better or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Two. (6 lab hours)

FASHION STUDIES (FASHI) 1205
Clothing Construction-Apparel Industry
3 Credit Hours
Equipment, practical skills, and sewing processes used in apparel manufacturing. Examines efficient and cost effective procedures for the garment manufacturer or independent designer. Prerequisite: Fashion Studies 1201 with a grade of C or better or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Two. (6 lab hours)

FASHION STUDIES (FASHI) 1301
Flat Pattern Drafting I
3 Credit Hours
Introduction to flat pattern drafting to create original design. Topics include use of drafting tools, sloper, and dart manipulation. Prerequisite: Fashion Studies 1201 with a grade of C or better or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Two. (6 lab hours)

FASHION STUDIES (FASHI) 1302
Flat Pattern Drafting II
3 Credit Hours

Advanced flat pattern techniques, includes contour sloper, jacket, pant, jean designing. Development of a personal sloper from measurement. Prerequisite: Fashion Studies 1301 with a grade of C or better, or equivalent. Course requires Reading Placement Test Score-Category Two. (6 lab hours)

FASHION STUDIES (FASHI) 1500
History of Fashion
3 Credit Hours
History of fashion through the ages. Emphasis is placed on Western world, costumes of antiquity through the twentieth century. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

FASHION STUDIES (FASHI) 1620
Visual Merchandising I
3 Credit Hours
Survey of creative and technical approaches to window and interior store display. Exploration of standard and innovative techniques in a laboratory setting. Prerequisite: Fashion Studies 1105 or concurrent enrollment in Fashion Studies 1105 or consent of instructor. Course requires Reading Placement Test Score-Category Two. (1 lecture hour, 4 lab hours)

FASHION STUDIES (FASHI) 1800
Special Project
1 to 4 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics). This course may be taken four times for credit as long as a different topic is selected each time. Prerequisite: Course requires Reading Placement Test Score-Category One or Two.

FASHION STUDIES (FASHI) 1820
Selected Topics in Fashion Merchandising
1 to 3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Course requires Reading Placement Test Score-Category One or Two. (depending on topic) (1 to 3 lecture hours)

FASHION STUDIES (FASHI) 1821
Selected Topics
3 Credit Hours
Exploration and analysis of topics within the discipline. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (2 lecture hours, 2 lab hours)

FASHION STUDIES (FASHI) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. Course requires Reading Placement Test Score-Category Two. (1 to 4 lecture hours)

FASHION STUDIES (FASHI) 2200
Tailoring
3 Credit Hours
Contemporary and traditional tailoring methods including: fitting, pressing, shaping, collar, closures, pockets, lining, and finishing. Prerequisite: Fashion Studies 1201 with a grade of C or better, or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Two. (6 lab hours)

FASHION STUDIES (FASHI) 2202
Design Studio: Apparel
3 Credit Hours
Advanced exploration of a theme or advanced techniques to generate portfolio pieces. Prerequisite: Fashion Studies 2201 or consent of instructor. Course requires Reading Placement Test Score-Category Two. (2 lecture hours, 2 lab hours)

FASHION STUDIES (FASHI) 2205
Bridal and Couture Techniques
3 Credit Hours
Study of couture sewing methods for wedding and special occasion dresses. Emphasis on inner support and construction of a bustier, bustle and train construction. Use of specialty fabrics, laces, and couture embellishments. Prerequisite: Fashion Studies 1202 with a grade of C or better, or equivalent or Fashion Studies 1302 with a grade of C or better, or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Two. (6 lab hours)

FASHION STUDIES (FASHI) 2206
Bridal Couture II
1.5 Credit Hours
Advanced couture sewing methods for wedding and special occasion dresses. Advanced embellishment techniques, bustle and train construction. Discussion of the independent bridal couture business. Prerequisite: Fashion Studies 2204 with a grade of C or better or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Two. (3 lab hours)

FASHION STUDIES (FASHI) 2208
Millinery Design I
1.5 Credit Hours
Creation of custom hats from straw, felt, and fabric. Use of professional millinery techniques and supplies. Prerequisite: Fashion Studies 1201with a grade of C or better or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Two. (3 lab hours)

FASHION STUDIES (FASHI) 2210
Millinery Design II
1.5 Credit Hours
Advanced millinery techniques including pattern drafting, blocking and trims. Prerequisite: Fashion Studies 2208 with a grade of C

or better or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Two. (1 lecture hour, 2 lab hours)

FASHION STUDIES (FASHI) 2212
Advanced Fashion Illustration
3 Credit Hours
Emphasis on texture, color, layout, and additional figure types. Includes development of portfolio. Prerequisite: Fashion Studies 2211 with a grade of C or better or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Two. (6 lab hours)

FASHION STUDIES (FASHI) 2222
Computer-Aided Apparel Design I
3 Credit Hours
Use of the computer in flat pattern drafting and design. Emphasis is on familiarity with the functions of a computer pattern-design system. Prerequisite: Fashion Studies 1102 or equivalent, or consent of instructor. Course requires Reading Placement Test Score-Category Two. (2 lecture hours, 2 lab hours)

FASHION STUDIES (FASHI) 2223
Computer-Aided Apparel Design II
3 Credit Hours
Continuation of Fashion Studies 2222 with emphasis on the fashion industry applications of the computerized apparel design system. Basic industrial work flow from design concept through pattern output and garment construction. Prerequisite: Fashion Studies 2222 or equivalent, or consent of instructor. Course requires Reading Placement Test Score-Category Two. (2 lecture hours, 2 lab hours)

FASHION STUDIES (FASHI) 2224
Production Pattern Grading
3 Credit Hours
Methods and mechanics of production pattern grading and its applications in the apparel manufacturing process. Emphasis on development of grade rule tables, manual and computerized grading, production specifications, and grading of specific apparel styles. Prerequisite: Fashion Studies 1102 or equivalent, or consent of instructor. Course requires Reading Placement Test Score-Category Two. (2 lecture hours, 2 lab hours)

FASHION STUDIES (FASHI) 2231
Fashion Marketing and Merchandising
3 Credit Hours
Overview of the fashion design and merchandising industries, includes trend analysis, fashion theories, apparel manufacturing, marketing, retailing and buying. Career opportunities are emphasized. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

FASHION STUDIES (FASHI) 2235
Apparel Quality Analysis
3 Credit Hours
Identification of terminology, manufacturing methods and merchandise quality as they apply to style details, workmanship, construction techniques, and wearability of fashion goods. For the professional entering the field of fashion buying and merchandising or product development and manufacturing. Prerequisite: Course requires Reading Placement Test Score-Category Two. (3 lecture hours)

FASHION STUDIES (FASHI) 2240
Design Studio: Fibers
3 Credit Hours
Advanced exploration of a theme or advanced techniques to generate fiber portfolio pieces. Prerequisite: Fashion Studies 1112 and 1116 with a grade of C or better or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Two. (6 lab hours)

FASHION STUDIES (FASHI) 2245
Design Collection Development
3 Credit Hours
Development of a marketable apparel, accessory or home fashion collection using professional trend projections, fabric and notion sourcing, sizing, grading and quality control. Prerequisite: Fashion Studies 2202 with a grade of C or better, or equivalent or consent of instructor. (6 lab hours)

FASHION STUDIES (FASHI) 2251
Fashion Motivation
3 Credit Hours
Identification of economic and social forces influencing consumer and fashion demand. Color theory and analysis, wardrobing, body type identification, and corporate and personal image. Prerequisite: Course requires Reading Placement Test Score-Category Two. (3 lecture hours)

FASHION STUDIES (FASHI) 2255
Design Studio: Marketing the Collection
3 Credit Hours
Marketing of a design collection at the wholesale and retail level. Topics covered include development of pricing, line sheets, orders, production schedules and delivery of goods. Prerequisite: Fashion Studies 2245 with a grade of C or better, or equivalent or consent of instructor. (6 lab hours)

FASHION STUDIES (FASHI) 2261
Textile Design I
3 Credit Hours
Design processes as applied to textiles, covering techniques such as silk screen, block prints and other processes. Prerequisite: Course requires Reading Placement Test Score-Category Two. (6 lab hours)

FASHION STUDIES (FASHI) 2262
Textile Design II
3 Credit Hours
Continuation of Fashion Studies 2261 Textile Design I processes as applied to textiles, includes advanced techniques such as batik, tye-dye and resist, silk screen, block prints and other textile printing processes. Prerequisite: Fashion Studies 2261 with a grade of C or better or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Two. (6 lab hours)

FASHION STUDIES (FASHI) 2301
Draping
3 Credit Hours
Garment design using design room draping techniques on industry dress forms. Prerequisite: Fashion Studies 1302 with a grade of C or better or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Two. (6 lab hours)

FASHION STUDIES (FASHI) 2430
Apparel Production Management
3 Credit Hours
Introduction to the preproduction processes of apparel product development. Topics include planning, forecasting, fabricating, developing silhouettes and specifications, pricing and sourcing. Prerequisite: Fashion Studies 1180 with a grade of C or better, or equivalent or Business 1100 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

FASHION STUDIES (FASHI) 2500
Modern Fashion History
3 Credit Hours
Explore fashion history through the modern time periods of the 20th and 21st century. Emphasis on social influences on fashion as it changes. Prerequisite: Course requires Reading Placement Test Score-Category Two. (3 lecture hours)

FASHION STUDIES (FASHI) 2630
Fashion Stylist
3 Credit Hours
Style the newest trends in apparel and accessories. Build a professional stylist portfolio through photography, writing, and social media. Prerequisite: Course requires Reading Placement Test Score-Category Two. (3 lecture hours)

FASHION STUDIES (FASHI) 2820
Advanced Selected Topics
1 to 6 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 6 lecture hours, 2 to 12 lab hours)

FASHION STUDIES (FASHI) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

FASHION STUDIES (FASHI) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

FIRE SCIENCE

FIRE SCIENCE (FIRE) 1100
Introduction to Emergency Services
3 Credit Hours
Students will explore the field of fire protection and emergency services. Career opportunities, culture and history of the fire service along with fire loss analysis are explored. Topics include public and private regulations affecting the fire service and basic chemistry of fire covering strategy and tactics of extinguishment. (3 lecture hours)

FIRE SCIENCE (FIRE) 1101
Basic Operations Firefighter- Mod A
6 Credit Hours
This is a hybrid course that provides partial training toward Basic Operations Firefighter Certification by the Office of the State Fire Marshal. Topics discussed include orientation/organization, fire behavior, building construction, safety, communication, self-contained breathing apparatus (SCBA) extinguisher training, ropes and knots, hazardous material operations level, and the national incident management system (NIMS) 100 and 700 Course. Completion qualifies students for the State Fire Marshal Certification Test Module A. Prerequisite: As Per the current Office of the State Fire Marshal Illinois Administrative code 141.300-a. Student must be engaged in firefighting and a member of an organized Illinois fire department or Fire Brigade. Student must provide National Fire Protection Association (NFPA) compliant protection clothing and self-contained breathing apparatus (SCBA) in accordance with NFPA safety standards. Students must be clean-shaven. (3 lecture hours, 6 lab hours)

FIRE SCIENCE (FIRE) 1102
Basic Operations Firefighter-B
6 Credit Hours
Continuation of Fire 1101. This is a hybrid course that provides partial training toward Basic Operations Firefighter Certification by the Office of the State Fire Marshal. Topics discussed include ladders, hose and appliances, nozzles and fire streams, water supply, forcible entry, ventilation, hazardous material operations level continuation, fire service vehicle operator. Completion qualifies students for the State Fire Marshal Certification Test Module B. Prerequisite: Fire Science 1101 or equivalent and as Per the current Office of the State Fire Marshal Illinois Administrative code 141.300-a. Student must be engaged in firefighting and a member of an organized Illinois fire department or Fire Brigade. Student must provide National Fire Protection Association (NFPA) compliant protection clothing and self-contained breathing apparatus (SCBA) in accordance with NFPA safety standards. Students must be clean-shaven. (3 lecture hours, 6 lab hours)

FIRE SCIENCE (FIRE) 1103
Basic Operations Firefighter-C
6 Credit Hours
Continuation of FIRE 1102. This course is a hybrid that provides partial training toward Basic Operations Firefighter Certification by the Office of the State Fire Marshal. Topics discussed include search and rescue, fire control, loss control, protecting evidence, fire detection and alarm systems, prevention and public education, wild land and ground cover firefighting, firefighter survival, technical rescue awareness, completion of hazardous material operations level, and courage to be safe. Course completion qualifies students for the State Fire Marshal Certification Test Module C. Prerequisite: Fire Science 1102 with a grade of C or better or equivalent and as per the current Office of the State Fire

Marshal Illinois Administrative code 141.300-a. Student must be engaged in firefighting and a member of an organized Illinois fire department or Fire Brigade. Student must provide National Fire Protection Association (NFPA) compliant protection clothing and self-contained breathing apparatus (SCBA) in accordance with NFPA safety standards. Students must be clean-shaven. (3 lecture hours, 6 lab hours)

FIRE SCIENCE (FIRE) 1104
Advanced Technician Firefighter
4 Credit Hours
Continuation of FIRE 1101, FIRE 1102, FIRE 1103 sequence. The Advanced Technician Firefighter is considered by Office of the State Fire Marshal (OSFM) to be the senior technical level in the fire suppression career ladder. A state certified examination will be administered to determine qualification. Prerequisite: Fire Science 1101, Fire Science 1102, and Fire Science 1103, or certification as a Firefighter II or Basic Operations Firefighter or consent of instructor. (2 lecture hours, 4 lab hours)

FIRE SCIENCE (FIRE) 1111
Fire Prevention I
3 Credit Hours
Fire Prevention I is for fire service personnel pursuing a Fire Officer I Certification or seeking a quality fire prevention foundation following the Illinois Office of the State Fire Marshal's guidelines. Prerequisite: Consent of Instructor or Fire Science Manager is required. (3 lecture hours)

FIRE SCIENCE (FIRE) 1112
Principles of Fire Prevention
3 Credit Hours
Principles of Fire Prevention provides the fundamental knowledge relating to the field of fire prevention and inspection. This course meets the National Fire Emergency Service Higher Education (FESHE) requirements. Prerequisite: Fire Science 1100 or concurrent enrollment in Fire Science 1100 or consent of instructor. (3 lecture hours)

FIRE SCIENCE (FIRE) 1113
Fire Prevention Officer Module A
3 Credit Hours
Designed for personnel whose duties are inspecting structures, conducting basic fire investigations and performing fire prevention education activities. (3 lecture hours)

FIRE SCIENCE (FIRE) 1114
Fire Prevention Officer Module B
3 Credit Hours
Continuation of Fire Science 1113, including knowledge of fire codes used in fire prevention and education. Prerequisite: Fire Science 1113 with a grade of C or better or consent of instructor. (3 lecture hours)

FIRE SCIENCE (FIRE) 1115
Fire Prevention Officer Module C
3 Credit Hours
Continuation of Fire Science 1114 including development of student skills in public education and fire investigation. Prerequisite: Fire Science 1114 with a grade of C or better or consent of instructor. (3 lecture hours)

FIRE SCIENCE (FIRE) 1120
Codes and Laws
3 Credit Hours
Study supplemented by plan reviews of codes and standards that relate to fire prevention and life safety in structures and includes the relationship between building officials and fire prevention personnel. (3 lecture hours)

FIRE SCIENCE (FIRE) 1150
CPR-Basic Life Support-Healthcare Prvdr
1 Credit Hour
Cardiopulmonary resuscitation (CPR) is intended for healthcare providers who care for patients of all ages in a variety of settings, including hospitals and other healthcare settings. (2 lab hours)

FIRE SCIENCE (FIRE) 1160
CPR-Basic Life Support Instructor
1 Credit Hour
Prepare American Heart Association (AHA) instructors to disseminate the science, skills, and philosophy of Cardiopulmonary Resuscitation (CPR) programs to participants enrolled in AHA courses. Prerequisite: Fire Science 1150 with a grade of C or better, or equivalent or consent of instructor. (2 lab hours)

FIRE SCIENCE (FIRE) 2201
Extinguishing and Alarm Systems
3 Credit Hours
Introductory course to familiarize public and private fire protection personnel with various types of fire protection systems. (2 lecture hours, 2 lab hours)

FIRE SCIENCE (FIRE) 2210
Fire Apparatus
3 Credit Hours
Study of the design, function and operating characteristics of motorized fire apparatus, including evaluation of custom and commercial chassis, power plant and fire pumps, and cost/benefit approach to apparatus purchasing. (3 lecture hours)

FIRE SCIENCE (FIRE) 2211
Fire Apparatus Engineer
3 Credit Hours
Continuation of Fire Science 2210. Application and skills necessary to qualify for Fire Apparatus Engineer/Driver/Operator positions. Meets or exceeds the requirements of National Fire Protection Association (NFPA) 1002, Fire Apparatus Drive/ Operator Professional Qualifications. Prerequisite: Fire Science 2210 or consent of instructor. (2 lecture hours, 2 lab hours)

FIRE SCIENCE (FIRE) 2213
Principles/Fire Behavior and Combustion
3 Credit Hours
Introduction to the broad range of factors that cause a fire. The basics of fire chemistry and physics, ignition, fire growth, spread, and suppression are covered. Prerequisite: Fire Science 1100 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

FIRE SCIENCE (FIRE) 2215
Building Construction
3 Credit Hours
Provides the components of building construction related to firefighter and life safety. Elements of construction and design of structures are key factors when inspecting buildings, pre-planning

fire operations, and operating at emergencies. Prerequisite: Fire Science 1100 with a grade of C or better, or equivalent or Fire Science 1103 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

FIRE SCIENCE (FIRE) 2218
Principles/Firefighter Safety & Survival
3 Credit Hours
Basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavior change throughout the emergency service. Prerequisite: Fire Science 1100 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

FIRE SCIENCE (FIRE) 2221
Tactics I
3 Credit Hours
Principles of coordinating fire ground tactics by utilization of manpower and equipment. Various fire situations presented for analysis and evaluation. Prerequisite: Fire Science 1100 or consent of instructor. (3 lecture hours)

FIRE SCIENCE (FIRE) 2222
Tactics II
3 Credit Hours
Designed for the Fire Officer responsible for commanding a fire or emergency scene involving multiple companies. Subject areas include strategic concepts in fire fighting, duties and responsibilities of command officers, incident command system (scene, manpower, apparatus, and Rapid Intervention Teams (RIT) management), multi-company operations, disasters, high-rise operations, critical incident stress, and tactical exercises. Prerequisite: Fire Science 2221 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

FIRE SCIENCE (FIRE) 2230
Hazardous Materials Awareness
3 Credit Hours
First responders will gain the knowledge and skills associated with hazardous substances, the risks associated with them, and the role of the emergency responder. Review of the U.S. Department of Transportation Emergency Guidebook and other resources, and appropriate notifications to the community. After successful completion of this course, first responders will be allowed to take the Office of the State Fire Marshal (OSFM) certification exam. Prerequisite: Fire Science 1100 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

FIRE SCIENCE (FIRE) 2231
Hazardous Materials Operations
3 Credit Hours
Intended for members of a fire department or other first responder agency. Includes basic hazards and risk-assessment techniques for Haz-mat and Chemical, Biological, Radiological, Nuclear, and Explosive (CBRNE) environments. Perform basic control, containment and/or confinement operations. After successful completion of this course, first responders will be allowed to take the Office of the State Fire Marshal (OSFM) certification exam. Prerequisite: Fire Science 2230 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

FIRE SCIENCE (FIRE) 2232
Hazardous Materials Technician A
3 Credit Hours
Laws regulating training requirements for the Hazardous Materials Technician A as set forth by Occupational Safety and Health Act (OSHA), Illinois Department of Labor (IDOL), Environmental Protection Agency (EPA), and the National Fire Protection Association (NFPA). Identifies a hazardous material incident, determines the magnitude of the problem, identifies and interprets hazard response information through the use of monitoring equipment. Prerequisites: Fire Science 1104 and Fire Science 2231 or state equivalents or consent of instructor. (2 lecture hours, 2 lab hours)

FIRE SCIENCE (FIRE) 2233
Hazardous Materials Technician B
3 Credit Hours
Continuation of Hazardous Materials Technician A involves the analysis and application of rescue procedures, tactics and strategies. Both Hazardous Materials A and B are required to satisfy National Fire Protection Association (NFPA) 472, Department of Labor (DOL), Occupational Safety and Health Act (OSHA), Environmental Protection Agency (EPA), and requirements of 29 Code of Federal Requirements(CFR) 1910.120. Prerequisite: Fire Science 1104 and Fire Science 2232 or state equivalents or consent of instructor. (2 lecture hours, 2 lab hours)

FIRE SCIENCE (FIRE) 2240
Industrial Safety
3 Credit Hours
Precautions and safeguards essential for protection of lives and property in various types of occupational establishments. (3 lecture hours)

FIRE SCIENCE (FIRE) 2251
Fire Leadership I
3 Credit Hours
Fire fighting personnel will be introduced to management, supervision, and leadership skills. Prerequisite: Fire Science 1103 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

FIRE SCIENCE (FIRE) 2252
Fire Leadership II
3 Credit Hours
Continuation of FIRE 2251 with emphasis placed on application of principles. Prerequisite: Fire Science 2251 or consent of instructor. (3 lecture hours)

FIRE SCIENCE (FIRE) 2253
Fire Leadership III
3 Credit Hours
Continuation of FIRE 2252 analyzing and organizing personnel assignments. Developing personnel policies, preparing capital budgets and fiscal financing, developing public relations programs, and developing management systems for the fire service. Prerequisite: Fire Science 2252 or consent of instructor. (3 lecture hours)

FIRE SCIENCE (FIRE) 2254
Fire Leadership IV
3 Credit Hours
Continuation of FIRE-2253 advanced personnel management, organizing health and safety programs, and labor relations. Prerequisite: Fire Science 2253 or consent of instructor. (3 lecture hours)

FIRE SCIENCE (FIRE) 2255
Fire Service Instructor I
3 Credit Hours
Fundamentals as applied to in-service training for fire department personnel. The course meets or exceeds the requirements of the Office of the Illinois State Fire Marshals Division of Career Development and Public Education. (2 lecture hours, 2 lab hours)

FIRE SCIENCE (FIRE) 2256
Fire Service Instructor II
3 Credit Hours
Curriculum planning, facilities layout and advanced teaching principles. The course meets or exceeds the requirements of the Office of the Illinois State Fire Marshals Division of Career Development and Public Education. Prerequisite: Fire Science 2255 or consent of instructor. (2 lecture hours, 2 lab hours)

FIRE SCIENCE (FIRE) 2260
Fire Investigation
3 Credit Hours
Techniques and procedures for the investigation of fires including the origin and causes of fires, fire behavior, chemistry of fire, structural fire patterns, detection of arson, role of the investigator, and role of the crime laboratory. Prerequisite: Fire Science 1100 or consent of instructor. (3 lecture hours)

FIRE SCIENCE (FIRE) 2261
Fire/Arson Investigation I
3 Credit Hours
Designed for fire investigators to gain knowledge in scene examination, evidence investigation, fire protection technology and sketching. Prerequisite: Fire Science 2260 or consent of instructor. (3 lecture hours)

FIRE SCIENCE (FIRE) 2262
Fire/Arson Investigation II
3 Credit Hours
Continuation of FIRE-2261 includes motives, communications, case presentations and explosives. Prerequisite: Fire Science 2261 or consent of instructor. (3 lecture hours)

FIRE SCIENCE (FIRE) 2263
Fire/Arson Investigation III
3 Credit Hours
Continuation of FIRE-2262 includes crime scene photography, evidence collection, accelerant detection canines, arson for profit, and search and seizure. Prerequisite: Fire Science 2262 or consent of instructor. (3 lecture hours)

FIRE SCIENCE (FIRE) 2266
Technical Rescue Awareness (TRA)
1 Credit Hour
First responders are prepared with the information needed to identify the rescue situation, its specific hazards, and the initial company operations to be performed. Prerequisite: Consent of instructor is required and must be an active member of a fire department. Contact Fire Science Manager for permit to register. (1 lecture hour)

FIRE SCIENCE (FIRE) 2267
Fire Service Vehicle Operator
1 Credit Hour
Designed for Firefighters or Engineers who are assigned, or may be assigned, to operate fire department apparatus safely in the normal course of their duties. Prerequisite: Consent of instructor is required and must be an active member of a fire department. Contact Fire Science Manager for permit to register. (1 lecture hour)

FIRE SCIENCE (FIRE) 2271
Emergency Medical Technician (EMT)
10 Credit Hours
Course includes emergency care skills, including management of bleeding, fractures, airway obstruction, cardiac arrest and emergency childbirth. Also addresses patient assessment skills and the use and maintenance of common emergency equipment. Completion of this course with a grade of B or better qualifies students to sit for the state or national exam. Prerequisite: Must be at least 18 years old with a high school diploma or equivalent, and pass the Writing Placement Test Score-Category One and Reading Placement Test Score-Category One or Fire Science 2283 with a grade of B or better. Admission to program is required. (5 lecture hours, 10 lab hours)

FIRE SCIENCE (FIRE) 2272
Paramedic Transition
3 Credit Hours
Emergency Medical Technician (EMT) students will develop their knowledge and skills to better prepare them to be successful in paramedic school. Prerequisite: Current EMT license as an Emergency Medical Technician or consent of instructor. (2 lecture hours, 2 lab hours)

FIRE SCIENCE (FIRE) 2273
Vehicle and Machinery Operations
3 Credit Hours
Introductory step in the acquisition of all knowledge and skills required in the various specialties of extrication. Prerequisite: Fire Science 1103 or consent of instructor. (2 lecture hours, 2 lab hours)

FIRE SCIENCE (FIRE) 2274
Paramedic I
8 Credit Hours
Introduction to advanced emergency medical services including the role of the paramedic and the ethical and legal aspects that influence field practice skills basic to the care of all patients Prerequisite: Fire Science 2271, consent of instructor and acceptance by a hospital; program admission approval required. (4 lecture hours, 8 lab hours)

FIRE SCIENCE (FIRE) 2275
Paramedic II
8 Credit Hours
Continuation of FIRE-2274 integration of previously learned principles and skills and the introduction of new theory, preparation of the learner for expanded medical responsibilities. Further emphasis on the pharmacological agents and adjunctive equipment utilized in pre-hospital care. Prerequisite: Fire Science 2274 or consent of instructor. (4 lecture hours, 8 lab hours)

FIRE SCIENCE (FIRE) 2276
Paramedic III
8 Credit Hours
Continuation of Fire Science 2275 practice of paramedicine in the care of patients with cardiovascular disorders. In-depth study in anatomy and pathophysiology relevant to cardiovascular disorders, arrhythmia identification and subsequent treatment. Experiences in telemetry monitoring, emergency department, and intensive

care unit rotations. Prerequisite: Fire Science 2275 or consent of instructor. (4 lecture hours, 8 lab hours)

FIRE SCIENCE (FIRE) 2277
Paramedic IV
8 Credit Hours
Continuation of Fire Science 2276 skills and fundamentals for the care of the patient in medical or traumatic emergencies. Emphasis is placed on development of assessment practices and the integration of appropriate treatment modalities in a pre-hospital setting. Prerequisite: Fire Science 2276 or consent of instructor. (4 lecture hours, 8 lab hours)

FIRE SCIENCE (FIRE) 2282
EMT Instructor Training
3 Credit Hours
Designed to give the Emergency Medical Technician-Basic (EMT-B) an overview of the educational process for the adult learner. Prerequisite: Fire Science 2271, consent of instructor, and approval of Illinois Department of Public Health (IDPH). (2 lecture hours, 2 lab hours)

FIRE SCIENCE (FIRE) 2283
Emergency Medical Responder
5 Credit Hours
Students will be introduced to pre-hospital and emergency medical training. Basic medical treatments and practical skills in emergency medical care are included. Students have the opportunity to earn their cardiopulmonary resuscitation credentials and complete the state-approved cognitive and psychomotor exams. (3 lecture hours, 4 lab hours)

FIRE SCIENCE (FIRE) 2285
Trauma Assessment
3 Credit Hours
Provides licensed Emergency Medical Technicians (EMT) with knowledge of acute, critical changes in physiological and psychological signs and symptoms in pre-hospital emergency care of pediatric, adult, and geriatric patients. Prerequisite: Fire Science 2271 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

FIRE SCIENCE (FIRE) 2286
Pediatric Education for Prehospital Prof
3 Credit Hours
Students will develop additional skills and knowledge of the prehospital professional who will provide care for the ill and injured children. Prerequisite: Fire Science 2271 with a grade of C or better or consent of instructor. (2 lecture hours, 2 lab hours)

FIRE SCIENCE (FIRE) 2287
Differential Medical Assessment
3 Credit Hours
Students will gain advanced training and knowledge of assessment and management of medical emergencies. Emergency Medical Technician (EMT) students build a strong foundation of differential medical assessment knowledge and skills through case-based scenarios and practical applications for patients. Prerequisite: Fire Science 2271 with a grade of B or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

FIRE SCIENCE (FIRE) 2820
Advanced Selected Topics
1 to 4 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. (1 to 3 lecture hours, 1 to 3 lab hours)

FIRE SCIENCE (FIRE) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

FIRE SCIENCE (FIRE) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

FRENCH

FRENCH (FRENC) 1100
Civilization and Culture of France
3 Credit Hours
An introduction in English to the culture, geography, history, economics, political institutions, psychology, literature, music and art of present-day France. A survey of the French-speaking world: Canada, North and West Africa, the Caribbean, the South Pacific, Switzerland and Belgium. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

FRENCH (FRENC) 1101
Elementary French I
4 Credit Hours
Develops the ability to speak, understand, read, and write French in a cultural and communicative context. For beginning students with no prior experience in the language. (4 lecture hours)

FRENCH (FRENC) 1102
Elementary French II
4 Credit Hours
Continues the development of the ability to speak, understand, read, and write French in a cultural and communicative context. For students who have successfully completed French 1101 or equivalent, or one year of high school French, or consent of instructor. (4 lecture hours)

FRENCH (FRENC) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

FRENCH (FRENC) 2201
Intermediate French I
4 Credit Hours
Continues to develop the ability to speak, understand, read, and write French in a cultural and communicative context. Includes reading and discussion of modern texts, conversation, composition, grammar review, and cultural activities. For students who have successfully completed French 1102 or equivalent, or two years of high school French, or consent of instructor. (4 lecture hours)

FRENCH (FRENC) 2202 (IAI H1 900)
Intermediate French II
4 Credit Hours
Continues to develop the ability to speak, understand, read, and write French in a cultural and communicative context. Includes reading and discussion of modern texts, short films, conversation, composition, grammar review, and cultural activities. For students who have successfully completed French 2201 or equivalent, or three years of high school French, or consent of instructor. (4 lecture hours)

FRENCH (FRENC) 2251 (IAI H1 900)
Conversation and Composition I
3 Credit Hours
Develops students' listening comprehension, speaking, reading, and writing skills and expands knowledge of the culture and civilization of French-speaking countries. Includes reading and discussion of modern texts, conversation, composition, grammar review, and cultural activities. For students who have successfully completed French 2202 or equivalent, or four years of high school French, or consent of instructor. (3 lecture hours)

FRENCH (FRENC) 2252 (IAI H1 900)
Conversation and Composition II
3 Credit Hours
Develops students' listening comprehension, speaking, reading, and writing skills and expands knowledge of the culture and civilization of French-speaking countries. Includes reading and discussion of modern texts, conversation, composition, grammar review, and cultural activities. For students who have successfully completed French 2251 or equivalent, or five years of high school French, or consent of instructor. (3 lecture hours)

FRENCH (FRENC) 2820
Advanced Selected Topics
1 to 4 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Course requires Reading Placement Test Score-Category One. At least one course in the discipline or consent of instructor. (1 to 4 lecture hours)

FRENCH (FRENC) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

FRENCH (FRENC) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

FRENCH (FRENC) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

FRENCH (FRENC) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

GENERAL EDUCATION DEVELOPMENT

GENERAL EDUCATION DEVELOPMENT (GED) 0800
General Education Development Review
3 Credit Hours
Prepares adult students to take the G.E.D. Literature and the Arts, Writing, Social Studies, Science, Mathematics and the U.S. Constitution tests. Reviews skills, concepts and information needed for the G.E.D. Focuses on developing independent study habits. Step III in the General Education Development reading, writing and mathematical skills course sequence. Mandatory Testing. This course may be taken four times for credit; course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. Prerequisite: Consent of instructor is required. (3 lecture hours)

GENERAL EDUCATION DEVELOPMENT (GED) 0801
Spanish General Ed Development Review
3 Credit Hours
Prepares adult students to take the Spanish General Education Development (GED) Literature and the Arts, Writing, Social Studies, Science Mathematics and the U.S. Constitution tests. Review skills, concepts and information needed for the Spanish GED. Focuses on developing independent study habits. Course is non-transferable and does not count toward GPA/graduation. This course may be taken four times for credit. This course can only be taken on a pass/fail basis. (3 lecture hours)

GENERAL EDUCATION DEVELOPMENT (GED) 0802
Bridge to Health Care Careers
6 Credit Hours
The course prepares adults to pass the GED tests while gaining the skills necessary to train for sustainable employment or post-secondary education in the health care field. Instruction combines reading, writing and math with academic and workplace readiness skills. Students will have the opportunity to explore multiple health care career pathways and learn supporting concepts and terminology. This course was developed by the Illinois Community College Board and has been approved for statewide use. This course does not count toward GPA/graduation and is non-transferable. This course can only be taken on a pass/fail basis. Prerequisite: Consent of instructor is required. (6 lecture hours)

GENERAL EDUCATION DEVELOPMENT (GED) 0805
GED Bridge to CIT
6 Credit Hours
This course prepares students to pass the GED tests while gaining the skills necessary to train for sustainable employment or post-secondary education in the information technology field. Instruction combines reading, writing, and math with academic and workplace readiness skills. Students will have the opportunity to explore multiple information and technology career pathways and learn supporting concept and terminology. This course can only be taken on a pass/fail basis. This course does not count toward GPA/graduation and is non-transferable. Prerequisite: Mandatory Testing or completion of ABE 0703 with a grade of S or better, demonstrated equivalent proficiency, or consent of instructor. (6 lecture hours)

GENERAL EDUCATION DEVELOPMENT (GED) 0830
GED Review: US/IL Constitution
1 Credit Hour
Prepares adult students to take the General Education Development (GED) U.S./Illinois Constitution tests. Course is non-transferable and does not count toward GPA/graduation. This course may be taken four times for credit. This course can only be taken on a pass/fail basis. (1 lecture hour)

GEOGRAPHY

GEOGRAPHY (GEOGR) 1100 (IAI S4 901)
Western World Geography
3 Credit Hours
This regional survey will examine the diverse geographic aspects of countries that are deemed to be part of the Western World: Anglo America, Latin America, Europe, Russia and Australia/ New Zealand. The interrelationship between people and their geographic environments (physical, social, economic, political, demographic, cultural, historical environments) will be considered. Coverage of countries and regions in this course will range from specific locational descriptions to consideration of broad regional elements. Students will be expected to learn basic place names, to understand geographic relationships and concepts as found in and among these countries, and to learn to think geographically. (3 lecture hours)

GEOGRAPHY (GEOGR) 1105 (IAI S4 902N)
Eastern World Geography
3 Credit Hours
This regional survey will examine the diverse geographic aspects of countries that are deemed to be part of the Eastern World: Southwest Asia and North Africa, Sub-Saharan Africa, Southeast Asia, East Asia, South Asia, and Central Asia. The interrelationship between people and their geographic environments (physical, social, economic, political, demographic, cultural, historical environments) will be considered. Coverage of countries and regions in this course will range from specific locational descriptions to consideration of broad regional elements. Students will be expected to learn basic place names, to understand geographic relationships and concepts as found in these countries, and to learn to think geographically. (3 lecture hours)

GEOGRAPHY (GEOGR) 1107
Introduction to Geography
3 Credit Hours
A fundamental overview of the methods geographers use to interpret the world. Includes economic, political, cultural and urban geography, as well as geomorphology and biogeography. Also introduces the various tools geographers use from Geographic Information Systems to maps. (3 lecture hours)

GEOGRAPHY (GEOGR) 1108
Geographic Skills: Regional
3 Credit Hours
Development of geographic skills such as map reading, air photo interpretation, and navigation. Tools such as Geographic Information Systems and Google Earth are introduced. Chicagoland, Illinois, and the United States form the spatial foci of the class. Prerequisite: Reading Placement Category 3 or consent of instructor. (3 lecture hours)

GEOGRAPHY (GEOGR) 1110
Political Geography
3 Credit Hours
An exploration of power and space relations. This course explores how political decisions and processes impact people and their environs, as well as the meaning, history, implications, and combinations of the concepts of nation and state. It will explore

the background and nature of borders, country shapes, regional conflicts, and boundary disputes and also compare major political systems and electoral geography. Students will also explore the politics of globalization, trade and trade agreements, and international law. (3 lecture hours)

GEOGRAPHY (GEOGR) 1120 (IAI S4 903N)
Economic Geography
3 Credit Hours
An overview of the spatial distribution of economic activities and resultant economic landscapes. This course includes the study of the Agricultural and Industrial Revolutions, neoliberal and participatory economics, the International Monetary Fund, World Bank, and World Trade Organization. Structural Adjustment Programs and the impact of free-market economics on traditional economies are examined. (3 lecture hours)

GEOGRAPHY (GEOGR) 1130 (IAI S4 900N)
Cultural Geography
3 Credit Hours
An introduction to geographic perspectives on such cultural topics as population, language, ethnicity, politics, religion, economics, and urbanization. Geographic themes such as spatial analysis, sense of place, region, diffusion, globalization, cultural ecology, and cultural landscape are highlighted. (3 lecture hours)

GEOGRAPHY (GEOGR) 1140 (IAI S4 901)
Urban Geography
3 Credit Hours
A geographical examination of settlement patterns, economic activities, usage of space and representations in the urban environment. The form and function of cities are analyzed, as are issues of disenfranchisement and gentrification. (3 lecture hours)

GEOGRAPHY (GEOGR) 1151
Geographic Information Systems I
3 Credit Hours
An introduction to the fundamentals of Geographic Information Systems (GIS) with examples of applications in various fields. Use GIS software to capture, store, query, analyze and display spatially referenced data such as roads, land parcels and vegetation stands on the earth's surface. GIS software usage is covered by tutorial exercises in textbook, with assistance by instructor. (2 lecture hours, 2 lab hours)

GEOGRAPHY (GEOGR) 1152
Geographic Information Systems II
3 Credit Hours
Focuses on the principles of Geographic Information Systems (GIS) and emphasizes building skills using ESRI software. This course includes data structure, assembly of GIS data sets, map symbology, queries, spatial analysis, coordinate systems, projections and map presentation. GIS software usage is covered by tutorial exercises in textbook, with assistance by instructor. Students may also work to develop their own GIS projects. Prerequisite: Geography 1151 or consent of instructor. (1 lecture hour, 4 lab hours)

GEOGRAPHY (GEOGR) 1153
Applied Geographic Information Systems
3 Credit Hours
An opportunity for students to learn through real-life GIS projects developed by public safety officials, public works departments, planners and other industry professionals. Prerequisite: Proficiency with the Windows operating system required; Geography 1151 and Geography 1152 or consent of instructor. (3 lecture hours, 1 lab hour)

GEOGRAPHY (GEOGR) 1154
Geodatabase Development
3 Credit Hours
Advanced study of Geodatabase development, maintenance, organization and editing within the ArcGIS suite of software. Students will explore the basic features and functionality that a geodatabase provides, as well as the ArcMap editing tools for creating and editing the geometry of spatial data stored in a geodatabase. Students will learn to create and manipulate Geographic Information Systems features that mimic real-world feature behavior, apply sophisticated rules and relationships between features, and access geospatial data from a centralized location. Prerequisite: Geography 1153 with a grade of C or better or consent of instructor. (3 lecture hours)

GEOGRAPHY (GEOGR) 1155
GIS Capstone Project
3 Credit Hours
Focus on student created projects solving problems in the fields of environmental science, marketing, urban planning, resource management and homeland security. Students will learn to draft a Geographic Information Systems proposal, which will include project timelines, system scope, cost-benefit analysis, risk planning, and delivering a final GIS product. Instructor will assist students with project topics, project approach, the availability and acquisition of source data, data organization and assembly, data preparation, GIS analysis techniques and project presentation. Throughout the course, instructor will guide students through the process of gaining GIS employment, including resume building, job interview techniques and obtaining national GISCI (Geographic Information Systems Certification Institute) status. Prerequisite: Geography 1154 with a grade of C or better or consent of instructor. (3 lecture hours)

GEOGRAPHY (GEOGR) 1800
Special Project
1 to 3 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for Geography. These courses require direct experience and focused reflection in an in-depth study of a specific geographic topic and/or the critical analysis of contemporary issues in Geography. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.). This course may be taken four times for credit.

GEOGRAPHY (GEOGR) 1820
Selected Topics I
1 to 3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 3 lecture hours)

GEOGRAPHY (GEOGR) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4lecture hours)

GEOGRAPHY (GEOGR) 2204
Russia
3 Credit Hours
This course examines the diverse geographic aspects of Russia and the former Soviet Union. The interrelationship between people and their geographic environments - physical, social, economic, political, demographic, cultural environments - are considered. Students are expected to learn basic place names, to understand geographic relationships and concepts as found in Russia and the former Soviet Union, and to think geographically about this region. (3 lecture hours)

GEOGRAPHY (GEOGR) 2210
United States and Canada
3 Credit Hours
A regional survey of the United States and Canada. Topics may include: Agriculture, manufacturing, the territorial expansion of the United States, Quebec separatism, the North American Free Trade Agreement (NAFTA), gentrification, and urbanization. (3 lecture hours)

GEOGRAPHY (GEOGR) 2220
Latin America
3 Credit Hours
A dynamic survey of Latin America and its countries. An array of topics will be addressed, ranging from physical landscapes to US foreign policy towards the region. The emergence of post-colonial countries, control of natural resources, and the significance of trade/shipping routes are key components of this class. Additionally, students should expect substantial discussion of debt and neoliberalism, international organizations, and trade agreements. (3 lecture hours)

GEOGRAPHY (GEOGR) 2221
Mexico
3 Credit Hours
A geographical exploration and analysis of Mexico. Topics covered may include physical landscape, economic conditions, the "War on Drugs," Structural Adjustment and the International Monetary Fund, the North American Free Trade Agreement, the militarization of the U.S.-Mexico border, the Mexican Diaspora, and Mexican communities in the United States. (3 lecture hours)

GEOGRAPHY (GEOGR) 2235
The Middle East
3 Credit Hours
A geographical exploration and analysis of the Middle East. This course provides a survey of the region through a geographic perspective. Included are country locations and discussion of physical features, the Israeli-Palestinian conflict, U.S. foreign policy towards the region, the exploitation of resources (particularly oil), U.S. interventions in Iraq, Iran and Afghanistan, and discussion relating to the "War on Terror" and the rise of "radical Islam." (3 lecture hours)

GEOGRAPHY (GEOGR) 2820
Advanced Selected Topics I
1 to 3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: At least one course in the discipline or consent of instructor. (1 to 3 lecture hours)

GEOGRAPHY (GEOGR) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

GEOGRAPHY (GEOGR) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

GEOGRAPHY (GEOGR) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

GEOGRAPHY (GEOGR) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study;

students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

GERMAN

GERMAN (GERMA) 1100
German Civilization and Culture
3 Credit Hours
Introduction in English to the culture, history, political institutions, mentality, literature, art and economic development of present-day Germany and other German-speaking countries. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

GERMAN (GERMA) 1101
Elementary German I
4 Credit Hours
Develops the ability to speak, understand, read, and write German in a cultural and communicative context. For beginning students with no prior experience in the language. (4 lecture hours)

GERMAN (GERMA) 1102
Elementary German II
4 Credit Hours
Continue to develop the ability to speak, understand, read, and write German in a cultural and communicative context. For students who have successfully completed German 1101 or equivalent or one year of high school German, or consent of instructor. (4 lecture hours)

GERMAN (GERMA) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

GERMAN (GERMA) 2201
Intermediate German I
4 Credit Hours
Continues to develop the ability to speak, understand, read, and write German in a cultural and communicative context. Includes reading and discussion of modern texts, conversation, composition, grammar review, and cultural activities. For students who have successfully completed German 1102 or equivalent or two to three years of high school German, or consent of instructor. (4 lecture hours)

GERMAN (GERMA) 2202 (IAI H1 900)
Intermediate German II
4 Credit Hours
Continues to develop the ability to speak, understand, read, and write German in a cultural and communicative context. Includes reading and discussion of modern texts, short films, conversation, composition, grammar review, and cultural activities. For students who have successfully completed German 2201 or equivalent, or three to four years of high school German, or consent of instructor. (4 lecture hours)

GERMAN (GERMA) 2251 (IAI H1 900)
Conversation and Composition I
3 Credit Hours
Develops students' listening, speaking, reading, and writing skills and expands knowledge of the culture and civilization of German-speaking countries. Includes reading and discussion of modern texts, conversation, composition, grammar review, and cultural activities. Classes are conducted completely in German. For students who have successfully completed German 2202 or equivalent, or four years of high school German, or consent of instructor. (3 lecture hours)

GERMAN (GERMA) 2252 (IAI H1 900)
Conversation and Composition II
3 Credit Hours
Continues to develop students' listening, speaking, reading, and writing skills and expands knowledge of the culture and civilization of German-speaking countries. Includes reading and discussion of modern texts, conversation, composition, grammar review, and cultural activities. Classes are conducted completely in German. For students who have successfully completed German 2202 or equivalent, or four to five years of high school German, or consent of instructor. (3 lecture hours)

GERMAN (GERMA) 2820
Advanced Selected Topics
1 to 4 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Course requires Reading Placement Test Score-Category One. At least one course in the discipline or consent of instructor. (1 to 4 lecture hours)

GERMAN (GERMA) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

GERMAN (GERMA) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

GERMAN (GERMA) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

GERMAN (GERMA) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

GRAPHIC DESIGN

GRAPHIC DESIGN (GRDSN) 1100
Drawing for Design
3 Credit Hours
Foundation of drawing illustrative matter for commercial applications using various materials and techniques appropriate to the field of graphic design and illustration. Emphasis on visualization and sketching of concepts. (6 lab hours)

GRAPHIC DESIGN (GRDSN) 1101
Digital Graphic Applications
3 Credit Hours
Explores graphics software package Adobe Creative Suite, focusing on core concepts and techniques that apply to any workflow in Photoshop, Illustrator, and InDesign. Emphasizes technical and print production skills necessary to develop effective designs for print, web, and other applications. (1 lecture hour, 5 lab hours)

GRAPHIC DESIGN (GRDSN) 1102
Graphic Design 1
3 Credit Hours
Introduces the basic principles and elements of graphic design, the history of graphic design, form/symbol development, typography, and color theory. Provides practical experience in essential studio processes and procedures, critiques, and group discussions. (6 lab hours)

GRAPHIC DESIGN (GRDSN) 1104
Typography
3 Credit Hours
Introduction to typographic history, study of letterforms, terms, classifications, and typeface selection. Exploration of type mechanics and aesthetics, using type in a variety of design applications. Examines structure, layout, and information hierarchy, as well as the relationship of type to image and cultural context. (6 lab hours)

GRAPHIC DESIGN (GRDSN) 1105
Graphic Design 2
3 Credit Hours
An exploration of graphic design through the integration of typography and imagery from planning, conceptualization, and creation, through management of content for a variety of projects. Major themes include: contrast and fusion of graphic form, text/image collage, hierarchy, grid systems, and extended layouts. Critiques and discussions of professional work including traditional structures of books, catalogs, magazines, and brochures. Emphasizes the use of Adobe InDesign in creating projects. Prerequisite: Graphic Design 1102 with a grade of C or better, or equivalent or consent of instructor. (6 lab hours)

GRAPHIC DESIGN (GRDSN) 1106
Three-Dimensional Design
3 Credit Hours
Design and construction of three-dimensional forms such as packaging, exhibits, and displays. Students will conceptualize and develop preliminary construction plans, and build mock-ups of three-dimensional communication design projects using a variety of materials and techniques. Prerequisite: Graphic Design 1102 with a grade of C or better, or equivalent or consent of instructor. (6 lab hours)

GRAPHIC DESIGN (GRDSN) 1107
Digital Illustration 1
3 Credit Hours
An introduction to creating digital images for use in graphic design. Use of computers and current software to develop illustrative projects. Focus on originality of imagery and image creation techniques including collage, montage, and mixed media to create professional quality images. Emphasis on the use of Adobe Photoshop and/or other raster-oriented software in creating projects. Prerequisite: Graphic Design 1102 with a grade of C or better, or equivalent or consent of instructor. (6 lab hours)

GRAPHIC DESIGN (GRDSN) 1108
Digital Illustration Design 2
3 Credit Hours
Focuses on the originality of imagery and image creation techniques, including collage, montage, and mixed media, to create professional quality images. Emphasis on the use of Adobe Illustrator and/or other vector-based software in creating illustration projects. Prerequisite: Graphic Design 1102 with a grade of C or better, or equivalent or consent of instructor. (6 lab hours)

GRAPHIC DESIGN (GRDSN) 1109
Project Planning for Graphic Design
3 Credit Hours
Explores the intersection of business and graphic design, introducing fundamentals of planning, research, analysis, presentation techniques, and production coordination. Addresses the entrepreneurial and strategic aspects of the business of design, as well as design concerns within a client's business environment. Course content may include case studies, group projects, guest speakers, and corporate events to prepare students to apply creative vision to the fulfillment of business objectives. Prerequisite: Graphic Design 1102 with a grade of C or better, or equivalent. (1 lecture hour, 5 lab hours)

GRAPHIC DESIGN (GRDSN) 1820
Selected Topics
2 Credit Hours
Critical discussion, review and analysis of a selected topic in advertising, design or illustration. Completion of projects appropriate to the selected topic. Topic is specified in the subtitle of the course listed in the class schedule. This course may be taken four times for credit as long as a different topic is selected each time. Prerequisite: Any 1100-level Graphic Design course or consent of instructor. (1 lecture hour, 2 lab hours)

GRAPHIC DESIGN (GRDSN) 1821
Selected Topics
3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Any 1100-level Graphic Design course or consent of instructor. (2 lecture hours, 2 lab hours)

GRAPHIC DESIGN (GRDSN) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (8 lab hours)

GRAPHIC DESIGN (GRDSN) 2200
User Experience Design
3 Credit Hours
Study of user experience design for interactive environments through the exploration of user interface, user personas, sitemaps, wire framing, prototypes, and current trends and practices in the field. Emphasis is placed on visual hierarchy and understanding the logical placement and flow of content to achieve a client's goals and create a navigable environment for the user. Prerequisite: Graphic Design 1102 with a grade of C or better, or equivalent or consent of instructor. (1 lecture hour, 4 lab hours)

GRAPHIC DESIGN (GRDSN) 2201
Graphic Design 3
3 Credit Hours
Development of visual identity systems for organizations and corporations applied to print, web, and broadcast media. Focuses on how organizations use identity design to express core values and impact consumer perceptions of brand. Processes include research, conceptualization, image, type generation, layout, presentation, and evaluation. Prerequisite: Graphic Design 1105 with a grade of C or better, or equivalent or consent of instructor. (6 lab hours)

GRAPHIC DESIGN (GRDSN) 2202
Web/Interactive Design 1
3 Credit Hours
Designing for interactivity in environments such as the web, portfolios, and apps with an emphasis on interactive design workflow. Designing HTML- and CSS-based web pages, prototypes, and web sites utilizing industry-standard hardware and software. Developing interactive concepts and organization and integration of content into web sites. Creating, preparing, and manipulating documents, illustrations, and images for the web. Prerequisite: Graphic Design 1102 with a grade of C or better and Graphic Design 2200 with a grade of C or better, or equivalent or consent of instructor. (6 lab hours)

GRAPHIC DESIGN (GRDSN) 2203
Advertising Design
3 Credit Hours
Introduction to creative brief writing, concept development, brand positioning, client/agency relationship, copywriting, and research methods. Study of cultural, social, and psychological aspects of advertising design, including consumer behavior and effects of globalization. Survey and development of advertising design for various media, including print, broadcast, direct mail, packaging, and point-of-purchase. Prerequisite: Graphic Design 1102 with a grade of C or better, or equivalent or consent of instructor. (6 lab hours)

GRAPHIC DESIGN (GRDSN) 2204
Digital Illustration 3
3 Credit Hours
Continues the development of skills necessary to create illustration projects. Uses a combination of traditional drawing skills and current industry standard vector/raster-based software, such as Adobe Illustrator and Photoshop. Prerequisite: Graphic Design 1108 with a grade of C or better, or equivalent or consent of instructor. (6 lab hours)

GRAPHIC DESIGN (GRDSN) 2205
Graphic Design 4
3 Credit Hours
Studies communication of ideas and information through symbols, images, illustration, and typography as applied to print, new media, and other types of graphic design projects. Emphasis on professional design, illustration processes and presentation skills. Practical application of design theory in a simulated design studio/agency environment. Prerequisite: Graphic Design 2201 with a grade of C or better, or equivalent or consent of instructor. (6 lab hours)

GRAPHIC DESIGN (GRDSN) 2206
Web/Interactive Design 2
3 Credit Hours
Development of web and interactive design concepts and processes through advanced projects. Planning and development of web site design, mobile interface design, digital portfolio, and menus, and screens is explored using current authoring tools and techniques. Current trends and practices are studied and integrated into project designs. Prerequisite: Graphic Design 2202 with a grade of C or better or equivalent or concurrent enrollment in Graphic Design 2202 or consent of instructor. (6 lab hours)

GRAPHIC DESIGN (GRDSN) 2208
Portfolio Seminar
3 Credit Hours
Capstone course in the development of a personal portfolio of communication design projects. Emphasizes creative self-assessment, portfolio preparation, written communication, presentation, interview, and job search skills. Review of professional portfolio work and exploration of career opportunities in communication design. Students will demonstrate their understanding of design principles and creative problem-solving abilities through a portfolio of professional quality work. Prerequisite: Graphic Design 2201 with a grade of C or better, or equivalent or consent of instructor. (6 lab hours)

GRAPHIC DESIGN (GRDSN) 2210
Cartooning
3 Credit Hours
Creation of original written and illustrated cartoons with an emphasis on character development for animation. Historical overview of cartooning as visual storytelling. Exploration of drawing materials and techniques as related to cartooning. Examination of how to individualize cartoon characters, leading to clear and concise techniques for conveying character, stories, humor, and concepts. Prerequisite: Graphic Design 1100 or Art 1101 with a grade of C or better, or equivalent or consent of instructor. (6 lab hours)

GRAPHIC DESIGN (GRDSN) 2211
Storyboarding/Sequential Art
3 Credit Hours
Study of visual storytelling ideas and techniques with an emphasis on storyboarding for animation and film. Includes developing scripts, drawing techniques, working with various materials and media, creating character model sheets, and storyboarding for character animation. Students break down ideas and scenes sequentially to promote visual storytelling. Prerequisite: Graphic Design 2210 with a grade of C or better, or equivalent or consent of instructor. (6 lab hours)

GRAPHIC DESIGN (GRDSN) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

GRAPHIC DESIGN (GRDSN) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

HEALTH INFORMATION TECHNOLOGY

HEALTH INFORMATION TECHNOLOGY (HIT) 1101
Fundamentals of Health Info Technology
4 Credit Hours
Introduction to the role of health information technicians and the health information field. Covers numbering, filing, indexing and professionals in health care. Health record content in hospitals and other types of health care facilities. Internal and external agency requirements for all types of health care facility records. Prerequisite: Admission to HIT program is required. (3 lecture hours, 2 lab hours)

HEALTH INFORMATION TECHNOLOGY (HIT) 1102
Classification Systems I
5 Credit Hours
Study of nomenclature and classification of systems including coding and abstracting. Introduction to International Classification of Diseases (ICD) coding principles. Prerequisite: Admission to HIT program is required. Health Information Technology 1101 and Anatomy & Physiology 1500 with a grade of C or better or Anatomy & Physiology 1551 and Anatomy & Physiology 1552 with a grade of C or better or equivalent or Anatomy & Physiology 1571 and Anatomy & Physiology 1572 with a grade of C or better or consent of instructor. (4 lecture hours, 2 lab hours)

HEALTH INFORMATION TECHNOLOGY (HIT) 1103
Computerized Health Data and Statistics
4 Credit Hours
Study of statistical data including hospital census. Electronic information processing and health information systems. Study of the computerized patient record. Computer applications to health data including abstracting, master patient index, and medical transcription. Prerequisite: Admission to Health Information Technology program is required. Health Information Technology 1101 and concurrent enrollment in Computer Information Systems 1150 or consent of instructor. (3 lecture hours, 2 lab hours)

HEALTH INFORMATION TECHNOLOGY (HIT) 1107
C.P.T. Coding
3 Credit Hours
An introduction to the Current Procedure Terminology (CPT) coding system for procedures in ambulatory care and services rendered by physicians. Emphasis is on the six sections of the CPT book. An introduction of Center for Medicare/Medicaid (CMS) Services' Common Procedure Coding System (HCPCS) is included. Prerequisite: Health Sciences 1110 or consent of instructor. (3 lecture hours)

HEALTH INFORMATION TECHNOLOGY (HIT) 1108
ICD-10-CM Coding for Physician Services
3 Credit Hours
An introduction to International Classification of Diseases (ICD) 10 for coding and reimbursement in physician office services. Prerequisite: Health Sciences 1110 with a grade of C or better or equivalent (2 lecture hours, 2 lab hours)

HEALTH INFORMATION TECHNOLOGY (HIT) 1120
ICD-9-CM Coding for Physicians Services
3 Credit Hours
An introduction to International Classification of Diseases Ninth Revision, Clinical Modification (ICD-9-CM) for physician office services. Prerequisite: Health Sciences 1110 or consent of instructor. (2 lecture hours, 2 lab hours)

HEALTH INFORMATION TECHNOLOGY (HIT) 1121
Billing in Physician Offices
3 Credit Hours
An overview of medical office procedures including billing, scheduling, legalities and office protocol. Prerequisite: Health Information Technology 1107 and Health Information Technology 1120 or consent of instructor. (2 lecture hours, 2 lab hours)

HEALTH INFORMATION TECHNOLOGY (HIT) 1125
Clinical Reimbursement Methodologies
3 Credit Hours
Study of health care reimbursement, prospective payment systems, and case mix analysis. The use of coded data and health information in reimbursement systems appropriate to all health care settings is explored. Prerequisite: Admission to Health Information Technology program is required. Health Information Technology 1102 or consent of instructor. (2 lecture hours, 2 lab hours)

HEALTH INFORMATION TECHNOLOGY (HIT) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (8 lab hours)

HEALTH INFORMATION TECHNOLOGY (HIT) 2201
Legal/Qualitative Aspects of Health Info
5 Credit Hours
Legal and qualitative aspects of health information. Privacy standards, confidentiality, case law, performance improvement, utilization management, risk management, medical staff credentialing as well as accreditation standards will be explored. Prerequisite: Admission to Health Information Technology program is required. Health Information Technology 1103 with a grade of C or better, or equivalent and Health Information Technology 1125 with a grade of C or better, or equivalent and concurrent enrollment in Health Information Technology 2221 or consent of instructor. (4 lecture hours, 2 lab hours)

HEALTH INFORMATION TECHNOLOGY (HIT) 2202
Management of Health Information
3 Credit Hours
Supervisory techniques and professional relationships. Knowledge and skills relevant to operating a health record department are emphasized. Human resource issues, procedures, equipment, forms and office systems are also reviewed. Prerequisite: Admission to Health Information Technology program is required. Health Information Technology 2201 or consent of instructor. (2 lecture hours, 2 lab hours)

HEALTH INFORMATION TECHNOLOGY (HIT) 2203
Pharmacology for HIT Professionals
3 Credit Hours
General introduction to pharmacological concepts. Focus on fundamental concepts of drug classification, adverse reactions, poisoning and management of common diagnoses. Prerequisite: Admission to Health Information Technology program is required. Health Information Technology 2211 or consent of instructor. (2 lecture hours, 2 lab hours)

HEALTH INFORMATION TECHNOLOGY (HIT) 2207
Advanced CPT/ICD Coding
4 Credit Hours
Continuation of the study of CPT and ICD classification systems with an emphasis on linking the code sets together. Compare the periodic updates of both code sets including expanding terminologies and new procedures, interpreting and applying official coding guidelines, and reviewing edits and modifiers. Prerequisite: Health Information Technology 1125 with a grade of C or better or equivalent and Anatomy & Physiology 1500 with a grade of C or better, or equivalent or Anatomy & Physiology 1551 and Anatomy & Physiology 1552 with a grade of C or better, or equivalent or Anatomy & Physiology 1571 and Anatomy & Physiology 1572 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours, 2 lab hours)

HEALTH INFORMATION TECHNOLOGY (HIT) 2211
Pathophysiology for Health Information
4 Credit Hours
Study of the origin, identification and classification of diseases of the human body. Emphasis on etiology, manifestations, diagnostic finding and treatment. Prerequisite: Admission to Health Information Technology program is required. Anatomy & Physiology 1500 with a grade of C or better, or equivalent or Anatomy & Physiology 1551 and Anatomy & Physiology 1552 with a grade of C or better, or equivalent or Anatomy & Physiology 1571 and Anatomy & Physiology 1572 with a grade of C or better, or equivalent or consent of instructor. (4 lecture hours)

HEALTH INFORMATION TECHNOLOGY (HIT) 2212
Clinical Classification Systems II
4 Credit Hours
Study of nomenclature and classification of systems including coding and abstracting. Introduction to International Classification of Diseases Procedural Classification System (ICD-PCS) coding principles. This course can be taken three times for credit. Prerequisite: Health Information Technology 1102 with a grade of C or better or equivalent and Anatomy & Physiology 1500 with a grade of C or better, or equivalent or Anatomy & Physiology 1551 and Anatomy & Physiology 1552 with a grade of C or better, or equivalent or Anatomy & Physiology 1571 and Anatomy & Physiology 1572 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

HEALTH INFORMATION TECHNOLOGY (HIT) 2213
ICD-10-CM Coding for Inpatient Services
3 Credit Hours
Study of nomenclature and classification of systems including coding and sequencing. Introduction to International Classification of Diseases (ICD)-10 coding principles. Prerequisite: Anatomy & Physiology 1500 with a grade of C or better, or equivalent or Anatomy & Physiology 1551 and Anatomy & Physiology 1552 with a grade of C or better, or equivalent or Anatomy & Physiology 1571 and Anatomy & Physiology 1572 with a grade of C or etter, or equivalent and consent of instructor. (2 lecture hours, 2 lab hours)

HEALTH INFORMATION TECHNOLOGY (HIT) 2221
Professional Practice Experience I
2 Credit Hours
Supervised professional practice (clinical) experiences in a variety of health information settings. Application of health information science theory will be emphasized. Prerequisite: Admission to Health Information Technology program is required. Health Information Technology 1103 with a grade of C or better, or equivalent and Health Information Technology 1125 with a grade of C or better, or equivalent and concurrent enrollment in Health Information Technology 2201 or consent of instructor. (1 lecture, 8 lab hours)

HEALTH INFORMATION TECHNOLOGY (HIT) 2231
Professional Practice Experience II
2 Credit Hours
Continuation of professional practice experiences in primary care and secondary site Prerequisite: Admission to HIT program is

required. Health Information Technology 2221 with a grade of C or better or equivalent.

HEALTH INFORMATION TECHNOLOGY (HIT) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

HEALTH INFORMATION TECHNOLOGY (HIT) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

HEALTH SCIENCES

HEALTH SCIENCES (HLTHS) 1100
Survey of Health Care Careers
2 Credit Hours
An exploration of various allied health professions including diagnostic, medical information, rehabilitation, and patient care services through classroom and field experience. (2 lecture hours)

HEALTH SCIENCES (HLTHS) 1101
Survey Health Care Careers: Field Study
2 Credit Hours
An exploration of various allied health professions including diagnostic, medical information, rehabilitation, and patient care services through career shadowing. (2 lecture hours)

HEALTH SCIENCES (HLTHS) 1106
Rehabilitation Aide
2 Credit Hours
Overview of the role and necessary skills of a Physical Rehabilitation Aide. Exploration of modalities of physical rehabilitation including effects of aging, neuromuscular/ neurological, musculoskeletal disorders and cardiopulmonary disease. Prerequisite: CNA, RN, LPN, Developmental Disabilities Aide, and Child Care Aide (2 lecture hours)

HEALTH SCIENCES (HLTHS) 1110
Biomedical Terminology
3 Credit Hours
Students will be introduced to medical terms for body systems including word roots, prefixes, suffixes and abbreviations commonly encountered in the healthcare field. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HEALTH SCIENCES (HLTHS) 1115
Pharmacy Technician
5 Credit Hours
Overview of the role and fundamental skills necessary for a professional pharmacy technician. Exploration of pharmacy abbreviations, calculations, drug classifications, basic anatomy and physiology, disease states, drug interactions, and prescription processing is included. Prerequisite: High School diploma or GED. (5 lecture hours)

HEALTH SCIENCES (HLTHS) 1120
Introduction to Clinical Lab Science
3 Credit Hours
Students will be introduced to the profession of clinical/medical laboratory science and to the clinical laboratory scientist's role in the delivery of health care. Prerequisite: Health Sciences 1110 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

HEALTH SCIENCES (HLTHS) 1122
Basic Phlebotomy Techniques
4 Credit Hours
Students will be presented with an overview of venipuncture and capillary puncture techniques for obtaining blood specimens for laboratory analysis. Prerequisite: Health Sciences 1110 with a grade of C or better, or equivalent or concurrent enrollment in Health Sciences 1110 or consent of instructor (3 lecture hours, 3 lab hours)

HEALTH SCIENCES (HLTHS) 1123
Phlebotomy for Health Professionals
2 Credit Hours
Students will be presented with an overview of basic phlebotomy procedures with hands-on experience designed for health science students that are not seeking national certification. Prerequisite: Health Science 1110 with a grade of C or better, or equivalent or concurrent enrollment in Health Sciences 1110 or consent of instructor. (1 lecture hour, 2 lab hours)

HEALTH SCIENCES (HLTHS) 1124
Phlebotomy Clinical
2 Credit Hours
Integrated clinical practice in the area of venipuncture and capillary puncture for the collection of blood specimens for diagnostic analysis. This course can only be taken on a pass/fail basis. Prerequisite: Consent of instructor is required.

HEALTH SCIENCES (HLTHS) 1125
Phlebotomy Exam Review
1 Credit Hour
Comprehensive review and update of phlebotomy practice, to include theory and procedures, as well as preparation for the certifying exam. This course can only be taken on a satisfactory/ fail basis. Prerequisite: Health Sciences 1124 with a grade of S or equivalent or concurrent enrollment in Health Sciences 1124 or consent of instructor. (1 lecture hour)

HEALTH SCIENCES (HLTHS) 1126
Basic Non-Invasive Electrocardiography
2 Credit Hours
Students will explore the anatomy and electrophysiology of the heart and perform basic cardiology procedures including pulse, blood pressure, and electrocardiogram (EKG). Prerequisite: Health Sciences 1110 with a grade of C or better, or equivalent or concurrent enrollment in Health Sciences 1110 or consent of instructor. (1 lecture hour, 2 lab hours)

HEALTH SCIENCES (HLTHS) 1127
EKG Clinical
1 Credit Hour
Integrated clinical practice in the area of electrocardiography. Students obtain patient Electrocardiograms (EKG), Holter monitor, and the Treadmill Stress Test (TMST) via non-invasive electrocardiographic procedures. Prerequisite: Health Sciences 1126.

HEALTH SCIENCES (HLTHS) 1128
Adv Non-Invasive Electrocardiograpy
3 Credit Hours
Advanced electrocardiography (EKG) includes electrophysiology of the heart and identification of waveforms. Cardiac arrhythmias, cardiac disease states and cardiac medications included. Non-invasive cardiography testing to include Holter monitor and Treadmill Stress Testing (TMST). Prerequisite: Health Sciences 1126 or consent of instructor. (2 lecture hours, 2 lab hours)

HEALTH SCIENCES (HLTHS) 1129
Non-Invasive EKG Clinical
1 Credit Hour
Integrated clinical practice in the area of electrocardiography to include electrocardiograms (EKG), Holter monitor testing, the Treadmill Stress Test (TMST), and telemetry via non-invasive electrocardiographic procedures. Prerequisite: Consent of instructor is required.

HEALTH SCIENCES (HLTHS) 1145
Health Care Collaboration
3 Credit Hours
Examines changes in health care due to an aging population, availability of resources, and related factors. Explores the impact of national initiatives and regulating bodies on standards of practice. Determines the role of the interdisciplinary health care team as it impacts patient outcomes. Prepares students to collaborate within a multidisciplinary team. (3 lecture hours)

HEALTH SCIENCES (HLTHS) 1800
Special Project
1 to 3 Credit Hours
Special project courses in the discipline cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30% but not to exceed 70%. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of the discipline concepts, theories, principles, and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) This course may be taken four times for credit as long as different topics are chosen.

HEALTH SCIENCES (HLTHS) 1820
Selected Topics
1 to 3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (1 to 3 lecture hours)

HEALTH SCIENCES (HLTHS) 1821
Selected Topics
3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (2 lecture hours, 2 lab hours)

HEALTH SCIENCES (HLTHS) 1840
Independent
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required (1 to 4 lecture hours)

HEALTH SCIENCES (HLTHS) 2235
Pharmacology for Medical Assisting
3 Credit Hours
Study of prescribed drugs as they relate to medical assisting. Emphasis on legislation, common medications prescribed, dosage calculation, preparation, administration and adverse reactions. Prerequisite: Admission to program and Medical Assistant 2233 with a grade of C or better, or concurrent enrollment in Medical Assistant 2233 or consent of instructor (3 lecture hours)

HEALTH SCIENCES (HLTHS) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

HEALTH SCIENCES (HLTHS) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite:

Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

HEARING INSTRUMENT DISPENSARY PROGRAM

HEARING INSTRUMENT DISPENSARY PROGRAM (HIDP) 1101
The Auditory Mechanism
3 Credit Hours
The Auditory Mechanism is an introduction to anatomy and physiology, pathophysiology and embryology, and development of the auditory and vestibular systems. Normal aspects of auditory physiology and behavior over the lifespan will be addressed. (3 lecture hours)

HEARING INSTRUMENT DISPENSARY PROGRAM (HIDP) 1102
Acoustics and Hearing Science
3 Credit Hours
Acoustics and Hearing Science will provide an overview of the basic properties of sound. Topics will also include the structures and functions of the auditory mechanism and their involvement in a wide range of the auditory perceptual phenomena, and how disorders with these components may lead to impaired auditory function. Prerequisite: Hearing Instrument Dispensary Program 1101 or concurrent enrollment in Hearing Instrument Dispensary Program 1101 or consent of instructor. (3 lecture hours)

HEARING INSTRUMENT DISPENSARY PROGRAM (HIDP) 1103
Intro to Audiology & Clinical Audiometry
4 Credit Hours
Students will be introduced to audiology and clinical audiometry. Auditory function and the basic principles of audiological assessment across the lifespan will be covered. Prerequisite: Admission to the program is required. Hearing Instrument Dispensary Program 1102 with a grade of C or better or equivalent or consent of instructor. (4 lecture hours)

HEARING INSTRUMENT DISPENSARY PROGRAM (HIDP) 1104
Aural Rehabilitation Across the Lifespan
3 Credit Hours
Aural Rehabilitation Across the Lifespan is an introduction to interventions aimed at minimizing the communication difficulties associated with hearing loss in people of all ages. Prerequisite: Hearing Instrument Dispensatory 1103 or concurrent enrollment in Hearing Instrument Dispensary Program 1103 or consent of instructor. (3 lecture hours)

HEARING INSTRUMENT DISPENSARY PROGRAM (HIDP) 2101
Hearing Aids
4 Credit Hours
This introduction to Hearing-Aid (HA) applications will include HA components, system, electroacoustic evaluation, and methods of prescribing HA gains to a person with a specified hearing loss. Basic and advanced HA signal processing will also be covered. Prerequisite: Hearing Instrument Dispensary Program 1103 with a grade of C or better, or equivalent and Hearing Instrument Dispensary Program 1104 with a grade of C or better, or equivalent or consent of instructor. (4 lecture hours)

HEARING INSTRUMENT DISPENSARY PROGRAM (HIDP) 2102
Professional Issues
3 Credit Hours
Professional Issues and the Hearing Instrument Specialist addresses a wide variety of issues pertinent to the professional life of the Hearing Instrument Specialist. Prerequisite: Hearing Instrument Dispensary Program 2101 or equivalent or concurrent enrollment in Hearing Instrument Dispensary Program 2101 or consent of instructor. (3 lecture hours)

HEARING INSTRUMENT DISPENSARY PROGRAM (HIDP) 2112
Clinical Practicum
2 Credit Hours
Students will obtain supervised clinical experience in a hearing instrument dispensing clinic. This course can only be taken on a pass/fail basis. Prerequisite: Hearing Instrument Dispensary Program 2101 with a grade of C or better, or equivalent and Hearing Instrument Dispensary Program 2102 with a grade of C or better, or equivalent or consent of instructor.

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 1100
Refrigeration Principles
3 Credit Hours
Introduction to basic principles of refrigeration, basic laws of matter, fluids, gases, compression systems, refrigeration controls, refrigerants, and components. Also introduces service practices including the use of a refrigeration service manifold, recovery, vacuuming, and charging a system. (2 lecture hours, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 1105
Intro to Safety, Materials & Equipment
3 Credit Hours
Introduction to general safety practices, tool safety, the use and care of hand tools, specialty tools used in the Heating Ventilation, Air Conditioning, and refrigeration(HVACR) industry, pipe fitting basics, tubing and connection methods, brazing and soldering, and a variety of other basics needed to be successful in the HVACR industry. (2 lecture hours, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 1108
Refrigerant Certification
1 Credit Hour
Environmental handling, refrigerant equipment and certification types are covered. Federal Government requires all individuals who open a system or container holding refrigerant to be certified. EPA refrigerant certification test given. (1 lecture hour)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 1110
Into to Electricity and HVACR Controls
3 Credit Hours

Practical study of electricity, electrical hardware, and electrical test instruments that are used in the heating, ventilation, air conditioning and refrigeration industry. Students will be introduced to: basic electricity, circuits, schematics, power distribution, electrical components, and motors. (2 lecture hours, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 1112
Residential Refrigeration
3 Credit Hours
Analysis of the operation of refrigeration systems, leak detection, leak repair, charging, component, replacements, schematic reading and troubleshooting domestic refrigerator and window air conditioning units. Prerequisite: Heating, Ventilation, Air Conditioning and Refrigeration 1100, 1105, and 1110 or consent of instructor. (2 lecture hours, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 1161
Introduction to Sheet Metal
2 Credit Hours
Basic fitting layouts. Various types of seams, elbows and triangulation used in constructing various square and round fittings. Drawing and fabrication of the fittings are required. (4 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 1180
Introduction to Heating
5 Credit Hours
Gas combustion, venting, operation of a heating unit, electrical circuitry, zoning and accessories. Servicing, troubleshooting and repairing mechanical and electrical components, and proper installation of heating units. Prerequisite: Heating, Ventilation, Air Conditioning and Refrigeration 1110 or consent of instructor. (4 lecture hours, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 1181
Heating Principles
3 Credit Hours
Introduction to heating systems and equipment used in the Heating Ventilation, Air Conditioning, and Refrigeration (HVACR) industry. The course will introduce students to residential and light commercial forced-air systems, hydronic boilers, low pressure and high pressure steam boilers, electric heating, components, sequences of operation,and venting. (2 lecture hours, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 1827
Selected Topics
1 Credit Hour
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (1 lecture hour)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (2 to 8 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 2110
Facility Electrical Systems
3 Credit Hours
Advanced facility electrical systems and controls. Cover electrical control and design of mechanical facility systems. Prerequisite: Heating, Ventilation, Air Conditioning and Refrigeration 1110 with a grade of C or better, or equivalent, or consent of instructor. (2 lecture hours, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 2180
Residential and Light Commercial Forced-Air Heating
3 Credit Hours
Advanced course covering forced-air furnaces in residential and light-commercial applications. Covers installation, components, sequence of operation, maintenance, and electrical and mechanical troubleshooting of mid-efficiency, high-efficiency (condensing), and modulating forced-air furnaces. Prerequisite: Heating, Ventilation, Air Conditioning and Refrigeration 1110 and 1181 with a grade of C or better, or equivalent, or consent of instructor. (2 lecture hours, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 2186
Hydronic Heating
3 Credit Hours
Hot water heating systems including residential and light commercial applications. Piping systems and components are also covered. Prerequisite: Heating, Ventilation, Air Conditioning and Refrigeration 1105, 1110 and 1181 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hour, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 2187
Central Heating Plants
3 Credit Hours
Theory of large boiler systems operation. Low and high pressure boilers, air handling equipment, heat exchangers, pumps, controls, water treatment, accessories, service and preventive maintenance are covered. Field trips to central heating plants are included. Prerequisite: Heating, Ventilation, Air Conditioning and Refrigeration 1110 and 1181 with a grade of C or better, or equivalent. (2 lecture hours, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 2201
Residential Air Conditioning
3 Credit Hours
Split and package air-conditioning systems, proper installation, operation, servicing, repair of mechanical and electrical components, and air treatment. Prerequisite: Heating, Ventilation, Air Conditioning and Refrigeration 1100, 1105 and 1110 or equivalent, or consent of instructor. (2 lecture hours, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 2202
Commercial Air Conditioning
3 Credit Hours
An advanced course covering commercial air-conditioning equipment and mechanical and electrical components of rooftop

heating and cooling systems. Prerequisite: Heating, Ventilation, Air Conditioning and Refrigeration 1100, 1105, 1110 and 1181, all with a grade of C or better or consent of instructor. (2 lecture hours, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 2205
Heat Pumps
2 Credit Hours
Theory of the refrigeration cycle with respect to heat pumps and electrical heat. Includes mechanical and electrical operation, service, repair and proper installation. Prerequisite: Heating, Ventilation, Air Conditioning and Refrigeration 1100, 1105 and 1110 or consent of instructor. (1 lecture hour, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 2210
Commercial Refrigeration
5 Credit Hours
High, medium, and low temperature refrigeration application, operation of mechanical and electrical components, service and repair of electrical circuitry, and mechanical components, capacity controls, walk-ins, reach-ins, ice machines, supermarket refrigeration equipment, refrigeration piping, heat reclaim, and start-up procedures. Prerequisite: Heating, Ventilation, Air Conditioning and Refrigeration 1100, 1105 and 1110 or consent of instructor. (4 lecture hours, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 2220
Installation
3 Credit Hours
Installation of heating, air conditioning and refrigeration systems, piping, duct installation, electrical circuitry, and accessories. Prerequisite: Heating, Ventilation, Air Conditioning and Refrigeration 1100, 1105, 1110 and 1181, all with a grade of C or better or consent of instructor. (2 lecture hours, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 2225
Troubleshooting Systems
3 Credit Hours
Systematic evaluation of system pressure, temperature, compressor efficiency, mechanical, and electrical components. Study of system performance on live equipment. Prerequisite: Heating, Ventilation, Air Conditioning and Refrigeration 1100, 1105, 1110 and 1181, all with a grade of C or better or consent of instructor. (2 lecture hours, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 2230
HVACR Control Systems
3 Credit Hours
Heating, Ventilation, Air Conditioning and Refrigeration (HVACR) control systems in commercial buildings: All-Air, All-Water, and Air-Water systems. Includes electric, pneumatic, electronic and an introduction to Direct Digital Control (DDC) controls. Prerequisite: Heating, Ventilation, Air Conditioning and Refrigeration 1100, 1105, 1110 and 1181, all with a grade of C or better or consent of instructor. (2 lecture hours, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 2231
Building Automation Control Devices
3 Credit Hours
Examines building HVACR, lighting, security, access, plumbing, fire protection, elevator, voice-data-video systems. Content includes control components, hardware, operation, and signaling used in an integrated building automation system. Prerequisite: Heating, Ventilation, Air Conditioning and Refrigeration 1100, 1105, 1110 and 1181, all with a grade of C or better or consent of instructor. (2 lecture hours, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 2232
Energy Audits/Economics
2 Credit Hours
Purpose, objectives and mechanics of the energy audit and economic processes include the audit procedures, heating, ventilation, air conditioning, and refrigeration systems, lighting, auxiliary equipment, energy conserving, cost-saving measures and analysis techniques that are necessary for evaluation of energy projects. After successful completion of the course, students are eligible to take the Environmental Protection Agency (EPA) Refrigerant Certification Test. (1 lecture hour, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 2233
BAS Programming I
3 Credit Hours
An introduction to Building Automation Control network (BACnet) and Local Operating Network (LON) protocols using Object-Oriented Programming (OOP) in the building automation industry. Prerequisite: Heating, Ventilation, Air Conditioning and Refrigeration 1100, 1105, 1110 and 1181, all with a grade of C or better or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 2234
BAS Programming II
3 Credit Hours
Advanced Object-Oriented Programming (OOP) applied to Direct-Digital Controls (DDC) used in Building Automation Systems (BAS). Covers sequence of operation and control strategies of DDC controllers used in building automation systems. Prerequisite: Heating, Ventilation, Air Conditioning and Refrigeration 2230, 2231, 2233 and 2238, all with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 2235
Building Commissioning
3 Credit Hours
Explores the history and development of building commissioning. Includes types of commissioning, responsibilities of commissioning agents, instruments, building automation systems, types of reports, and functional testing. Prerequisite: Heating, Ventilation, Air Conditioning and Refrigeration 2230 and 2231, both with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 2236
Central Cooling Plants
3 Credit Hours

Theory of centrifugal, absorption and screw systems, minor repairs, service, preventive maintenance of pumps, air-handling equipment and controls are covered. Field trips to central cooling plants are included. Prerequisite: Heating, Ventilation, Air Conditioning and Refrigeration 1100, 1105 and 1110 or equivalent. (2 lecture hours, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 2237
BAS Solutions
3 Credit Hours
Explores different manufacturers of Direct Digital Controls (DDC) and systems used in building automation. Prerequisite: Heating, Ventilation, Air Conditioning and Refrigeration 2230, 2231, 2233 and 2238, all with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 2238
BAS Integration Open Protocols
3 Credit Hours
Examines control concepts and network data communication using LonWorks (local operating networks) and BACnet (building automation controls network) protocols. Prerequisite: Heating, Ventilation, Air Conditioning and Refrigeration 1100, 1105, 1110 and 1181, all with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 2240
Load Calculations and Duct Design
5 Credit Hours
Techniques and procedures necessary to evaluate residential and commercial heat loss, heat gain and duct layout design. Heat transmission, infiltration, R-value, U-valve, duct analysis, duct sizing, duct and register location and selection, and equipment sizing and selection. (4 lecture hours, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 2241
Industrial Air Conditioning Design
3 Credit Hours
Design and application of industrial air conditioning, psychrometrics, load calculation, equipment selection, ventilation, duct design, pipe design, and automatic controls: Prerequisite: Heating, Ventilation, Air Conditioning and Refrigeration 1100, Heating, Ventilation, Air Conditioning and Refrigeration 1105, Heating, Ventilation, Air Conditioning and Refrigeration 2240 and Mathematics 1100 or Mathematics 1115 (or college equivalent) or qualifying score on the mathematics placement test, or consent of instructor. (2 lecture hours, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 2242
Mechanical Systems
3 Credit Hours
Introduces students to mechanical concepts of measurement, pipe fittings, pipe dimensions, shaft and pulley alignment, pumping concepts, pump maintenance, introduction to fluid dynamics, and systems integration of mechanical facility and industrial systems. Prerequisite: Heating, Ventilation, Air Conditioning and Refrigeration 1105 with a grade of C or better, or equivalent or Manufacturing 1151 with a grade of C or better, or equivalent or Welding 1100 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 2250
System Balancing
3 Credit Hours
Covers air-delivery equipment, duct distribution, duct pressure, cubic feet per minute, fluid flow, pumps, piping, refrigeration systems, testing instruments, and fine tuning of systems. Prerequisite: Heating, Ventilation, Air Conditioning and Refrigeration 1100, 1105, 1110 and 1181, all with a grade of C or better or consent of instructor. (2 lecture hours, 2 lab hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 2260
Heating and Air Conditioning Contracting
3 Credit Hours
Application of the HVACR design and implementation procedure, with emphasis on the equipment selection process, as outlined in Air Conditioning Contractors of America (ACCA) Manuals S and CS, Residential and Commercial Equipment Selection. Best practices for residential and light commercial HVACR contractors and designers, including identifying and incorporating recognized industry practices into business operations. Prerequisite: Heating, Ventilation, Air Conditioning and Refrigeration 1100, 1105, 1110 and 1181, all with a grade of C or better and concurrent enrollment in Management 2210 or consent of instructor. (3 lecture hours)

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 2860
Internship (Career &Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 2862
Internship (career & Technical Ed)
2 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

HEATING, VENTILATION, AIR CONDITIONING, & REFRIGERATION (HVACR) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career & Technical Ed). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives

are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

HISTORY

HISTORY (HISTO) 1110 (IAI H2 901)
Western Civilization Until 1600
3 Credit Hours
A survey of developments in Western Civilization to 1600, this course examines political, social, economic, and cultural systems and relations, as well as the role of religion, philosophy, and the arts in state and society. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HISTORY (HISTO) 1120 (IAI H2 902)
Western Civilization Since 1600
3 Credit Hours
An examination of the development of intellectual, social, economic, and political characteristics of modern Western Civilization. Themes such as the Scientific Revolution and the Enlightenment, political revolutions, the rise of industry, the world wars, and the Cold War will be analyzed. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HISTORY (HISTO) 1130 (IAI S2 900)
History of the United States to 1865
3 Credit Hours
Survey of American history from the Pre-Columbian era through the U.S. Civil War: peoples and origins, colonial development, revolution, establishment of the U.S. Constitution, Early Republic, Age of Reform and Civil War. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HISTORY (HISTO) 1140 (IAI S2 901)
History of the United States Since 1865
3 Credit Hours
Survey of U.S. history from Reconstruction to the present: Reconstruction, Industrial Revolution, Progressive Era Politics, problems of 20th century include economic, political, cultural, international and social changes in the modern United States including 20th century major wars, Depression era, and the Cold War era. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HISTORY (HISTO) 1160 (IAI H2 907)
World Civilization Since 1300
3 Credit Hours
The history of the intellectual, political, social, economic and cultural development of world societies from the fourteenth century to the present. Examines landmark documents and artifacts that reflect world cultures. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HISTORY (HISTO) 1800
Special Project
1 to 4 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.). This course may be taken four times for credit. Prerequisite: Course requires Reading Placement Test Score-Category One.

HISTORY (HISTO) 1820
Selected Topics
1 to 4 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Course requires Reading Placement Test Score-Category One. (1 to 4 lecture hours)

HISTORY (HISTO) 1824
Selected Topics in History
2 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Course requires Reading Placement Test Score-Category One. (2 lecture hours)

HISTORY (HISTO) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. Course requires Reading Placement Test Score-Category One. (1 to 4 lecture hours)

HISTORY (HISTO) 2200
Middle East History From 1500
3 Credit Hours
Course examines the history, culture, and identity of the people of the Middle East from 1500 to the present day. Topics include Middle Eastern cultural roots; the formation of distinctive identity; social, economic, cultural and political contributions; the unique issues and challenges of Middle Eastern people, and the role and legacy of their involvement in the history of the world. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HISTORY (HISTO) 2205 (IAI H2 903N)
East Asian Civilization
3 Credit Hours

A survey of the political, social, economic and cultural changes in East Asia over the past 2,000 years, with a focus on the last 400 years. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HISTORY (HISTO) 2210 (IAI S2 907N)
History and Culture of Africa
3 Credit Hours
An examination of the history and cultures of Africa. Themes such as the influence of geography, ethnic and cultural diversity, European domination, independence movements, and contemporary economic and political issued is analyzed. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HISTORY (HISTO) 2215 (IAI S2 916N)
History and Culture of India
3 Credit Hours
A survey of the history and culture of India from the Indus Valley civilization to the present. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HISTORY (HISTO) 2220 (IAI H2 903N)
History and Culture of China
3 Credit Hours
A survey of the history of China from the Hsia dynasty to the present, with emphasis on the cultural, political, social and religious aspects of Chinese society. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HISTORY (HISTO) 2225 (IAI H2 908)
History and Culture of Russia
3 Credit Hours
A survey of the history and culture of Russia from earliest times to the present, including the adoption of Orthodoxy, the Mongol invasions, the development of a strong monarchy, Westernization, the Revolutions, and the Soviet State and its collapse. The course includes the development of Russian cultural, political and social institutions, as well as a discussion of the formation of its multi-ethnic and multi-cultural empire. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HISTORY (HISTO) 2230 (IAI H2 908)
History and Culture of Japan
3 Credit Hours
A survey of the history and culture of Japan from the Neolithic Era to the present. Emphasis is placed on the political, social, economic, intellectual, religious and artistic aspects of Japanese culture. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HISTORY (HISTO) 2235 (IAI H2 903N)
20th Century World History
3 Credit Hours
An examination of the world in the 20th century. Themes such as imperialism, colonialism, war, revolution, totalitarianism and globalization are analyzed. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HISTORY (HISTO) 2237
History of Terrorism
3 Credit Hours
Examines the history of terrorism in world history. Analyzes historical episodes of terrorism throughout the world in order to provide a greater understanding of the phenomenon. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HISTORY (HISTO) 2240
History and Culture of Latin America
3 Credit Hours
Description and analysis of factors shaping the development of Latin American civilization including pre-Columbian and European roots, colonial structure, independence movements, creation of modern states, and relations with the United States. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HISTORY (HISTO) 2242
African-American History
3 Credit Hours
Examines the history, culture, and identity of African-Americans in the United States from the colonial era to the present. Explores the unique challenges faced by African-Americans, as well as their contributions to the history of the United States. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HISTORY (HISTO) 2245
History and Culture of England
3 Credit Hours
An overview of the major political, social, economic, intellectual and cultural developments in the history of England from the Neolithic Age to the present. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HISTORY (HISTO) 2250
World War II and the Holocaust
3 Credit Hours
Examines the causes and course of World War II and the Holocaust, including the rise of fascism; European, Japanese, and U.S. imperialism in Asia; the course of the war in Europe and Asia; the home fronts of the belligerent countries; and the march toward the final solution. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HISTORY (HISTO) 2260 (IAI S2 901)
United States Since 1945
3 Credit Hours
An in-depth examination of the United States since 1945. Themes such as the growth of the presidency, economic and social developments, and the United States in the world arena are analyzed. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HISTORY (HISTO) 2265
History of Illinois
3 Credit Hours
This course surveys Illinois history from the arrival of the first humans during the Paleolithic Era to the present. It also examines the interaction of ecological, social, cultural, economic, and political factors in their impact on Illinois' historical evolution. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HISTORY (HISTO) 2267
Native American History
3 Credit Hours

Examines the history, culture, and identity of Native Americans in the United States from the colonial era to the present. Explores the unique challenges faced by Native Americans, as well as their contributions to the history of the United States. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HISTORY (HISTO) 2270
History of Chicago
3 Credit Hours
An examination of the development of the urban, political, cultural, social and economic history of Chicago. Themes such as industrialization, immigration, the rise of labor, and the impact of national politics are analyzed. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HISTORY (HISTO) 2800
Special Project
1 to 4 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.). Prerequisite: At least one course in the discipline or consent of instructor. Course requires Reading Placement Test Score-Category One.

HISTORY (HISTO) 2820
Advanced Selected Topics
1 to 4 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: At least one course in the discipline or consent of instructor. Course requires Reading Placement Test Score-Category One. (1 to 4 lecture hours)

HISTORY (HISTO) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

HISTORY (HISTO) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

HISTORY (HISTO) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

HISTORY (HISTO) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

HORTICULTURE

HORTICULTURE (HORT) 1100 (IAI AG 905)
Introduction to Horticulture
3 Credit Hours
Principles and practices in the development, production and use of horticultural crops. Includes classification, structure, growth and development, environmental influences on horticultural plants, and vocational opportunities in the horticultural industries. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 1101 (IAI AG 904)
Soils and Fertilizers
3 Credit Hours
Nature and characteristics of soils including physical, chemical and biological properties, soil origins, classification, soilless media and proper soil management. Examines the interrelationship between soils and fertilizers and the selection and use of fertilizers to meet plant nutritional needs. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 1105
Floral Design I
3 Credit Hours
Principles and elements of floral design, with practice in creating basic floral designs and using proper techniques. Includes identification, care and handling of flowers. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 1109
OSHA 10-Hour Landscape Safety
1 Credit Hour
Occupational Safety and Health Administration (OSHA) Landscape training for entry level workers and employers on the recognition, avoidance, abatement, and prevention of safety and health hazards in workplaces in general industry and landscape. Includes information regarding workers' rights, employer responsibilities, and how to file a complaint. Students receive their 10 hour Card upon satisfactory completion of the course. (1 lecture hour)

HORTICULTURE (HORT) 1110
Applied Plant Taxonomy
3 Credit Hours
Classification of plant families with an emphasis on plant material used in the horticulture industry. Prerequisite: Horticulture 1100 or consent of instructor. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 1111
Landscape Design I
3 Credit Hours
The process of residential landscape design, site analysis and practical solutions of typical landscape problems. Includes plant selection, graphic presentation and correct placement of materials in the residential landscape. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 1112
Landscape Maintenance
3 Credit Hours
Principles and practices for sustainable maintenance of various landscape features for residential and commercial sites. Includes best practices and strategies for snow and ice management. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 1113
Landscape Construction
3 Credit Hours
Principles and practices for sustainable construction and installation of various landscape features for residential and commercial sites. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 1114
Irrigation & Water Management
3 Credit Hours
Principles and practices of landscape irrigation involving the use of water from proper system design and installation through maintenance and management. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 1115
Floral Design II
3 Credit Hours
Continuation of the principles covered in Floral Design I. Introduces new styles and techniques and includes flower shop management. Prerequisite: Horticulture 1105 or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 1125
Water Use/Conservation in the Landscape
1 Credit Hour
Residential and commercial water management as it relates to understanding the intersection of the Plant-Soil-Water continuum. Includes best practices and strategies for sustainability. (1 lecture hour)

HORTICULTURE (HORT) 1130
Horticulture Business
3 Credit Hours
Principles and practices of operating a horticultural business and operational procedures for dealing with the perishable and seasonal nature of horticulture. Includes trends, skills and career opportunities in the various disciplines within horticulture. (3 lecture hours)

HORTICULTURE (HORT) 1131
Landscaping for Wildlife
1 Credit Hour
A study of landscape environments that offer food, water, and shelter/nesting cover to local wildlife to help species compete in our changing environment. The role of native plants in sustaining wildlife will be emphasized. (1 lecture hour)

HORTICULTURE (HORT) 1135
Introduction to Green Roofs
1 Credit Hour
The basics of green roof design, construction, and maintenance. Includes benefits of green roofs and a review of the products, plants, and growing media used in green roof applications. (1 lecture hour)

HORTICULTURE (HORT) 1140
Landscape Graphics
2 Credit Hours
Drawing plans, section-elevations and perspectives for landscape design. Includes the use of pencils and markers for lettering, drafting and color renderings. (2 lecture hours)

HORTICULTURE (HORT) 1141
Sustainable Landscape Design
1 Credit Hour
Sustainable landscape design and construction practices that minimize loss of natural resources. The economic benefits of sustainable practices will also be discussed. (1 lecture hour)

HORTICULTURE (HORT) 1145
Perennial Plant Communities I
2 Credit Hours
Introduction to selecting perennial plants that grow well together and have similar maintenance requirements to create diverse, compatible, functional and beautiful gardens. Perennial plants are combined based on cost, maintenance and aesthetic appeal. (2 lecture hours)

HORTICULTURE (HORT) 1150
Power Equipment Electrical Systems
3 Credit Hours
Basic electrical theory, circuit construction, and digital multimeter use. Service information and wiring diagrams used in power equipment diagnosis. Power equipment starting and charging systems. Small engine ignition systems. Electrical wiring repair

techniques. Diagnosis of power equipment electrical systems. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 1151
2-Cycle Small Engine RepairMaintenance
2 Credit Hours
Principles of 2-cycle engine-powered devices used in the landscape industry. Includes 2-cycle engine function, use of technical literature, safe disassemble, repair and troubleshooting techniques. (1 lecture hour, 2 lab hours)

HORTICULTURE (HORT) 1152
4-Cycle Small Engine Repair/Maintenance
3 Credit Hours
Principles of 4-cycle small engine repair, maintenance, troubleshooting, failure analysis and problem solving skills to repair and rebuild small engines used in landscape, industrial, and agricultural applications. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 1153
Generator Repair and Maintenance
2 Credit Hours
Introduces portable power generator operation, basic electrical concepts, safety procedures, brushless and brush type generators, circuit analysis, troubleshooting using related testing procedures and equipment to repair generators. Prerequisite: Horticulture 1150 with a grade of C or better, or equivalent. (1 lecture hour, 2 lab hours)

HORTICULTURE (HORT) 1154
Compact Diesel Engines
3 Credit Hours
Explores the design, operation, proper maintenance, repair, and troubleshooting of compact diesel engines found in the horticulture and agriculture industries. Prerequisite: Horticulture 1150 and Horticulture 1152 with a grade of C or better, or equivalent. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 1155
Drivelines/Hydraulics/Hydrostatics
3 Credit Hours
Foundation of driveline, hydraulic, and hydrostatic principles and system operation including how to troubleshoot and repair equipment found in the horticulture and agriculture industries. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 1185
Arboriculture
3 Credit Hours
Care and maintenance of trees and shrubs in the urban landscape. Includes Plant Health Care (PHC), environmental factors affecting plants, and proper and safe use of tools. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 1800
Special Project
1 to 3 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.).

HORTICULTURE (HORT) 1820
Selected Topics
3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (3 lecture hours)

HORTICULTURE (HORT) 1821
Selected Topics
3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 1824
Selected Topics
2 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (2 lecture hours)

HORTICULTURE (HORT) 1826
Selected Topics
1 Credit Hour
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (2 lab hours)

HORTICULTURE (HORT) 1827
Selected Topics
1 Credit Hour
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (1 lecture hour)

HORTICULTURE (HORT) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

HORTICULTURE (HORT) 2211
Computer-Aided Drafting for Landscape
3 Credit Hours
Introduction to computer-aided design and drafting utilizing landscape-specific DynaSCAPE software. Prerequisite:

Horticulture 1111 or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 2212
Adv. Computer-Aided Draft for Landscape
3 Credit Hours
Advanced Computer-Aided Design (CAD) and drafting utilizing landscape-specific DynaSCAPE software. Includes producing quotes from CAD designs and producing designs in color. Prerequisite: Horticulture 2211 or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 2213
3D Landscape Design
3 Credit Hours
Visual interpretation and presentation of landscape design concepts using 3D Design Software. Create 3D models and presentation materials for multiple phases of landscape design projects. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 2214
Advanced 3D Landscape Design
2 Credit Hours
Advanced visual interpretation and presentation of landscape design concepts using 3D design software. Prerequisite: Horticulture 2213 or equivalent or consent of instructor. (1 lecture hour, 2 lab hours)

HORTICULTURE (HORT) 2221
Plant Propagation
3 Credit Hours
Principles and practices of sexual and asexual propagation of plants used in the horticulture industry. Includes work with seeds, cuttings, grafting, micropropagation, special structures and layering. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 2225
Specialty Floral Design
3 Credit Hours
Advanced floral design skills using principles, elements and techniques to create party, wedding and sympathy presentations. Prerequisite: Horticulture 1115 or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 2231
Turf Science and Management
3 Credit Hours
Principles and methods of selecting, establishing and maintaining turf for residential lawns, parks, sports fields and golf courses. Includes cultural practices such as fertilization, irrigation and cultivation, as construction and renovation techniques. Also covers weed, insect and disease identification and control. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 2235
Landscape Estimating and Bidding
3 Credit Hours
Fundamentals of creating landscape project estimates and bids to present to a client including reading landscape plans, take-off's, plant pricing, labor rates, measuring equipment, contingency, overhead costs and math calculations. (3 lecture hours)

HORTICULTURE (HORT) 2241
Landscape Plants I
3 Credit Hours
Identification of woody ornamental trees, shrubs, vines and groundcovers common to northern Illinois with an emphasis on deciduous plants. Includes adaptability, cultural requirements and placement in the landscape. Prerequisite: Horticulture 1100 or consent of instructor. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 2242
Landscape Plants II
3 Credit Hours
Identification of woody ornamental trees, shrubs, vines and groundcovers common to northern Illinois with an emphasis on narrow and broad-leaved evergreens. Includes adaptability, cultural requirements and placement in the landscape. Prerequisite: Horticulture 1100 or consent of instructor. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 2243
Ornamental Grasses
2 Credit Hours
Identification and use of ornamental grasses in the landscape. Includes propagation, production and designing with native and non-native grasses. (2 lecture hours)

HORTICULTURE (HORT) 2244
Herbaceous Perennials
3 Credit Hours
Identification, selection, design and maintenance of herbaceous perennials in the landscape. Prerequisite: Horticulture 1100 or consent of instructor. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 2245
Perennial Plant Communities II
1 Credit Hour
Design, installation and evaluation of perennial plant community gardens. Plant selections are based on time, cost and sustainability. Prerequisite: Horticulture 1145 or equivalent. (1 lecture hour)

HORTICULTURE (HORT) 2251
Diseases of Ornamental Plants
3 Credit Hours
Detection, identification and treatment of common plant diseases. Includes analysis of symptoms, selection of chemicals, preventive measures and selection of disease resistant ornamental plants. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 2253
Greenhouse Operations and Procedures
3 Credit Hours
Principles and practices of operating a commercial greenhouse. Includes types of greenhouse structures, greenhouse components, plant nutrition, greenhouse pests, crop scheduling, and business management principles for the greenhouse industry. Prerequisite: Mathematics 0460 (or college equivalent) or consent of instructor. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 2255
Greenhouse Crop Production
3 Credit Hours
Principles and practices utilized in growing and maintaining greenhouse crops such as bench and pot mums, poinsettias, lilies,

bulbs, azaleas, hydrangeas, foliage and miscellaneous pot crops. Includes hands-on experience with these crops. (2 lecture hours)

HORTICULTURE (HORT) 2257
Bedding Plant Production
3 Credit Hours
Principles and practices of bedding plant and plug production. Includes culture and identification of annual plant material such as petunias, marigolds, impatiens, begonias, geraniums and miscellaneous bedding plant varieties. Hands-on experience with these crops is provided. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 2261
Insects of Ornamental Plants
3 Credit Hours
Detection, identification and eradication of local species of insects that damage ornamental plants. Includes selection and use of pesticides for insect control. Prerequisite: Course requires Reading Placement Test Score-Category One. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 2271
Landscape Design II
3 Credit Hours
The design process with emphasis on problem solving and hardscape materials. Includes graphics, estimating, sales, and construction processes as they relate to design, installation and costs. Prerequisite: Horticulture 1111 and Horticulture 2241. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 2300
Intro to Sustainable Urban Agriculture
3 Credit Hours
Principles of sustainable agriculture for urban production. Includes the ethical, practical and scientific aspects of agricultural sustainability addressing economic, social and environmental impacts of food and urban farming. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 2301
Principles of Agroecology
3 Credit Hours
Introduces ecological approaches to urban agriculture examining the interactions of crops with the environment and soil culminating in a whole systems perspective. Prerequisite: Horticulture 1100 or equivalent. (3 lecture hours)

HORTICULTURE (HORT) 2302
Sust Urban Vegetable & Herb Production
3 Credit Hours
Explores origin, crop requirements, harvesting, and management strategies for sustainable urban production of vegetables and herbs. Prerequisite: Horticulture 1100 or equivalent. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 2303
Urban Agriculture Issues
2 Credit Hours
Explores urban agricultural issues at the local, national, and global level focusing on growing food in urban areas. Includes the current state of urban agriculture, as both a social movement and as an aid in the implementation of urban environment sustainability. (2 lecture hours)

HORTICULTURE (HORT) 2304
Hydroponic/Aquaponic Production Systems
3 Credit Hours
Introduction to concepts and practices of growing crops in hydroponic and aquaponic systems. (2 lecture hours, 2 lab hours)

HORTICULTURE (HORT) 2305
Local Foods
2 Credit Hours
Explore the local food system, the importance of locally grown foods and the future impact of urban agriculture. (2 lecture hours)

HORTICULTURE (HORT) 2307
Business Princpl-Sustainable Agriculture
2 Credit Hours
Introduction to starting and expanding a sustainable urban agriculture business. Emphasizes management and marketing practices unique to sustainable agriculture. (2 lecture hours)

HORTICULTURE (HORT) 2308
Introduction to Composting
1 Credit Hour
Introduces the cultural requirements, advantages, and benefits of composting systems. (2 lab hours)

HORTICULTURE (HORT) 2800
Special Project
1 to 3 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) This course may be taken four times for credit. Prerequisite: At least one course in the discipline or consent of instructor.

HORTICULTURE (HORT) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

HORTICULTURE (HORT) 2863
Internship (Career & Technical Ed)
3 Credit Hours

Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 225 clock hours for three semester credit hours. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

HORTICULTURE (HORT) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

HOSPITALITY & TOURISM

HOSPITALITY AND TOURISM (HOSP) 1100
Introduction to the Hospitality Industry
3 Credit Hours
Orientation to the hospitality industry, its history and magnitude, organization, challenges, and opportunities. Highlights interdependent nature of the public hospitality industry. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 1101
Introduction to Travel & Tourism
3 Credit Hours
Overview of the career opportunities within the travel and tourism industries. Includes airlines, cruise lines, tour operators, wholesalers, charter operations, hotel representatives, car rental agencies, tourist offices, meeting and convention planning companies, incentive travel, consolidators, travel agencies, and home-based agents. Specific job titles and necessary skills will be examined. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 1102
Introduction to World Destinations
3 Credit Hours
Covers the seven continents of the world in general terms. Discusses basic geography terminology including map reading, time zones, and the location of major airports and cities. Examines companies serving these areas for tourism purposes. Analyzes cultural differences, weather and climate conditions from a traveler's perspective. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 1103
Principles of the Travel Industry
3 Credit Hours
An overview of responsibilities within the travel industry. Students will review the management functions including: analyzing, coordinating, implementing, and supervising tasks of managing a travel related business. Protocol, etiquette, and different types of travel professionals will be discussed, including the changing role of the travel agent. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 1104
Principles of the Tourism Industry
3 Credit Hours
Introduction to the characteristics of tourism concepts and systems. Tourism past and present is discussed building around why people want to be tourists. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 1105
Introduction to Resort Management
3 Credit Hours
Overview of resort management and operations. Review the history and the growth of resorts in the United States, expansion of resorts worldwide, and their operations and characteristics. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 1111
Front Office Operations
3 Credit Hours
Supervisory management roles in the front office of a hotel or resort. Includes desk operations, reservations, sales, information management and uniformed services. Use of simulations, computers, role playing and hotel job shadowing. (2 lecture hours, 2 lab hours)

HOSPITALITY AND TOURISM (HOSP) 1112
Hospitality Facilities Management
3 Credit Hours
Introduction to the environments and functions in the housekeeping, maintenance, and engineering departments of today's hospitality environment. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 1121
Supervision in the Hospitality Industry
3 Credit Hours
Principles of effective human relations required by hospitality industry supervisory personnel. Practical skills for effective supervision including decision making, leadership roles, motivating personnel, recruiting and training employees, conflict resolution, delegation and effective communications. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 1122
Food & Beverage for the Meeting Planner
2 Credit Hours
Introduction to the food and beverage industry for the meeting/ event professional. Emphasis will be placed on menu planning, service styles, nutrition, and special dietary restrictions. (2 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 1131
State and National Parks
3 Credit Hours
In-depth study of State and National Parks in the United States. Covers the most popular National Parks as important tourist attractions. Itinerary planning is included. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 1140
Quality Mgmt of Service in Hospitality
3 Credit Hours

Applies the services concept to a total management improvement system in the hospitality industry. Analysis includes ethics, practices, and case studies of leading hotel companies. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 1151
Restaurant Service and Sales
2 Credit Hours
Principles and techniques necessary in a dining room to perform proper food and beverage service, reflecting the variety of operations in the restaurant industry including responsible service of alcohol. Laboratory activities will provide students an opportunity to develop skills in proper cash handling, training with a point of sale system, and service styles to include: Russian, American, tapas and banquet service. The student will also learn principles of dining room management, and will receive BASSET certification upon completion of the class. (additional fee required) (4 lab hours)

HOSPITALITY AND TOURISM (HOSP) 1152
Advanced Restaurant Service
2 Credit Hours
This advanced level service management course includes fine dining and a la carte table service, with an emphasis on complex table and beverage techniques. Focus on customer service skills, responsible service of alcohol, cash handling, and technology systems in a lab setting. Students will analyze the service delivery system from the conceptual development stages to the final measurement of guest satisfaction. Prerequisite: Hospitality & Tourism 1151 with a grade of C or better, or equivalent or consent of instructor. (4 lab hours)

HOSPITALITY AND TOURISM (HOSP) 1161
Travel Geography & Culture-The Americas
3 Credit Hours
Covers the location of major cities, airports, and sea ports and the air, land, and cruise companies serving North, Central, and South American destinations. Includes the location of important tourist attractions, unique land formations, climate data, the best time to visit the attractions, and how tour companies operate in these areas. Includes the impact of cultural differences, protocols, and acceptable standards of behavior. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 1162
Travel Geography/Culture - Europe/Africa
3 Credit Hours
Covers the location of major cities, airports, and sea ports and the air, land, and cruise companies serving European and African destinations. Includes the location of important tourist attractions, unique land formations, climate data, the best time to visit the attractions, and how tour companies operate in these areas. Also includes the cultural differences, protocols, and accepted standards of behavior. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 1163
Travel Geography & Culture-Asia/Pacific
3 Credit Hours
Covers the location of major cities, airports, and sea ports and the air, land, and cruise companies serving these areas. Includes the location of important tourist attractions, unique land formations, climate data, the best time to visit the attractions, and how tour companies operate in these areas. Includes the impacts of cultural differences, protocols, and accepted standards of behavior. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 1201
Introduction to Wine
2 Credit Hours
An introductory course designed for the wine enthusiast. Examines wine history, basic wine terminology, fermentation, and an appreciation for all types of wine. Prerequisite: Students must be 21 years of age or older to enroll in this course. (2 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 1202
Old World Wine Traditions
3 Credit Hours
Exploration of the old world wine-producing regions: France, Germany, Italy, Spain, Portugal, Hungry, and Austria. Students will sample tastings, understand viticulture influences and practice technique that impact aroma, flavor, body and style of wine. Students will also learn the seven noble grapes. Prerequisite: Students must be 21 years of age or older to enroll in this course. Hospitality & Tourism 1201 or equivalent or concurrent enrollment in Hospitality & Tourism 1201. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 1203
New World Wine Advancements
3 Credit Hours
Exploration of the new world wine producing regions: California, Oregon, Washington, Australia, New Zealand, South Africa, Argentina, and Chile through tastings, viticulture influences, and techniques that impact aroma, flavor, body and style of wine. Prerequisite: Students must be 21 years of age or older to enroll in this course. Hospitality & Tourism 1202 or equivalent or concurrent enrollment in Hospitality & Tourism 1202 or consent of instructor. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 1204
Wine and Food Pairing
2 Credit Hours
Introduction to wine and food pairings through tastings, viticulture influences, and preparation techniques that impact aroma, flavor, body, and style of wine. Students will taste various foods that showcase the best possible expression of food and wine. Prerequisite: Students must be 21 years of age or older. Hospitality & Tourism 1201 or equivalent or consent of instructor. (2 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 1820
Selected Topics
1 to 3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. (1 to 3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 1821
Selected Topics II
1 Credit Hour
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. (1 lecture hour)

HOSPITALITY AND TOURISM (HOSP) 1822
Selected Topics III
2 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. (2 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 1823
Selected Topics IV
3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline, and methods of evaluation in coordination with, and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. (1 to 4 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 2105
Spa & Recreational Management
3 Credit Hours
Orientation to spa and recreational management within a resort. Highlights the role of wellness, relaxation, and entertainment to the guest experience. Emphasis is also placed on business relationship between spa and hotel property. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 2130
Hospitality Industry Accounting
3 Credit Hours
Application of basic accounting principles to hospitality industry establishments. Systems of daily reporting and the preparation of periodic accounting statements will be covered. Recommended courses: Accounting 1110 or Accounting 2140. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 2131
Contracts & Risk Mgmt for the Planner
3 Credit Hours
Introduction to basic meeting and event contract law. Meeting and event planner contract terminology and risk associated with signing a contract. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 2203
Professional Catering & Banquet Managemt
3 Credit Hours
Planning, production, and execution of catered events and banquets. Topics covered include needs assessment, client relationships, operations, food production, technology, primary and auxiliary services, and post event activities. (3 lecture hours, 3 lab hours)

HOSPITALITY AND TOURISM (HOSP) 2204
Wines of the World
2 Credit Hours
Survey of the world's leading wines classified by type and suitability for particular use. Methods and techniques employed in purchasing, storing, and merchandising of wine will be discussed. Restaurant service staff's role in customer satisfaction is emphasized. Prerequisite: Students must be 21 years of age or older to enroll in this course. (1 lecture hour, 2 lab hours)

HOSPITALITY AND TOURISM (HOSP) 2210
Global Distribution Systems
3 Credit Hours
Fundamental computer entries to complete an airline reservation within a computer system. Includes the major airline Global Distribution Systems (GDS), their operation, and value to travel agents, outside sales agents, home-based agents, and independent contractors. (2 lecture hours, 2 lab hours)

HOSPITALITY AND TOURISM (HOSP) 2229
Revenue, Fares, & E-Ticketing for Travel
3 Credit Hours
Air travel basic terminology and documentation procedures including fares, tariffs, reservations, e-ticketing, airline computer Global Distribution Systems (GDS), and Internet capabilities. Examine the interrelationships of accommodations, car rentals, ground handlers, rail travel, air travel, and tours. (2 lecture hours, 2 lab hours)

HOSPITALITY AND TOURISM (HOSP) 2230
Law for the Hospitality Industry
2 Credit Hours
Introduction to the legal principles that affect the hospitality industry. Special emphasis is placed on the rights and responsibilities of a manager in a hospitality enterprise. (2 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 2231
Airline Operations & Security Procedures
3 Credit Hours
Operations and security procedures for domestic and international airlines. Topics include airport policies for passengers and baggage handling, procedures for transporting live animals, denied boarding compensation and other procedures. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 2236
Cruise Industry Sales
3 Credit Hours
Study of the Cruise Line Industry with analysis of contemporary cruising, marketing strategies, and documentation. Includes evaluation of types of ships, styles, sizes, itinerary selection, and destinations. Cruise Lines International Association (CLIA) cruise lines will be evaluated. Credit towards CLIA certification available. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 2240
Tour Escorting, Planning and Operations
3 Credit Hours
Wholesale and group tour operations, including the initiation and development of tours and vacation packages, generating group business via travel agency sales, marketing travel products to the retail industry, and reviewing documentation preparation. Basic theories and strategies related to tour escorting are covered. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 2245
Tour Escorting
3 Credit Hours
Wholesale and group tour operations with hands-on experience. Students will prepare a comprehensive plan and implement an actual tour package to a vacation destination. Course culminates with student planned tour. Prerequisite: Hospitality & Tourism 2240 or equivalent or consent of instructor (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 2250
Sustainable Tourism
3 Credit Hours
Essential principles and concepts of sustainable tourism. Includes practical applications of the economic, environmental, and sociocultural context of sustainability. Integrates challenges

and opportunities with sustainable tourism principles. Covers conventional mass and alternative tourism. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 2253
Meeting and Event Management I
3 Credit Hours
Meeting and special event planning including exhibits, trade shows, and conventions. Emphasis is on techniques of conference service, related food and beverage services, and sales management. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 2254
Meeting & Event Management II
3 Credit Hours
Intermediate principles in meeting and event planning including registration and housing, technology, greening, and international planning. Prerequisite: Hospitality & Tourism 2253 or equivalent or consent of instructor. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 2255
Special Event Management
3 Credit Hours
The development of a special event from the conceptual design through completion. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 2256
Wedding Planning Management
4 Credit Hours
The Wedding Planning Management course will concentrate on the planning of a wedding and follow through to the implementation of the event. The course will highlight the history of marriage, cultural and ethnic diversity in weddings, consumerism, venues, destination weddings, and stress management. The students will apply this learning through a business plan, marketing strategies, and client relations. (4 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 2261
Beverage Management Operation
2 Credit Hours
Overview of beverage operations management in the hospitality industry. Covers equipment, staffing, managing, marketing, purchasing and mixology. Hospitality industry regulations relevant to beverage operations will be discussed. (2 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 2262
Restaurant Beverage Service: Mixology
2 Credit Hours
Essential skills of beverage service with emphasis placed upon the need for responsible beverage service. Includes the proper use of equipment and techniques used in beverage preparation. (1 lecture hour, 2 lab hours)

HOSPITALITY AND TOURISM (HOSP) 2275
Hospitality Concept Design
2 Credit Hours
Exploration of culinary and hospitality based businesses. Vision, product development, marketing, management and operations are all emphasized. (2 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 2280
Hospitality Marketing Management
3 Credit Hours
Successful marketing principles employed in the hospitality industry. Demand variables, distribution channels, communications, promotions, research, packaging, collateral materials, pricing strategies, the marketing plan, and enhancing internal sales may be covered. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 2285
Advanced Hospitality Operations
3 Credit Hours
Study of the integration of hotel industry departments such as hotel operations, marketing, technology, human resource management, accounting, and purchasing. Special emphasis is placed on decision-making and problem solving models used in the hospitality industry. Current issues in the hospitality industry will also be discussed. Prerequisite: Hospitality & Tourism 1111 or equivalent or consent of instructor. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 2290
Adv Meeting & Event Management- Capstone
3 Credit Hours
The capstone course for meeting and event planning. This course will allow students implement the concepts learned from previous classes and plan an actual meeting. Prerequisite: Hospitality & Tourism 2253 and 2254 or equivalent or consent of instructor. (6 lab hours)

HOSPITALITY AND TOURISM (HOSP) 2820
Advanced Selected Topics
1 to 3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. (1 to 3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 2821
Advanced Selected Topics II
1 Credit Hour
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. (1 lecture hour)

HOSPITALITY AND TOURISM (HOSP) 2822
Advanced Selected Topics III
2 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. (2 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 2823
Advanced Selected Topics III
3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. (3 lecture hours)

HOSPITALITY AND TOURISM (HOSP) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point

average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

HOSPITALITY AND TOURISM (HOSP) 2862
Internship (Career & Technical Ed)
2 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 150 clock hours for two semester credit hours. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

HOSPITALITY AND TOURISM (HOSP) 2863
Internship (Career & Technical Ed)
3 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 320 clock hours for three semester credit hours. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

HOSPITALITY AND TOURISM (HOSP) 2864
Internship (Career & Technical Ed)
4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

HOSPITALITY AND TOURISM (HOSP) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

HUMAN SERVICES

HUMAN SERVICES (HUMAN) 1100
Introduction to Human Services
4 Credit Hours
Students will explore human service systems through tours of facilities, discussions with professionals, and an examination of the ethical principles that guide their work. Requires 20 hours of service learning. (3 lecture hours, 2 lab hours)

HUMAN SERVICES (HUMAN) 1105
Esteem Building
2 Credit Hours
An overview of cognitive behavioral interventions that increase self-esteem. The construct of self-esteem are explored through research and assessment tests. Specific interventions and appropriate utilization of these interventions for various age groups are discussed. (2 lecture hours)

HUMAN SERVICES (HUMAN) 1113
Interpersonal Dynamics
4 Credit Hours
Overview of interpersonal skills that enhance therapeutic communication. Skills of empathy, respect, concreteness, genuineness, appropriate self-disclosure and confrontation are addressed. Assessment, interviewing and de-escalation techniques are introduced. (3 lecture hours, 2 lab hours)

HUMAN SERVICES (HUMAN) 1114
Contemporary Practice Models
3 Credit Hours
An introduction to current treatment approaches. Each approach is viewed in its historical, cultural and philosophical perspectives. Students demonstrate each theoretical model and assess its potential for incorporation into their developing counseling style. (2 lecture hours, 2 lab hours)

HUMAN SERVICES (HUMAN) 1115
Behavior Change Principles
3 Credit Hours
Students will learn best practices for assisting people to make changes in human services settings. (2 lecture hours, 2 lab hours)

HUMAN SERVICES (HUMAN) 1121
Cross-Cultural Communications
4 Credit Hours
Introductory course exploring a variety of issues related to cultural competency in Human Services practice. The concepts of race, ethnicity, culture, class, religion, gender, sexual orientation, ethnocentrism, oppression, and power will be explored. Practical application of acquired awareness, knowledge, and skills will be stressed. (3 lecture hours, 2 lab hours)

HUMAN SERVICES (HUMAN) 1125
Introduction to Addictions
4 Credit Hours
An overview of historical, cultural and current attitudes toward alcohol use; the model of alcoholism and other addictions; systems applications of the addictions model; the interaction of physical, psychological, social and spiritual aspects of addiction; the clinical manifestations, methods and models of treatment; and various concepts of early intervention and prevention. (4 lecture hours)

HUMAN SERVICES (HUMAN) 1126
Psychopharmacology for Addictions Counse
3 Credit Hours
An introduction to the pharmacology, physiology, and biochemical principles necessary to understand the effects of the nature, action, and use of psychoactive drugs. Utilization of psychoactive drugs in psychiatry as it applies to dual diagnosis substance abuse counseling is explored. (3 lecture hours)

HUMAN SERVICES (HUMAN) 1130
Psychedelic Mindview
2 Credit Hours
An exploration of the role of psychedelic substances throughout history. Includes use by indigenous cultures, religious groups, and in psychotherapy. Current research on the use of psychedelics in substance abuse treatment and as a therapeutic adjunct. (2 lecture hours)

HUMAN SERVICES (HUMAN) 1140
Mental Health First Aid
1 Credit Hour
Students will be introduced to basic concepts and strategies for assisting people experiencing a mental health crisis. (1 lecture hour)

HUMAN SERVICES (HUMAN) 1141
Psychiatric Rehabilitation
4 Credit Hours
Rehabilitative approach to treating individuals with severe mental illness. Emphasis is placed on collaborating treatment methods with the clients. Students are introduced to the mental health team, understanding legal and ethical issues surrounding treatment, psychiatric symptoms, and disability. Psychiatric rehabilitation is introduced through vocational skills training, interview techniques and assessment methods. (3 lecture hours, 2 lab hours)

HUMAN SERVICES (HUMAN) 1142
Psychiatric Rehabilitation Skills
4 Credit Hours
Continuation of Psychiatric Rehabilitation Certificate training. Course focuses on interviewing and listening skills, skills training, preventing and managing behaviors, assessment skills, treatment planning and crises intervention. (3 lecture hours, 2 lab hours)

HUMAN SERVICES (HUMAN) 1143
Health Skills Psychiatric Rehabilitation
4 Credit Hours
Continuation of Psychiatric Rehabilitation Certificate training program. Course examines three dimensions of wellness: physical, emotional and environmental. Psychoeducational training sessions are introduced, as well as medication management skill training. Prerequisite: Human Services 1141 with a grade of C or better, or equivalent. (3 lecture hours, 2 lab hours)

HUMAN SERVICES (HUMAN) 1144
Vocational and Community Living Skills
4 Credit Hours
Examines fundamentals of vocational rehabilitation. Job coaching, job analysis, medication management, negotiation skills and networking skills are practiced. Policy standards, both state and federal, are discussed and integrated into coursework. (3 lecture hours, 2 lab hours)

HUMAN SERVICES (HUMAN) 1160
Residential Child Care
4 Credit Hours
Introduction to residential child care. Provides an overview of the settings and skills needed to assist children with emotional problems. Students will be introduced to the models of care utilized in outpatient and inpatient settings. (3 lecture hours, 2 lab hours)

HUMAN SERVICES (HUMAN) 1165
Dynamics of Child Abuse
3 Credit Hours
An in-depth look at child neglect, and child sexual, physical and emotional abuse. Students investigate treatment issues surrounding each area. Victim and perpetrator treatment issues, prevention of abuse, and the long-term impact on the individual are discussed. Clinical issues that arise in children, adolescents and adults as a result of child abuse are covered. (3 lecture hours)

HUMAN SERVICES (HUMAN) 1170
Role of Advocacy in Human Services
2 Credit Hours
Introduction to advocacy skills in relation to counseling in Human Services. An overview of political and public advocacy issues are discussed. Essential skills and knowledge of legal processes for effective solutions are introduced. (1 lecture hour, 2 lab hours)

HUMAN SERVICES (HUMAN) 1175
Crisis Intervention
2 Credit Hours
Introduction to clinical interventions utilized in crisis intervention. This course covers crises throughout the life cycle and situations such as medical and psychological traumas, post-traumatic stress disorder and professional burnout. (1 lecture hour, 2 lab hours)

HUMAN SERVICES (HUMAN) 1180
Domestic/Family Violence
4 Credit Hours
Students will be introduced to a comprehensive exploration of domestic/family violence. Students will examine the history, nature, extent, causes and consequences of family/domestic violence. Skill building in direct service will be explored. (3 lecture hours, 2 lab hours)

HUMAN SERVICES (HUMAN) 1190
Introduction-Developmental Disabilities
5 Credit Hours
Introduction to developmental disabilities. Course covers treatment history and present methods. Behavioral management programs, record maintenance, and facility and/or home maintenance techniques are explored. Students are introduced to working with an interdisciplinary team to provide care to a varied population. (4 lecture hours, 2 lab hours)

HUMAN SERVICES (HUMAN) 1800
Special Project
1 to 3 Credit Hours
Special project course covers topics not otherwise covered by general education courses and other course in the Catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than

30 percent but not to excess 70 percent (to be determined by the disciplines). This experiential component may include filed studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, participles and methods with a specific focus.

HUMAN SERVICES (HUMAN) 1820
Selected Topics I
1 to 3 Credit Hours
Introductory exploration and analysis of selected Human Services topics with a specific theme indicated by course title listed in the college class schedule. This course may be taken four times for credit as long as different topics are selected. (1 to 3 lecture hours)

HUMAN SERVICES (HUMAN) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

HUMAN SERVICES (HUMAN) 2200
Human Services Corrections Counseling
4 Credit Hours
Provides a human services perspective on working with clients in the criminal justice system. Students will explore the legal issues pertinent to offenders. The functions of rehabilitation settings and clinical interventions provided in these settings are examined. (3 lecture hours, 2 lab hours)

HUMAN SERVICES (HUMAN) 2212
Group Dynamics
3 Credit Hours
Introduction to leadership functions that affect collective behavior. Exploration of the dynamics of change as it applies to group functions. Analysis of group stages and differing theoretical models to conduct the group process are addressed. Ethical guidelines that govern the establishment and maintenance of groups are explored. (1 lecture hour, 4 lab hours)

HUMAN SERVICES (HUMAN) 2213
Grief Counseling
3 Credit Hours
An overview of grief counseling, including history and research, normal and abnormal grief responses, and physiological and psychological implications of grief. Lab emphasizes acquiring skills in assisting others to successfully resolve grief issues. (2 lecture hours, 2 lab hours)

HUMAN SERVICES (HUMAN) 2214
Older Adult Care Management
4 Credit Hours
Introduction to the basic components of older adult care management. Content covers the physical, emotional, social, psychological and cognitive aspects of aging. Course covers practical applications of interviewing and counseling families, managing client behavior, and assessing individual needs for appropriate treatment. (3 lecture hours, 2 lab hours)

HUMAN SERVICES (HUMAN) 2223
Generalist Practice I
2 Credit Hours
An applied skills approach to interviewing skills, psychological assessment techniques, and individual and group counseling skills. Development of treatment plans, discharge planning, and documentation skills are addressed. Ethical guidelines governing practice will be reinforced throughout each skill practiced. Students will be prepared for the fieldwork experience. Prerequisite: Consent of instructor is required. (1 lecture hour, 2 lab hours)

HUMAN SERVICES (HUMAN) 2225
Addictions Counseling I
4 Credit Hours
Focuses on the methods and skills utilized in treating the chemically dependent individual and his/her family. Skill development is accomplished through role play, video review, or audio tape review. Skills development in assessment, diagnosis, treatment planning, relapse prevention, American Society for Addiction Medicine (ASAM) criteria, levels of care, motivational interviewing, legal and ethical issues, and documentation. Prerequisite: Human Services 1113 with a grade of C or better, Human Services 1125 with a grade of C or better, and Human Services 1126 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours, 2 lab hours)

HUMAN SERVICES (HUMAN) 2226
Addictions Counseling II
3 Credit Hours
Expands on issues related to addiction. Topics include advanced issues in psychopharmacology, addictions and sexuality, interventions, treatment applications consistent with the needs of special population, employee assistance programs, motivational skills in the treatment of change, counselor self-care, advanced group skills, and effective didactic presentations to client populations. Prerequisite: Human Services 1113, Human Services 1125, Human Services 1126 and Human Services 2225 or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

HUMAN SERVICES (HUMAN) 2230
Grant Development/Non-Profits
2 Credit Hours
Students will be introduced to basic concepts of the grant process, including how to identify funding prospects, determine funding requirements, understand grant guidelines, understand the basic steps in developing a sound grant proposal, and grant management. This class provides the learner with the tools to understand grants and their role in the fundraising schema of human services organizations. (2 lecture hours)

HUMAN SERVICES (HUMAN) 2235
Dynamics of Fund Development
2 Credit Hours
Students are introduced to basic concepts and terminology of fundraising operations, fundraising strategies, relationship building, the solicitation process, and the realities of asking for money. Students will refine their skills through analysis of case studies, participation in role playing exercises, and may include a service learning component. (2 lecture hours)

HUMAN SERVICES (HUMAN) 2240
Family Education and Treatment Models
3 Credit Hours
Overview of the effects of family interaction on individual growth and change. The impact of crises such as divorce, addictions, death, troubled children, and/or aging parents on the family system

is explored. Diverse family systems are also introduced. Clinical approaches as well as preventive interventions with families are explained. (3 lecture hours)

HUMAN SERVICES (HUMAN) 2245
Introduction to Eating Disorders
3 Credit Hours
An overview of the historical, cultural, biological, social and psychological factors related to eating disorders. This course addresses assessment and methods of treatment, including individual treatment, group treatment, family treatment, and self-help groups. (3 lecture hours)

HUMAN SERVICES (HUMAN) 2251
Fieldwork I
4 Credit Hours
Practicum experience in the field of Human Services. Students from all certificate/degree options in Human Services are required to fulfill 300 clinical hours in the field. One hour of class lecture time per week is required with this course. Supervision of skill development and an introduction to the network of community services is introduced. Prerequisite: Human Services core coursework for degree or certificate option of choice and consent of instructor is required.

HUMAN SERVICES (HUMAN) 2252
Fieldwork II
4 Credit Hours
Continuation of HUMAN-2251. This course provides an additional 300 hours of clinical internship along with weekly one-hour clinical supervision classroom consultation time. Students are provided with advanced training to improve their skills. Prerequisite: Human Services 2251 and consent of instructor is required.

HUMAN SERVICES (HUMAN) 2279
Ethics & Legal Issues in Human Services
2 Credit Hours
Students will explore the Human Services code of ethics and examine legal issues encountered by professionals in the field. (2 lecture hours)

HUMAN SERVICES (HUMAN) 2280
Addictions Counseling III
3 Credit Hours
Course explores the most current information in addictions treatment and prevention. In addition students are introduced to primary prevention strategies, the clinical needs of special populations, addictions treatment planning according to best practices guidelines, holistic approaches to addictions treatment, psycho-educational principles in treatment and prevention, effective clinical supervision, and administrative practices. This course is a hybrid class involving hours of work outside the classroom. Prerequisite: Human Services 2226 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

HUMAN SERVICES (HUMAN) 2284
CADC Exam Preparation
1 Credit Hour
A review of basic concepts and information presented in the Addictions Counselor Training Program that will guide the individual preparation for the Illinois Alcohol and Other Drugs of Abuse Professional Certification Association (IAODAPCA) certification exam. Test taking strategies will be reviewed. This course may be taken four times for credit. (1 lecture hour)

HUMAN SERVICES (HUMAN) 2285
Divorce and Family Mediation
4 Credit Hours
Conflict resolution framework for use in divorce and family mediation. (4 lecture hours)

HUMAN SERVICES (HUMAN) 2286
Assessment of Trauma for Veterans
3 Credit Hours
Overview of sources of stress and trauma in active military and veteran populations, and the impact such trauma has on level of functioning. Military experience involving the military family, military service, call-up and mobilization deployment to peacetime and combat assignments, combat duty, demobilization and reunion, experiencing injury and recovery, discharge from active military duty, reserve status, and life as a veteran will be examined. Paradigms for understanding trauma using both schema/belief and neurobiology lenses will be explored using case studies of peacetime and combat military experience and their legacy for the veteran. (3 lecture hours)

HUMAN SERVICES (HUMAN) 2287
Post Trauma Stress & Co-Morbid Disorders
3 Credit Hours
Assessment measures for military personnel, veterans, and their families. Topics include military culture, combat trauma, suicidal risk, blast-related traumatic brain injury (TBI), and post-traumatic stress disorder (PTSD). (3 lecture hours)

HUMAN SERVICES (HUMAN) 2288
Treatment for Veteran Population & Fam
3 Credit Hours
Best practices for the treatment of behavioral health-related problems which affect veteran populations and their families. Discussion and planning of viable strategies for ongoing support for continuing recovery and wellness will also be included. Students will have the opportunity to practice treatment approaches and discharge planning in simulated group and individual settings. (3 lecture hours)

HUMAN SERVICES (HUMAN) 2289
Counseling Focusing - Veteran Population
3 Credit Hours
Individual and group counseling techniques that promote recovery from acute stress reactions and related issues. Diagnosis and treatment of post-traumatic stress disorder (PTSD) and acute stress disorder (ASD) will be explored. Students will learn to recognize and manage their personal response to dealing with veterans with trauma related disorders. (3 lecture hours)

HUMAN SERVICES (HUMAN) 2840
Experimental Pilot Class
1 to 6 Credit Hours
Exploration and analysis of topics within the discipline. This course is used to pilot a proposal for a permanent discipline course. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (2 to 12 lab hours)

HUMAN SERVICES (HUMAN) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

HUMAN SERVICES (HUMAN) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Dean from the academic discipline where the student is planning to earn credit.

HUMANITIES

HUMANITIES (HUMNT) 1101 (IAI F9 900)
Introduction to Humanities: The Arts
3 Credit Hours
An exploration of creativity as expressed in music, literature and/or the visual and performing arts of the Western tradition. Emphasis is on students' consideration and development of their own personal aesthetic values within an historical framework. Attendance at cultural events and an individual project may be required. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HUMANITIES (HUMNT) 1102 (IAI H9 900)
Introduction to Humanities: Ideas and Va
3 Credit Hours
An exploration of the nature of mankind, primarily as reflected in the disciplines of philosophy, history, literature and religious studies. Particular attention is paid to individual and communal identities, to questions of values, and to the struggle for personal fulfillment. Emphasis on students' consideration and development of their own personal, moral and ethical values. Attendance at outside events may be required. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HUMANITIES (HUMNT) 1103 (IAI H9 901)
Introduction to World Mythology
3 Credit Hours
Exploration of the significant myths, legends, and folktales of world cultures, with an emphasis upon the various ways in which they function in culture. Examines myth not only as a cultural artifact reflective of the values and ideals of a culture, but also as a source of universal themes and values in literature, drama, art, music, and film. Participation at outside activities may be required. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HUMANITIES (HUMNT) 1105 (IAI HF 904N)
Non-Western Humanities
3 Credit Hours
Interdisciplinary survey of the significant intellectual and artistic achievements of several non-Western cultures, such as Asian, African, South American, Native American and Islamic. The course surveys selected works of literature, philosophy, visual art, music and other performing arts from each culture, as well as offers a comparative examination of their values, motifs and aesthetics with those of Western cultural expression. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HUMANITIES (HUMNT) 1110 (IAI HF 906D)
The Arts and Cultural Diversity
3 Credit Hours
An exploration of human relations and cultural diversity in the contemporary United States and their roots in African, Native American, Asian and Latin American civilizations. Creative artworks in the humanities, such as literature, film, art, music, photography, dance and drama, serve as catalysts to look in-depth at the topics of race, ethnicity, gender and other issues related to improving human relations. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HUMANITIES (HUMNT) 1120
Introduction to Medical Humanities
3 Credit Hours
An interdisciplinary survey course that will draw on the arts, social sciences, philosophy, religion, and history to focus on how we frame and are framed by medical practices and interactions. This course will also consider meanings attached to illness and health and to how these meanings are narrated and given representation across time and through the Humanities. Students will consider cultural influences that drive medical narratives and will be asked to analyze medical narratives from a humanist perspective. Attendance at outside events may be required. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HUMANITIES (HUMNT) 1150
Intersections: Humanities/Math/Science
3 Credit Hours
An introductory Humanities course which explores the interplay among the humanities, math, and science. This course will consider the shifting views of science and math as integral to the production of the arts and will also focus on the ways writers and other artists have made sense of scientific and mathematical advances using the humanities to articulate discoveries and their impact on culture and the world at large. Both Western and non-Western perspectives may be considered. Relying on some or all of the following-theater, film, literature, comics, architecture, philosophy, history, music, painting, photography, biography-the mutual influences of the arts, math, and science will be explored. No prior math or science courses are required but students should be prepared for college level studies. This Humanities course will not fulfill a Math or Science requirement. Attendance at outside events may be required. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HUMANITIES (HUMNT) 1800
Special Project
1 to 3 Credit Hours

Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) Prerequisite: Course requires Reading Placement Test Score-Category One.

HUMANITIES (HUMNT) 1820
Selected Topics I
3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college Class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HUMANITIES (HUMNT) 1824
Selected Topics in Humanities
2 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Course requires Reading Placement Test Score-Category One. (2 lecture hours)

HUMANITIES (HUMNT) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. Course requires Reading Placement Test Score-Category One. (1 to 4 lecture hours)

HUMANITIES (HUMNT) 2210
Leadership Development
3 Credit Hours
Development of leadership ability through an investigation of leadership styles, group dynamics theory and experiential exercises. Students also develop a personal philosophy of leadership demonstrates an awareness of the moral and ethical responsibilities of leadership. The opportunity to develop essential leadership skills through classic case studies, the Great Books and other classical and contemporary literature, and film. There is a service-learning component to this course. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HUMANITIES (HUMNT) 2800
Special Project
1 to 3 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline, while building on academic knowledge and skills acquired in introductory-level classes. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of more complex discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) Prerequisite: At least one course in the discipline or consent of instructor. Course requires Reading Placement Test Score-Category One.

HUMANITIES (HUMNT) 2820
Select Topics II
3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: At least one course in the discipline or consent of instructor. Course requires Reading Placement Test Score-Category One. (3 lecture hours)

HUMANITIES (HUMNT) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

HUMANITIES (HUMNT) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

HUMANITIES (HUMNT) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide

appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

HUMANITIES (HUMNT) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

INTERIOR DESIGN

INTERIOR DESIGN (INTER) 1110
Drafting Interiors
3 Credit Hours
Introductory interior design course covering 2D architectural drafting and related graphic conventions. Course content also includes concept development and presentation techniques. (2 lecture hours, 2 lab hours)

INTERIOR DESIGN (INTER) 1125
Sustainable Design I
3 Credit Hours
Introduction to sustainable design as a foundation for interior design applications. Content includes vocabulary, design methods, local and national resources, professional organizations and governmental Leadership in Energy and Environmental Design (LEED) standards. (2 lecture hours, 2 lab hours)

INTERIOR DESIGN (INTER) 1135
Visualization Techniques
3 Credit Hours
Graphic visualizations including one and two point perspectives, and sketching techniques with an emphasis on concept development. Project visualizations are then enhanced with application of color, using marker for color studies and digital methods for photo-realistic renderings. Prerequisite: Course requires Reading Placement Test Score-Category Three. Interior Design 1110 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

INTERIOR DESIGN (INTER) 1151
Architecture and Design History I
3 Credit Hours
Survey of design history including architecture, interiors, furniture, and accessories in world civilizations from ancient times through the Renaissance. Students will relate social and cultural influences of the period and place to interior design. Prerequisite: Course requires Reading Placement Test Score-Category Three. (3 lecture hours)

INTERIOR DESIGN (INTER) 1152
Architecture and Design History II
3 Credit Hours
Survey of design history including architecture, interiors, furniture, and accessories in world civilizations from post Renaissance to the present. Students will relate social, cultural, and technical influences of the period and place to interior design. Prerequisite: Course requires Reading Placement Test Score-Category Three. (3 lecture hours)

INTERIOR DESIGN (INTER) 1170
Environmental Materials and Applications
3 Credit Hours
Survey course on interior design materials and resources and their application in the built environment, with a focus on sustainable design. Prerequisite: Interior Design 1110 with a grade of C or better or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Three. (2 lecture hours, 2 lab hours)

INTERIOR DESIGN (INTER) 1190
Interior Design Codes and Standards
3 Credit Hours
Codes, standards and regulations for interior design applications are the focus of this course. Students will apply codes to projects insuring accessibility and protection of health, safety and welfare for all users. Prerequisite: Interior Design 1110 or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Three. (3 lecture hours)

INTERIOR DESIGN (INTER) 1821
Selected Topics
1 to 3 Credit Hours
Guided study and exploration of subjects not covered by other courses in the discipline. Class offerings may use such resources as recognized experts, lectures, library research, selected readings and/or field trips. This course may be taken four times for credit if different topics are selected. Prerequisite: At least one course in the discipline or consent of instructor. Course requires Reading Placement Test Score-Category Three. (1 to 3 lecture hours, 2 to 6 lab hours)

INTERIOR DESIGN (INTER) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. Course requires Reading Placement Test Score-Category Three. (1 to 4 lecture hours)

INTERIOR DESIGN (INTER) 2110
Studio Foundation
3 Credit Hours
Preparatory course for design studio classes. Content includes space planning, universal design principles, design principles/elements, color for interior spaces, and contract drawing set formats for residential and commercial applications. Prerequisite: Interior Design 1110 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

INTERIOR DESIGN (INTER) 2120
Furniture, Fixtures & Equipment
3 Credit Hours
Overview of furniture, fixtures, and equipment (FF&E) for residential and commercial interior design applications. Course will focus on specification criteria and budgets. Prerequisite: Interior Design 1110 and Interior Design 2110 with a grade of C or better. The course requires Reading Placement Test - Category Three. (2 lecture hours, 2 lab hours)

INTERIOR DESIGN (INTER) 2135
Advanced Visualization Techniques
3 Credit Hours
Advanced graphic visualization techniques are developed using computer software and hand sketching for enhanced presentation images. Techniques learned in this class will enhance students' future projects and employable job skills. Prerequisite: Interior Design 1135 with a grade of C or better, or equivalent or consent of instructor (2 lecture hours, 2 lab hours)

INTERIOR DESIGN (INTER) 2211
Computer-Aided Interior Design I
3 Credit Hours
Introduction to computer-aided design and drafting techniques. Course covers two-dimensional drawing and printing for interior design applications. Prerequisite: Interior Design 1110 with a grade of C or better, or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Three. (2 lecture hours, 2 lab hours)

INTERIOR DESIGN (INTER) 2212
Computer-Aided Interior Design II
3 Credit Hours
Advanced computer-aided drafting, presentation, and modeling techniques. Coursework includes two and three dimensional drafting and graphic project presentations for interior design applications. Prerequisite: Interior Design 2211 with a grade C or better, or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Three. (2 lecture hours, 2 lab hours)

INTERIOR DESIGN (INTER) 2213
Computer-Aided Interior Design III
3 Credit Hours
Computer-aided drafting as a three-dimensional drawing and presentation tool for Interior Design applications. Students will create realistic computer generated 3-D models of interior spaces including materials and lighting. Prerequisite: Interior Design 2212 with a grade of C or better, or consent of instructor. Course requires Reading Placement Test Score-Category Three. (2 lecture hours, 2 lab hours)

INTERIOR DESIGN (INTER) 2214
Digital Interior Design Presentation
3 Credit Hours
Advanced exploration of computer software to create digital images for interior design presentations. Course utilizes Adobe Photoshop and InDesign (or similar software) in creating projects. Prerequisite: Interior Design 1135 and Interior Design 2212 with a grade of C or better, and consent of instructor. (2 lecture hours, 2 lab hours)

INTERIOR DESIGN (INTER) 2215
BIM for Interior Design
3 Credit Hours
Computer drafting of interior spaces utilizing BIM (Building Information Modeling) software. Students will create multi-sheet projects including 3-D renderings. Prerequisite: Interior Design 2211 with a grade C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

INTERIOR DESIGN (INTER) 2220
Interior Systems and Details
3 Credit Hours
Overview of building systems and construction as applied to interior design projects, including National Kitchen & Bath (NKBA) Standards. Design and drafting of interior architectural details and their integration into the built environment. Prerequisite: Interior Design 1170 with a grade of C or better, or equivalent and Interior Design 2211 with a grade of C or better, or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Three. (2 lecture hours, 2 lab hours)

INTERIOR DESIGN (INTER) 2311
Lighting I
3 Credit Hours
Lighting design fundamentals for natural and artificial light sources. Course will also cover specifications and working drawings for residential and commercial interior lighting applications. Prerequisite: Interior Design 2211 with a grade of C or better, or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Three. (2 lecture hours, 2 lab hours)

INTERIOR DESIGN (INTER) 2312
Lighting II
3 Credit Hours
Advanced design studio that incorporates residential and commercial lighting environment and technology applications. Prerequisite: Interior Design 2311 or consent of instructor. Course requires Reading Placement Test Score-Category Three. (2 lecture hours, 2 lab hours)

INTERIOR DESIGN (INTER) 2410
Residential Design Studio
3 Credit Hours
Design studio course with emphasis on the development and presentation of residential design projects. Prerequisite: Interior Design 1135, Interior Design 2110, Interior Design 2220 and Interior Design 2311; all with a grade of C or better or consent of instructor. Course requires Reading Placement Test Score-Category Three. (2 lecture hours, 2 lab hours)

INTERIOR DESIGN (INTER) 2420
Healthcare Design Studio
3 Credit Hours
Advanced studio course that focuses on the healthcare design area of practice. A variety of projects will be developed utilizing evidence based design principles that benefit patients, family, visitors, and staff. Prerequisite: Interior Design 1190 with a grade of C or better, or equivalent and Interior Design 2110 with a grade of C or better, or equivalent and Interior Design 2220 with a grade of C or better, or equivalent and Interior Design 2311 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

INTERIOR DESIGN (INTER) 2430
Contract Design Studio
3 Credit Hours

Design development studio course with emphasis on retail, restaurant, and hospitality projects. Students in this course should produce portfolio quality projects. Prerequisite: Interior Design 1135, Interior Design 1190, Interior Design 2110, Interior Design 2220 and Interior Design 2311; all with a grade of C or better, or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Three. (2 lecture hours, 2 lab hours)

INTERIOR DESIGN (INTER) 2440
Office Design Studio
3 Credit Hours
Practice based studio course in sustainable corporate office design. Students implement a project from space planning through contract documents. Prerequisite: Interior Design 1125, Interior Design 1135, Interior Design 1190, Interior Design 2110, Interior Design 2220 and Interior Design 2311; all with a grade of C or better, or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Three. (2 lecture hours, 2 lab hours)

INTERIOR DESIGN (INTER) 2450
Senior Design Studio
3 Credit Hours
Capstone course of advanced research and analysis of selected projects utilizing reality based end-user interior environment program requirements which emphasize the interrelationship of codes, regulations, standards, material specifications, and sustainable interior applications and design solutions. Prerequisite: Interior Design 2532 or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Three. (2 lecture hours, 2 lab hours)

INTERIOR DESIGN (INTER) 2511
Kitchen and Bath Design I
3 Credit Hours
Design studio projects that incorporate National Kitchen and Bath Association (NKBA) standards. Prerequisite: Interior Design 2110 and Interior Design 2220 both with a grade of C or better, or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Three. (2 lecture hours, 2 lab hours)

INTERIOR DESIGN (INTER) 2512
Kitchen and Bath Design II
3 Credit Hours
Advanced kitchen and bath design skills, market trends, special populations, professional ethics, and technology applications as endorsed by the National Kitchen and Bath Association (NKBA). Prerequisite: Interior Design 2511 or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Three. (2 lecture hours, 2 lab hours)

INTERIOR DESIGN (INTER) 2515
Kitchen and Bath Computer Applications
3 Credit Hours
Introduction to drafting and design computer software used primarily in the kitchen and bath industry. Course includes 2D production drawings and 3D presentation renderings. Prerequisite: Course requires Reading Placement Test Score-Category Three. (2 lecture hours, 2 lab hours)

INTERIOR DESIGN (INTER) 2520
Furniture Design
3 Credit Hours
Furniture design theory, construction joinery methods, materials and specifications applied to detail drawings and/or models. Prerequisite: Interior Design 1110 or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Three. (2 lecture hours, 2 lab hours)

INTERIOR DESIGN (INTER) 2680
Professional Practice and Ethics
3 Credit Hours
Pre-graduation course to prepare students for professional interior design employment. Business practices, ethics, regulations, organizations, and professional testing will be covered. Completion of Interior Design 2440 is recommended prior to enrollment. Prerequisite: Interior Design 2410 and Interior Design 2430 with a grade of C or better, or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category Three. (2 lecture hour, 2 lab hours)

INTERIOR DESIGN (INTER) 2710
Portfolio Review
1 Credit Hour
Capstone course to refine a student's portfolio of work for printed and media applications. Prerequisite: Interior Design 2410 and Interior Design 2430 with a grade of C or better, or equivalent or consent instructor. Course requires Reading Placement Test Score-Category Three. (2 lecture hours, 2 lab hours)

INTERIOR DESIGN (INTER) 2821
Advanced Selected Topics
1 to 3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. Topics for this course are geared for graduates or design professionals seeking professional development opportunities. This course may be taken four times for credit as long as different topics are selected. (1 to 3 lecture hours, 2 to 6 lab hours)

INTERIOR DESIGN (INTER) 2860
Interior Design Kitchen/Bath Internship
2 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum number of hours to satisfy NKBA (National Kitchen and Bath Association) accreditation requirements. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

INTERIOR DESIGN (INTER) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite:

Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

INTERIOR DESIGN (INTER) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

INTERIOR DESIGN (INTER) 2871
Internship-Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

INTERPRETING

INTERPRETING (INTP) 2104
Intro to Interpreting and Ethics
3 Credit Hours
Students will be introduced to the Registry of Interpreters for the Deaf (RID) and the Code of Professional Conduct (CPC). The role of the sign language interpreter in various work settings will be explored. The history and current models will be discussed. Prerequisite: Sign 2101 or equivalent or concurrent enrollment in Sign 2101 and Sign 2102 or concurrent enrollment in Sign 2102 or equivalent or consent of instructor. (3 lecture hours)

INTERPRETING (INTP) 2105
ASL/English Skills Development
4 Credit Hours
Students will develop and master the intralingual skills needed to effectively translate from the source language into the target language. Prerequisite: Admission to the program is required. Sign 2103 or equivalent or concurrent enrollment in Sign 2103 or consent of instructor. (4 lecture hours)

INTERPRETING (INTP) 2106
Cognitive Processing ASL/English
4 Credit Hours
Students will be introduced to cognitive processing skills essential to the interpreting process. These include memory pattern recognition and inferences, delayed repetition, comprehension, immediate repetition, acuity and discrimination, word and phrase pattern inference, and multitasking. Prerequisite: Interpreting 2104 with a grade of C or better, or equivalent or consent of instructor. (4 lecture hours)

INTERPRETING (INTP) 2107
Translate ASL to English/English to ASL
4 Credit Hours
This foundation prepares students with basic translation skills enabling students to progress in faithful message transfer and rendering. The focus is on message analysis, transfer and reformulation in American Sign Language (ASL) and English. Prerequisite: Interpreting 2106 with a grade of C or better, or equivalent or consent of instructor. (4 lecture hours)

INTERPRETING (INTP) 2108
Consecutive & Simultaneous Interpreting
4 Credit Hours
Students will master a high level of interlingual skills that are required for simultaneous and consecutive interpreting. They will demonstrate a competency of comprehending, transferring, and reformulating the message. Prerequisite: Interpreting 2107 or equivalent or concurrent enrollment in Interpreting 2107 or consent of instructor. (4 lecture hours)

INTERPRETING (INTP) 2109
Educational Interpreting/Transliterating
3 Credit Hours
Students will receive advanced instruction in the concepts and skill sets necessary to work in a K-12 and post-secondary setting as educational interpreters and support service providers. Students will learn to understand deafness and how to work as part of a Deaf Education Team. Prerequisite: Interpreting 2107 with a grade of C or better, or equivalent and Interpreting 2108 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

INTERPRETING (INTP) 2110
ASL Interpreter Practicum
2 Credit Hours
Students are provided with opportunities to apply their interpreting skills in a variety of settings. The requirements include off-campus assignments with a mentor and a weekly colloquium. Students must be available during the day and evening for interpreting assignments. Test preparation will also take place during this course. This course can only be taken on a pass/fail basis. Prerequisite: Interpreting 2107 with a grade of C or better, or equivalent and Interpreting 2108 with a grade of C or better, or equivalent or consent of instructor.

ITALIAN

ITALIAN (ITALI) 1100
Civilization and Culture of Italy
3 Credit Hours
Introduction in English to the culture, geography, history, economics, political institutions, literature, music, art, architecture, and educational system of Italy. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

ITALIAN (ITALI) 1101
Elementary Italian I
4 Credit Hours

Develops the ability to speak, understand, read, and write Italian in a cultural and communicative context. For beginning students with no prior experience in the language. (4 lecture hours)

ITALIAN (ITALI) 1102
Elementary Italian II
4 Credit Hours
Continues the development of the ability to speak, understand, read, and write Italian in a cultural and communicative context. For students who have successfully completed Italian 1101 or equivalent, or one year of high school Italian, or consent of instructor. (4 lecture hours)

ITALIAN (ITALI) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course descriptions, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

ITALIAN (ITALI) 2201
Intermediate Italian I
4 Credit Hours
Continues to develop the ability to speak, understand, read, and write Italian in a cultural and communicative context. Includes reading and discussion of modern texts, conversation, composition, grammar review, and cultural activities. For students who have successfully completed Italian 1102 or equivalent, or two years of high school Italian, or consent of instructor. (4 lecture hours)

ITALIAN (ITALI) 2202 (IAI H1 900)
Intermediate Italian II
4 Credit Hours
Continues to develop the ability to speak, understand, read, and write Italian in a cultural and communicative context. Includes reading and discussion of modern texts, short films, conversation, composition, grammar review, and cultural activities. For students who have successfully completed Italian 2201 or equivalent, or three years of high school Italian, or consent of instructor. (4 lecture hours)

ITALIAN (ITALI) 2251
Conversation and Composition I
3 Credit Hours
Develops students' listening comprehension, speaking, reading, and writing skills and expands knowledge of the culture and civilization of Italy. Includes reading and discussion of modern texts, conversation, composition, grammar review, and cultural activities. For students who have successfully completed Italian 2202 or equivalent, or four years of high school Italian, or consent of instructor. (3 lecture hours)

ITALIAN (ITALI) 2252
Conversation and Composition II
3 Credit Hours
Develops students' listening comprehension, speaking, reading, and writing skills and expands knowledge of the culture and civilization of Italy. Includes reading and discussion of modern texts, conversation, composition, grammar review, and cultural activities. For students who have successfully completed Italian 2251 or equivalent, or five years of high school Italian, or consent of instructor. (3 lecture hours)

ITALIAN (ITALI) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

ITALIAN (ITALI) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

ITALIAN (ITALI) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

ITALIAN (ITALI) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

JAPANESE

JAPANESE (JAPAN) 1100
Japanese Civilization and Culture
3 Credit Hours
Introduction in English to the culture, history, political institutions, mentality, literature/art and economic position of present-day Japan. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

JAPANESE (JAPAN) 1101
Elementary Japanese I
4 Credit Hours
An introduction to modern Japanese: pronunciation, useful expressions, speech patterns, listening, reading and writing. (4 lecture hours)

JAPANESE (JAPAN) 1102
Elementary Japanese II
4 Credit Hours
Continuation of JAPAN-1101 with emphasis on increased accuracy in listening, speaking skills, reading and writing. For students who have successfully completed Japanese 1101 or equivalent or three years of high school Japanese. (4 lecture hours)

JAPANESE (JAPAN) 1800
Special Project
1 to 4 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the catalogue for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30% but not to exceed 70% (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles, and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.). This course may be taken four times for credit.

JAPANESE (JAPAN) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course descriptions, goals, objectives, topical outline, and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

JAPANESE (JAPAN) 2201
Intermediate Japanese I
4 Credit Hours
Continuation of JAPAN-1102 with emphasis on listening, speaking and writing of kana and kanji as well as reading of authentic materials. For students who have successfully completed Japanese 1102 or equivalent or 4 years of high school Japanese. (4 lecture hours)

JAPANESE (JAPAN) 2202 (IAI H1 900)
Intermediate Japanese II
4 Credit Hours
Continuation of JAPAN-2201 with emphasis on listening, speaking and writing of kana and kanji as well as reading of authentic materials. For students who have successfully completed Japanese 2201 or equivalent or five years of high school Japanese. (4 lecture hours)

JAPANESE (JAPAN) 2251
Conversation and Composition I
3 Credit Hours
Develops students' listening comprehension, speaking, reading and writing skills and expands knowledge of the culture and civilization of Japanese-speaking countries. For students who have successfully completed Japanese 2202 or equivalent. (3 lecture hours)

JAPANESE (JAPAN) 2252
Conversation and Composition II
3 Credit Hours
Continue to develop students' listening comprehension, speaking, reading and writing skills and expands knowledge of the culture and civilization of Japanese-speaking countries. For students who have successfully completed Japanese 2251. (3 lecture hours)

JAPANESE (JAPAN) 2800
Special Project
1 to 4 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the discipline, while building upon academic knowledge and skills acquired in introductory-level classes. These courses require direct experience and focused reflection in an in-depth study of a specific topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30% but not to exceed 70%. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of more complex geographic concepts, theories, principles, and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.). This course may be taken four times for credit. Prerequisite: At least one course in the discipline or consent of instructor.

JAPANESE (JAPAN) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

JAPANESE (JAPAN) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours

Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

JAPANESE (JAPAN) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

JAPANESE (JAPAN) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

KOREAN

KOREAN (KOREA) 1101
Elementary Korean I
4 Credit Hours
An introduction to modern spoken Korean: pronunciation, useful expressions, speech patterns, listening, reading and writing. (4 lecture hours)

KOREAN (KOREA) 1102
Elementary Korean II
4 Credit Hours
Continuation of KOREA-1101 with emphasis on increased accuracy in listening, speaking skills, reading and writing. For students who have successfully completed Korean 1101 or equivalent or three years of high school Korean. (4 lecture hours)

KOREAN (KOREA) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

KOREAN (KOREA) 2201
Intermediate Korean I
4 Credit Hours
Continuation of KOREA-1102 with emphasis on listening, speaking and writing of han-gul as well as reading of authentic materials. For students who have successfully completed Korean 1102 or equivalent or four years of high school Korean. (4 lecture hours)

KOREAN (KOREA) 2202 (IAI H1 900)
Intermediate Korean II
4 Credit Hours
Continuation of KOREA-2201 with emphasis on listening, speaking, and writing of han-gul as well as reading of authentic materials. For students who have successfully completed Korean 2201 or equivalent or five years of high school Korean. (4 lecture hours)

KOREAN (KOREA) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

KOREAN (KOREA) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

KOREAN (KOREA) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

KOREAN (KOREA) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

LIBRARY & INFORMATION TECHNOLOGY

LIBRARY & INFORMATION TECHNOLOGY (LIBRA) 1101
Intro to Libraries & the Information Age
3 Credit Hours
Introduction to different types of libraries and the information industry. The role of the Library Technical Assistant (LTA) in all areas of the library profession is explored. An overview of basic library and information research methods and tools, both print and digital format is presented. (3 lecture hours)

LIBRARY & INFORMATION TECHNOLOGY (LIBRA) 1102
Intro to Reference & Information Svcs
4 Credit Hours
Introduction to reference and information services for the Library Technical Assistant. Includes basic tools needed to answer directional and ready reference questions. Print and electronic resources, interview techniques and virtual reference services are discussed. Prerequisite: Library and Information Technology 1101 with a grade of C or better or consent of instructor. (4 lecture hours)

LIBRARY & INFORMATION TECHNOLOGY (LIBRA) 1103
Acquisition of Library Materials
3 Credit Hours
Introduces the Library Technical Assistant to the process of how to acquire materials from the decision to obtain them to the time they are ready to be cataloged. Automation processes and techniques are incorporated. Prerequisite: Library and Information Technology 1101 with a grade of C or better or consent of instructor. (3 lecture hours)

LIBRARY & INFORMATION TECHNOLOGY (LIBRA) 1104
Essential Library Workplace Skills
3 Credit Hours
Overview of the skills necessary to communicate effectively with coworkers and the public, work in team settings, deal with a variety of personality types, resolve conflicts, and become an effective part of the library workforce. (3 lecture hours)

LIBRARY & INFORMATION TECHNOLOGY (LIBRA) 1105
Readers Advisory
3 Credit Hours
Introduces genres of literature and techniques for patron interaction. Topics include library collection analysis, display creation, bibliographic tool development and reading programs. Prerequisite: Library and Information Technology 1101 or equivalent or consent of instructor. (3 lecture hours)

LIBRARY & INFORMATION TECHNOLOGY (LIBRA) 1820
Selected Topics
3 Credit Hours
Addresses current issues in the field that necessitate a greater depth, broader scope or fuller assimilation of a particular area of study. Prerequisite: Library and Information Technology 1101 or equivalent, or consent of instructor or program coordinator. (3 lecture hours)

LIBRARY & INFORMATION TECHNOLOGY (LIBRA) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This class may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

LIBRARY & INFORMATION TECHNOLOGY (LIBRA) 2100
Intro to Cataloging & Classification
4 Credit Hours
The role of Library Technical Assistant (LTA) in descriptive and subject cataloging and processing of print and non-print materials. Emphasis is on the orGanization of information resources in print and non-print formats. Includes the philosophy, tools and techniques for performing cataloging. Prerequisite: Library and Information Technology 1101 with a grade of C or better or consent of instructor. (4 lecture hours)

LIBRARY & INFORMATION TECHNOLOGY (LIBRA) 2200
Serving the Public in Today's Libraries
4 Credit Hours
Role of the Library Technical Assistant (LTA) in serving the public including programming, creating displays, basic circulation desk duties, shelf maintenance, interlibrary loan activities, registering and effective interaction with patrons. Automated and online systems are emphasized. Prerequisite: Library and Information Technology 1101 with a grade of C or better or consent of instructor. (4 lecture hours)

LIBRARY & INFORMATION TECHNOLOGY (LIBRA) 2300
Multimedia Services and Equipment in Tod
3 Credit Hours
Basic operation, evaluation, selection and uses of media, hardware and software. Emphasis on hands-on experience and creation of a media portfolio. Prerequisite: Library and Information Technology 1101 with a grade of C or better or consent of instructor. (3 lecture hours)

LIBRARY & INFORMATION TECHNOLOGY (LIBRA) 2400
Library Technology
3 Credit Hours
Introduction to technology applications for library functions and services. Prerequisite: Library and Information Technology 1101 or equivalent, or consent of instructor. (3 lecture hours)

LIBRARY & INFORMATION TECHNOLOGY (LIBRA) 2600
Library Practicum
4 Credit Hours
Capstone course integrating the application of all course work in the Library Technology program. Required seminars provide a forum for discussing issues related to working in the library field, guidance in searching for jobs, and instruction about

how to create a professional portfolio. Prerequisite: Library and Information Technology 1102, Library and Information Technology 1103, Library and Information Technology 1104, Library and Information Technology 1820, Library and Information Technology 2100, Library and Information Technology 2200 and Library and Information Technology 2300; all with a grade of C or better, or consent of instructor. (2 lecture hours, 4 lab hours)

LIBRARY & INFORMATION TECHNOLOGY (LIBRA) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

LIBRARY & INFORMATION TECHNOLOGY (LIBRA) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

LONG-TERM CARE ADMINISTRATION

LONG-TERM CARE ADMINISTRATION (LTC) 1130
Introduction Long-Term Care Services
3 Credit Hours
Overview of various settings for long-term care including nursing homes, senior housing options, adult day care, home health care, assisted living, and hospice. Introduces ethical and quality of care issues, reimbursement for services, role of technology, marketing and leadership responsibilities. (3 lecture hours)

LONG-TERM CARE ADMINISTRATION (LTC) 1140
Intro to Nursing Home Administration
3 Credit Hours
Introduction to the responsibilities of the nursing facility administrator, licensure procedures, and standards. Relevant legal, funding, and program issues are addressed. Prerequisite: Long Term Care Administration 1130 with a grade of C or better, or equivalent. (3 lecture hours)

LONG-TERM CARE ADMINISTRATION (LTC) 1151
Nursing Home Administrative Practices I
3 Credit Hours
Introduction to personnel management specific to long-term care including staffing, scheduling, recruitment, training, performance appraisal, wage and benefit administration, job satisfaction, and employee health and safety. (3 lecture hours)

LONG-TERM CARE ADMINISTRATION (LTC) 1152
Nursing Home Administrative Practices II
3 Credit Hours
Introduction to financial management in long-term care administration including budgeting, accounting, internal controls, and equity and debt financing. (3 lecture hours)

LONG-TERM CARE ADMINISTRATION (LTC) 1161
Aging and Long-Term Care I
2 Credit Hours
Survey of the physical, psychological, sociological and financial aspects of aging. Introduces related long-term care options, and current social policies and programs. (2 lecture hours)

LONG-TERM CARE ADMINISTRATION (LTC) 1162
Aging and Long-Term Care II
2 Credit Hours
Continuation of LTC-1161. Expands on the physical, psychological, sociological and financial aspects of aging as well as current policies and programs that can benefit the older adult. Prerequisite: Long Term Care Administration 1161 or equivalent, or concurrent enrollment in Long Term Care Administration 1161. (2 lecture hours)

LONG-TERM CARE ADMINISTRATION (LTC) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (2 to 8 lab hours)

MAGNETIC RESONANCE IMAGING TECHNOLOGY

MAGNETIC RESONANCE IMAGING TECHNOLOGY (MRIT) 2101
Physical Principles and Instrumentation
3 Credit Hours
Comprehensive overview of MR imaging principles as well as the instrumentation associated with MR imaging. Provides a basic understanding of the principles and system components of MR image acquisition. This information enables the student to maximize MR image quality by understanding the fundamentals and system components of MR imaging. Prerequisite: Admission to the program is required. (3 lecture hours)

MAGNETIC RESONANCE IMAGING TECHNOLOGY (MRIT) 2102
Sectional Anatomy
3 Credit Hours
A study of normal anatomy and normal variations, as well as its appearance in multiple planes, enables the student to better recognize abnormal conditions and make the associated imaging changes required to adequately demonstrate the patient's anatomy and pathology. Prerequisite: Admission to the program is required. (3 lecture hours)

MAGNETIC RESONANCE IMAGING TECHNOLOGY (MRIT) 2103
Principles and Procedures I
3 Credit Hours
The content covers specific clinical applications, coils that are available and their use, considerations in the scan sequences, specific choices in the protocols and positioning criteria. Anatomical structures and the plane that best demonstrates anatomy are discussed, as well as signal characteristics of normal and abnormal structures. Prerequisite: Admission to the program is required. (2 lecture hours, 2 lab hours)

MAGNETIC RESONANCE IMAGING TECHNOLOGY (MRIT) 2104
Clinical Practice I
3 Credit Hours
Content is presented as a progression in competency levels through clinical performance objectives and competency exams. Prerequisite: Admission to the program is required. (6 lab hours)

MAGNETIC RESONANCE IMAGING TECHNOLOGY (MRIT) 2105
MR Pathology
3 Credit Hours
The magnetic resonance imaging pathology course familiarizes the student with the common pathologies found in magnetic resonance imaging and the appearance of these pathologies in various imaging protocols. Prerequisite: Consent of instructor is required. (3 lecture hours)

MAGNETIC RESONANCE IMAGING TECHNOLOGY (MRIT) 2106
Imaging Applications
3 Credit Hours
Imaging applications provide the student with a comprehensive overview of MR pulse sequences, image formation, and image contrast, as well as the knowledge of the parameters and imaging options used to create MR images. Prerequisite: Admission to the program and consent of instructor is required. (2 lecture hours, 2 lab hours)

MAGNETIC RESONANCE IMAGING TECHNOLOGY (MRIT) 2107
Principles and Procedures II
3 Credit Hours
The second principles and procedures course provides the student with the continuation of the imaging techniques related to the central nervous system (CNS), neck, thorax, musculoskeletal system and abdominopelvic regions. Prerequisite: Admission to the program and consent of instructor is required. (2 lecture hours, 2 lab hours)

MAGNETIC RESONANCE IMAGING TECHNOLOGY (MRIT) 2108
Clinical Practice II
3 Credit Hours
Content is presented as a progression in competency levels through clinical performance objectives and competency exams. Prerequisite: Magnetic Resonance Imaging Technology 2104 or equivalent or consent of instructor. (6 lab hours)

MAGNETIC RESONANCE IMAGING TECHNOLOGY (MRIT) 2109
Clinical Practice III
3 Credit Hours
Content is presented as a continuation in competency levels through clinical performance objectives and competency exams. Prerequisite: Magnetic Resonance Imaging Technology 2108 or equivalent or consent of instructor (6 lab hours)

MANAGEMENT

MANAGEMENT (MANAG) 1100
Supervision
3 Credit Hours
Prepares the individual to manage front-line workers and the responsibilities, problems, challenges and opportunities facing a supervisor. Presents the range of supervisory methods from classical to behavioral. (3 lecture hours)

MANAGEMENT (MANAG) 1820
Selected Topics
3 Credit Hours
Introductory exploration, discussion, review and analysis of selected topics in management with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (3 lecture hours)

MANAGEMENT (MANAG) 1840
Independent Study
1 to 3 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 3 lecture hours)

MANAGEMENT (MANAG) 2170
Project Management
3 Credit Hours
Overview of project management tools and methodology. Includes the strategic significance of projects, project selection, team building and decision-making, and project planning, scheduling, budgeting and resource allocation. Project implementation, control and termination are also included. Provides a foundation for those involved in using project management to decrease cycle times in e-commerce and traditional business operations. (3 lecture hours)

MANAGEMENT (MANAG) 2210
Principles of Management
3 Credit Hours
The study of the essential principles and concepts of management. Includes theoretical bases and practical applications of planning, organizing, leading, and controlling. Integrates the managerial functions, history, strategies, and decision making within the managerial process. Completion of Business 1100 is recommended prior to enrollment. (3 lecture hours)

MANAGEMENT (MANAG) 2215
Leadership
3 Credit Hours

Characteristics of leaders, leadership styles and methods, power, politics and influence styles, teamwork, and leadership problem solving. Strategic leadership, international and diversity aspects of leadership and leadership development. Completion of Business 1100 or equivalent is recommended prior to enrollment. (3 lecture hours)

MANAGEMENT (MANAG) 2220
Organizational Behavior
3 Credit Hours
The study of individual human behavior and group dynamics in organizations. Organizational Behavior looks at employee behavior, decisions, perceptions, and emotional responses. Organizational Behavior also encompasses the study of how organizations relate to each other and to their counterparts in other organizations. (3 lecture hours)

MANAGEMENT (MANAG) 2230
Purchasing
3 Credit Hours
Introduction to the materials acquisition process in industry and non-profit organizations. Topics include structure, tools and techniques for purchasing agents. Prerequisite: Business 1100. (3 lecture hours)

MANAGEMENT (MANAG) 2240
Human Resource Management
3 Credit Hours
Addresses key human resource management competencies and practices associated with attracting, developing, and retaining an organization's human capital. Includes practices and procedures associated with strategically aligning the firm's human talent to accomplish organizational goals. Completion of Business 1100 and Management 2210 is recommended prior to enrollment. (3 lecture hours)

MANAGEMENT (MANAG) 2242
Talent Acquisition and Retention
2 Credit Hours
Course focuses on the activities involved in the acquisition and retention of human capital and talent. The course explores Human Resources role in developing, implementing, and measuring the individual and organizational success of activities and programs in the following areas: sourcing, recruiting, hiring, onboarding, orientation, and retention. Prerequisite: Management 2240 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours)

MANAGEMENT (MANAG) 2245
Workforce Development & Compensation
2 Credit Hours
Course will examine key human resource concepts and tools designed to enhance workforce and organizational performance. Topics include workforce and performance management, employee training and development, employee and labor relations, total rewards, compensation, and benefits. Prerequisite: Management 2240 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours)

MANAGEMENT (MANAG) 2248
Strategic Human Resource Management
2 Credit Hours
Course covers the alignment of an organization's human resource management and business strategies, including the overall design of the human resource management structure to align with and enable optimal employee performance relative to the strategic goals of the organization. Prerequisite: Management 2240 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours)

MANAGEMENT (MANAG) 2295
Strategic Management
3 Credit Hours
Capstone course focused on the strategic management process. Topics include development of strategic plan, analysis and allocation of financial resources, environmental and industry force analysis, and competitive positioning. Case study analyses will provide students with strategic experiences and allow them to integrate management, marketing, financial, and accounting concepts. Prerequisite: Business 1100 with a grade of C or better, or equivalent and Management 2210 with a grade of C or better, or equivalent and Marketing 2210 with a grade of C or better, or equivalent and Accounting 2140 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

MANAGEMENT (MANAG) 2860
Internship for Management
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of Instructor 2.0 cumulative grade point average; MANAG 2210 and 6 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

MANAGEMENT (MANAG) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

MANUFACTURING TECHNOLOGY

MANUFACTURING TECHNOLOGY (MANUF) 0480
Blueprint Reading for Machinists
1 Credit Hour
Lines, dimensions, tolerances, notes, symbols, specifications, materials, manufacturing processes and standards. Orthographic and pictorial projections. Machine shop terminology. (1 lecture hour)

MANUFACTURING TECHNOLOGY (MANUF) 1101 (IAI IND 911)
Industrial Design/CAD
3 Credit Hours
An introduction to the use of microcomputers for design of industrial blueprints of intermediate complexity. Sketching, lettering, orthographic projections, descriptive geometry, point, line and basic geometric shapes. The use of menus, layers, fonts and weights. Basic dimensioning, tolerancing and pictorial drawings. The student is expected to draw a blueprint with simple dimensions label and notes using different layers. (2 lecture hours, 2 lab hours)

MANUFACTURING TECHNOLOGY (MANUF) 1104
Technical Mechanics
2 Credit Hours
Analysis and solution of practical problems in technical mechanics. Application of basic calculations and standards for design and maintenance of mechanical systems. (2 lecture hours)

MANUFACTURING TECHNOLOGY (MANUF) 1110
Metrology
3 Credit Hours
Initial course in the science of precision measurement techniques. Basic and advanced methodology behind measurement principles and tools used in the measurement process. Emphasis on laboratory skills in dimensional measurement using micrometers, calipers and gage blocks. Basics of geometric tolerancing and data analysis. Various applications of measurement including the Coordinate Measuring Machine (CMM), roundness measurement, and surface finish measurement. Additional topics include optical systems and quality control methods, as well as calibration standards. (2 lecture hours, 2 lab hours)

MANUFACTURING TECHNOLOGY (MANUF) 1121 (IAI IND 912)
Physical Metallurgy
3 Credit Hours
Functions of the metallurgical laboratory and equipment including mechanical testing, metallography, heat treatment and extractive metallurgy. Basic principles concerning materials science including atomic and crystal arrangements and their effect on mechanical properties. Simple phase equilibrium. Ferrous and nonferrous metals and alloys classification systems. (2 lecture hours, 2 lab hours)

MANUFACTURING TECHNOLOGY (MANUF) 1126
Introduction to Plastics
3 Credit Hours
The theory and use of plastics in industry. Physical, chemical and electrical properties of plastics and testing criteria are discussed. Processes such as injection molding, extrusion, blow molding, rotational molding, and thermoforming are covered. Control factors affecting the quality of parts, applications, benefits and limitations of plastics are explained. Related topics include process relationships, parameter setting techniques, rapid changeover techniques, process control and troubleshooting. (3 lecture hours)

MANUFACTURING TECHNOLOGY (MANUF) 1127
Engineering Materials of Industry
3 Credit Hours
Basic principles of materials technology including the internal structures of materials, physical and mechanical properties, fusion and bonding, annealing and plastic deformation (3 lecture hours)

MANUFACTURING TECHNOLOGY (MANUF) 1151
Machine Shop I
3 Credit Hours
Designed for students with little background in the use of metal-working machine tools. Basic principles and operations on the engine lathe, vertical milling machine and surface grinder. Precision measurement. (2 lecture hours, 2 lab hours)

MANUFACTURING TECHNOLOGY (MANUF) 1153
Advanced Machine Processes
3 Credit Hours
The application of skills that are commonly known in the industry as "machine shop." The development of operation skills of traditional engine lathes, vertical/horizontal mills and grinding as well as operations on similar machines. Emphasis is on those skills needed by trade's persons who have achieved proficiency in the operation of machines and related tooling and equipment. Quality skills related to machining and some planning and job control skills related to machine work. Prerequisite: Manufacturing Technology 1151 or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

MANUFACTURING TECHNOLOGY (MANUF) 1160
Technical Static & Strength of Material
4 Credit Hours
Basic analysis of external force systems acting upon bodies in equilibrium with subsequent treatment of the stresses and strains induced. Laboratory projects involve the use of nondestructive and destructive testing equipment to determine the various mechanical properties of materials and their behavior under load. Not intended for engineering students. Prerequisite: Physics 1201 or equivalent and Mathematics 1432 (or college equivalent) or qualifying score on the Mathematics placement test or qualifying A.C.T. math score or consent of instructor. (3 lecture hours, 2 lab hours)

MANUFACTURING TECHNOLOGY (MANUF) 1180 (IAI IND 914)
Quality Control
3 Credit Hours
An introduction to quality control and the development of the concept of total quality control engineering, process improvement, and quality information systems. A broad overview of total quality control and its scope throughout the business organization enables the student to analyze the various costs of quality and improve productivity. Topics will include 100 percent inspection versus statistical inspection and process control charts, as well as some of the tools of Organizational Development (OD) useful in promoting a Total Quality Control (TQC) and Total Quality Management (TQM) environment. (3 lecture hours)

MANUFACTURING TECHNOLOGY (MANUF) 1700
Fundmntls of Plastics & Plastic Products
3 Credit Hours
Fundamentals of plastics materials as they pertain to plastic products. Topics include comparing and contrasting elastomers and plastics, and testing methods. Data sheet analysis used to predict product characteristics. Prerequisite: Manufacturing Technology 1126 with a grade of D or better or equivalent. (3 lecture hours)

MANUFACTURING TECHNOLOGY (MANUF) 1820
Selected Topics I
1 to 10 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class

schedule. This course may be taken four times for credit as long as different topics are selected. (1 to 6 lecture hours, 2 to 8 lab hours)

MANUFACTURING TECHNOLOGY (MANUF) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

MANUFACTURING TECHNOLOGY (MANUF) 2200
Production Technology
4 Credit Hours
The theory of process planning and process control in manufacturing. Emphasis is on the study of these concepts as they apply the manufacturing production process, safety, quality and continuous improvement, and maintenance awareness. Prerequisite: Consent of instructor is required. (4 lecture hours)

MANUFACTURING TECHNOLOGY (MANUF) 2201
Geometric Dimensioning and Tolerancing
3 Credit Hours
Introduces the principles of industrial drafting as specified by the American National Standards Institute (ANSI). Topics include part dimensional control techniques, interchangeability of parts and the differences between traditional dimensioning and geometric dimensioning. Symbols and terms for dimensioning, datum and materials condition symbols are introduced. Various tolerances of form, profile orientation, run-out and location are demonstrated. Feature control frames are discussed. Prerequisite: Manufacturing Technology 1101 or consent of instructor. (3 lecture hours)

MANUFACTURING TECHNOLOGY (MANUF) 2202
Solid Modeling and Design
3 Credit Hours
The theory and application of solid modeling techniques for product design and manufacturing. Prerequisite: Manufacturing Technology 1101 or consent of instructor. (2 lecture hours, 2 lab hours)

MANUFACTURING TECHNOLOGY (MANUF) 2203 (IAI IND 913)
Manufacturing Processes and Design
3 Credit Hours
A survey of manufacturing methods and materials employed in cold working processes. The student will understand the various methods of product fabrication and the manufacturing processes for sound economic decision making in manufacturing and product design. Other topics include the interrelationship among materials, their selection for use in product design and processes, and conversion of these materials into finished components. Prerequisite: Manufacturing Technology 2202 or consent of instructor. (2 lecture hours, 2 lab hours)

MANUFACTURING TECHNOLOGY (MANUF) 2206
Mechanical Computr-Aided Drafting/Design
3 Credit Hours
Computer-aided drafting/design (CADD) as drafting tool for the creation of mechanical production drawings. Solids modeling concepts and application of geometric dimensioning techniques are explained. The student is expected to finish detail and assembly drawings from a layout and demonstrate an understanding of the principles of engineering and design. Prerequisites: Manufacturing Technology 2201 or equivalent and Manufacturing Technology 2202 or equivalent and consent of instructor. (2 lecture hours, 2 lab hours)

MANUFACTURING TECHNOLOGY (MANUF) 2207
Tool Design
3 Credit Hours
An advanced course on the designing of manufacturing production tools, molds, dies, jigs and fixtures. Prerequisite: Manufacturing Technology 2202 or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

MANUFACTURING TECHNOLOGY (MANUF) 2208
Mechanical Design Portfolio
3 Credit Hours
Practical overview of the design process with case materials and real-life design problems. Provides the student with an opportunity to create a design portfolio. Prerequisite: Manufacturing Technology 2207 or equivalent, or consent of instructor. (2 lecture hours, 2 lab hours)

MANUFACTURING TECHNOLOGY (MANUF) 2240
Basic Parametric Design-Pro/E
3 Credit Hours
A basic course in creating 3-dimensional (3-D) parametric parts, 2-dimensional (2-D) drawings and 3-D assemblies. Includes multi-part models. Emphasis is on the philosophy of parametric design and constraints. Prerequisite: Experience in design and drafting. (2 lecture hours, 2 lab hours)

MANUFACTURING TECHNOLOGY (MANUF) 2242
Advanced Parametric Design-Pro/E
3 Credit Hours
Advanced course in creating multi-part parametric assemblies, exploded assemblies, parts having complex surface features, and design of sheet metal parts in both a flattened and bent state using parametric modeling software. Includes associated drawing files. Prerequisite: Manufacturing Technology 2240 with a grade of D or better, or equivalent, or consent of instructor. (2 lecture hours, 2 lab hours)

MANUFACTURING TECHNOLOGY (MANUF) 2251
Computer Numerical Control (CNC)
3 Credit Hours
An introduction to CNC machinery as it applies to the operator and programmer. Introduction to CNC programming coding, set-up, tooling, operation and troubleshooting. Basic principles and applications of numerically controlled equipment and the set-up and operation of CNC machines. Prerequisite: Manufacturing Technology 1151 or equivalent, or consent of instructor. (2 lecture hours, 2 lab hours)

MANUFACTURING TECHNOLOGY (MANUF) 2252
CNC Operations
3 Credit Hours
Theory and practice in the preparation and machining of selected parts. Skill is developed in fixturing, tool offsets, finding and setting program zeros. Prerequisite: Manufacturing Technology 1151 with a grade of B or better or equivalent and Manufacturing Technology 2251 with a grade of B or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

MANUFACTURING TECHNOLOGY (MANUF) 2253
Computer-Aided Manufacturing (CAM)
3 Credit Hours
Introduction to computer assisted part of programming (CAM) as it applies to computer numerical control (CNC). Various types of programming systems. Piece part geometry definition, computer input of this geometry, and post processing this information into CNC code. This code is then used to machine parts. Familiarity with CAM software and mathematical skills required. The student is expected to demonstrate a measurable level of skill in geometry definition of the CAM system, post processor knowledge to modify CNC code, and application of computer aided design (CAD) to generate CNC code. Prerequisite: Manufacturing Technology 2251 or equivalent. (2 lecture hours, 2 lab hours)

MANUFACTURING TECHNOLOGY (MANUF) 2261
Basic Die Making I
4 Credit Hours
Fundamental theory and study of tool and die making, including punch press sizes and feeds for dies, and their uses and relationships to each other. Prerequisite: Consent of instructor is required. (4 lecture hours)

MANUFACTURING TECHNOLOGY (MANUF) 2262
Basic Die Making II
4 Credit Hours
Continuation of Basic Die Making I. Principles and processes used in sheet metal work, using stock-strip layouts, cutting and stripping pressures, and flat blank layouts. Prerequisite: Manufacturing Technology 2261 or equivalent or consent of instructor. (4 lecture hours)

MANUFACTURING TECHNOLOGY (MANUF) 2265
Mold Making I
4 Credit Hours
Mold construction, elastics, die casting, proper selection and heat treatment. Prerequisite: Consent of instructor is required. (4 lecture hours)

MANUFACTURING TECHNOLOGY (MANUF) 2267
Mold Making II
4 Credit Hours
An advanced class in mold making. Emphasis is on the use of side cores, various methods of mold construction, fitting clearances, locking devices, and finishes required in mold cavities. Prerequisite: Manufacturing Technology 2265 or equivalent, or consent of instructor. (4 lecture hours)

MANUFACTURING TECHNOLOGY (MANUF) 2271
Robotic Application
3 Credit Hours
Industrial applications of robots with emphasis on set-up, programming and operations. End effect or design and production line interfacing are studied. Prerequisite: Electro-Mechanical Technology 1171 or equivalent. (2 lecture hours, 2 lab hours)

MANUFACTURING TECHNOLOGY (MANUF) 2272
Advanced Die Making and Engineering I
4 Credit Hours
An introduction to draw dies: the theory of the drawing of metal, metal reaction, problems and solutions used, lubricants and draw die reductions along with advanced work in gages, fixtures and intricate progressive dies. Prerequisite: Manufacturing Technology 2262 or equivalent, or consent of instructor. (4 lecture hours)

MANUFACTURING TECHNOLOGY (MANUF) 2274
Advanced Die Making and Engineering II
4 Credit Hours
An advanced study of draw dies including types, materials used, lubricants, and the theory of draw die reductions with a continuation of advanced work in gages, fixtures and intricate progressive dies. Prerequisite: Manufacturing Technology 2272 or equivalent, and consent of instructor. (4 lecture hours)

MANUFACTURING TECHNOLOGY (MANUF) 2276
Advanced Mold Making and Engineering I
4 Credit Hours
Theory and process of mold cavities using electrical impulse methods, thread molding and automatic unscrewing methods. Prerequisite: Manufacturing Technology 2267 or equivalent, or consent of instructor. (4 lecture hours)

MANUFACTURING TECHNOLOGY (MANUF) 2277
Advanced Mold Making and Engineering II
4 Credit Hours
A continuation of Advanced Mold Making and Engineering I. Product standards for die casting and analysis of mold cavities by electrical impulse methods. Thread molding and automatic unscrewing methods, current advances in molds, molding machines, and mold-making methods. Prerequisite: Manufacturing Technology 2276 or equivalent, and consent of instructor. (4 lecture hours)

MANUFACTURING TECHNOLOGY (MANUF) 2280
Industrial Safety
2 Credit Hours
Survey and analysis of current problems and trends in the design and supervision of industrial accident prevention programs. (2 lecture hours)

MANUFACTURING TECHNOLOGY (MANUF) 2281
Cost Analysis
2 Credit Hours
Study of the economic interdependency of the design, tooling, manufacturing, inspection and testing decisions and the means of quantifying such decisions. Sources and controls of direct, indirect and fixed costs. Influences of cost-accounting practices on engineering decisions. Generating alternatives based on the principles of time and motion economics and work simplification. Cost estimation procedures and controls. (2 lecture hours)

MANUFACTURING TECHNOLOGY (MANUF) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

MANUFACTURING TECHNOLOGY (MANUF) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours

Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

MARKETING

MARKETING (MARKE) 1100
Consumer Marketing
3 Credit Hours
Consumer behavior and marketing principles, concepts, functions and activities involved in generating consumer satisfaction through business and marketing transactions. (3 lecture hours)

MARKETING (MARKE) 1171
Database Marketing
3 Credit Hours
Strategy, methods and techniques used to design, generate, compile, analyze and strategically use marketing databases. (3 lecture hours)

MARKETING (MARKE) 1175
Customer Relationship Management
3 Credit Hours
Strategy and methods used to increase customer satisfaction and to improve and maintain customer relationships. (3 lecture hours)

MARKETING (MARKE) 1820
Selected Topics I
3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (3 lecture hours)

MARKETING (MARKE) 1840
Independent Study
1 to 3 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 3 lecture hours)

MARKETING (MARKE) 2210
Principles of Marketing
3 Credit Hours
Study of satisfying customer needs for goods and services. Marketing environments, marketing planning, and marketing research are covered. Target market identification, competitor analysis and marketing strategy are modeled. Completion of Business 1100 is recommended prior to enrollment. (3 lecture hours)

MARKETING (MARKE) 2215
Domestic Distribution Channels
3 Credit Hours
Creation and maintenance of a domestic logistics system to move products from producers to consumers. Role of distribution in the marketing effort and in meeting the needs of customers. Distribution channel design, management, motivation, evaluation, price determination and conflict resolution. Domestic logistics and distribution for Internet and direct marketing. Prerequisite: Business 1100 or equivalent and Marketing 2210 or equivalent. (3 lecture hours)

MARKETING (MARKE) 2220
Principles of Selling
3 Credit Hours
Selling as a problem-solving activity, strategic development, and implementation of the sales process and its components within the context of effective communication, customer relationships, motivation and behavioral theories, determination of customer needs, and sales ethics. Completion of Business 1100 recommended prior to enrollment. (3 lecture hours)

MARKETING (MARKE) 2225
Consumer Behavior
3 Credit Hours
Study of consumer need for goods and services. Surveys the impact of both internal and external forces on consumer decision making. Motivation, personality, attitudes, groups, social media, culture and other types of influences will be considered. Marketer's strategic responses to these influences will also be explored. Prerequisite: Marketing 2210 or equivalent or consent of instructor. (3 lecture hours)

MARKETING (MARKE) 2230
Principles of Retail
3 Credit Hours
Strategic approach to principles and problems of retailing. Includes market information, organization, layout, location, merchandising, buying, receiving, display, promotion, price, control systems, human resources and government regulations. Completion of Business 1100 recommended prior to enrollment. (3 lecture hours)

MARKETING (MARKE) 2240 (IAI MC 912)
Advertising
3 Credit Hours
Theoretical and descriptive survey of the advertising function. Explains how advertising is used, identifies specific tasks employed, and describes how advertising is integrated into the entire marketing strategy. Included are analyses of regulatory issues, creative processes and media outlets. Completion of Business 1100 and Management 2210 is recommended prior to enrollment. (3 lecture hours)

MARKETING (MARKE) 2250
Business to Business
3 Credit Hours
Application of marketing principles to the business/industrial/organizational market. Covers demand, marketing intelligence, and the development of strategy for products and services, supply chain management, pricing, promotion, control, customer relationship management, communication, and electronic marketing methods. Completion of Business 1100 and Marketing 2210 is recommended prior to enrollment (3 lecture hours)

MARKETING (MARKE) 2255
International Logistics
3 Credit Hours
Planning, implementing and controlling an international system to move products from point of origin to consumers located in a different country. Covers the primary elements of international logistics including legal considerations, transportation modes and packaging for export. (3 lecture hours)

MARKETING (MARKE) 2270
Internet & Social Media Marketing
3 Credit Hours
Explore world of digital marketing through email, mobile, video, search engine and social media. Integrate digital tools into marketing campaigns to build brand equity, create awareness, and motivate desired consumer behaviors. Marketing 2210 is recommended. (3 lecture hours)

MARKETING (MARKE) 2860
Internship for Marketing
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor, Marketing 2210, 2.0 cumulative grade point average; six semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Associate Dean from the academic discipline where the student is planning to earn credit.

MARKETING (MARKE) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

MASS COMMUNICATION

MASS COMMUNICATION (MCOMM) 1100 (IAI MC 911)
Introduction to Mass Communication
3 Credit Hours
Overview of the mass media as a functionally-integrated system that emphasizes critical thinking about historical development, nature, functions, and storytelling responsibilities in a global environment. Mass media roles in American society and the effect on consumers through social and traditional media are included. For non-majors and majors. (3 lecture hours)

MASS COMMUNICATION (MCOMM) 1105 (IAI MC 919)
News Reporting & Writing for Multimedia
3 Credit Hours
Develops basic journalistic reporting skills and storytelling techniques in a multimedia environment for citizen journalism and professional news gathering. Emphasizes live reporting to produce news stories, podcasts, video assignments and social media. (3 lecture hours)

MASS COMMUNICATION (MCOMM) 1120 (IAI MC 914)
Intro to Broadcasting-Global Environment
3 Credit Hours
Introduces students to the history of broadcasting and the concept of how globalization has impacted the broadcasting industry today. Students develop projects on U.S. broadcast programming, important media figures, FCC regulations, and non-U.S. media. (3 lecture hours)

MASS COMMUNICATION (MCOMM) 1800
Special Project
1 to 3 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for journalism and mass communication. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses hold an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, and other appropriate requirements).

MASS COMMUNICATION (MCOMM) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

MASS COMMUNICATION (MCOMM) 2100
Social Media As News
3 Credit Hours
Uses Facebook, Twitter, YouTube, Linked-in, listservs, blogs and other interactive online media to develop students as citizen journalists. Students will publish writing, video and audio for social commentary and news values on current events and seek audience interaction. (3 lecture hours)

MASS COMMUNICATION (MCOMM) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to

obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

MASS COMMUNICATION (MCOMM) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

MATHEMATICS

MATHEMATICS (MATH) 0405
Study Skills: Math Anxiety
1 Credit Hour
Basic course designed for students who want to reduce or manage math anxiety. Students examine underlying issues that contribute to math anxiety; discuss various learning styles; assess own learning style; learn ways to accommodate an instructor's teaching style; and learn strategies and techniques to effectively cope with math anxiety. This course may be taken three times for credit. This course can only be taken on a pass/fail basis. Prerequisite: Consent of instructor is required. (1 lecture hour)

MATHEMATICS (MATH) 0408
Arithmetic Whole Numbers I
0.5 Credit Hours
Computation skills involving addition and subtraction of whole numbers and applications. This course can only be taken on a pass/fail basis. Prerequisite: Consent of instructor is required. (.5 lecture hour)

MATHEMATICS (MATH) 0409
Arithmetic Whole Numbers II
0.5 Credit Hours
Computation skills involving multiplication and division of whole numbers and applications. This course can only be taken on a pass/fail basis. Prerequisite: Consent of instructor is required. (0.5 lecture hour)

MATHEMATICS (MATH) 0410
Arithmetic of Whole Numbers
0.5 Credit Hours
Computation skills involving addition, subtraction, multiplication, division and applications of whole numbers. This course may be taken four times for credit. Prerequisite: Consent of instructor is required. (0.5 lecture hour)

MATHEMATICS (MATH) 0412
Arithmetic of Fractions I
0.5 Credit Hours
Computation skills involving addition and subtraction of fractions and mixed numbers. This course may be taken four times for credit. Prerequisite: Consent of instructor is required. (0.5 lecture hour)

MATHEMATICS (MATH) 0413
Arithmetic of Fractions II
0.5 Credit Hours
Computation skills involving multiplication and division of fractions and mixed numbers. This course may be taken four times for credit. Prerequisite: Consent of instructor is required. (0.5 lecture hour)

MATHEMATICS (MATH) 0415
Arithmetic of Decimals
0.5 Credit Hours
Computation skills involving addition, subtraction, multiplication and division of decimals. This course may be taken four times for credit. Prerequisite: Consent of instructor is required. (0.5 lecture hour)

MATHEMATICS (MATH) 0417
Arithmetic of Percents
0.5 Credit Hours
Computation skills involving percents, conversions among fractions, o decimals and percents including applications. This course may be taken four times for credit. Prerequisite: Consent of instructor is required. (0.5 lecture hour)

MATHEMATICS (MATH) 0418
Arithmetic of Ratio/Proportion
0.5 Credit Hours
Computation skills involving ratio and proportion. This course may be taken four times for credit. Prerequisite: Consent of instructor is required. (0.5 lecture hour)

MATHEMATICS (MATH) 0420
Arithmetic: Special Topics
0.5 Credit Hours
Topics include exponents, roots, rounding and estimating. This course may be taken four times for credit. Prerequisite: Consent of instructor is required. (0.5 lecture hour)

MATHEMATICS (MATH) 0422
Arithmetic of Signed Numbers
0.5 Credit Hours
Computation skills involving addition, subtraction, multiplication and division of signed numbers, and properties of numbers. This course may be taken four times for credit. Prerequisite: Consent of instructor is required. (0.5 lecture hour)

MATHEMATICS (MATH) 0424
Algebra: Solving Linear Equations
0.5 Credit Hours
Solve linear equations algebraically. This course may be taken four times for credit. Prerequisite: Consent of instructor is required. (0.5 lecture hour)

MATHEMATICS (MATH) 0426
Algebra: Word Problems
0.5 Credit Hours
Word problems involving money, ratio and proportion, percent and variation. This course may be taken four times for credit. Prerequisite: Consent of instructor is required. (0.5 lecture hour)

MATHEMATICS (MATH) 0428
Algebra: Exponents
0.5 Credit Hours

Algebraic expressions involving positive, negative and zero exponents. This course may be taken four times for credit. Prerequisite: Consent of instructor is required. (0.5 lecture hour)

MATHEMATICS (MATH) 0430
Algebra: Factoring
0.5 Credit Hours
Factoring polynomials and its application in solving equations. This course may be taken four times for credit. Prerequisite: Consent of instructor is required. (0.5 lecture hour)

MATHEMATICS (MATH) 0432
Algebra: Fractions
0.5 Credit Hours
Computation skills involving addition, subtraction, multiplication and division of algebraic fractions and applications of algebraic fractions. This course may be taken four times for credit. Prerequisite: Consent of instructor is required. (0.5 lecture hour)

MATHEMATICS (MATH) 0434
Algebra: Graphing
0.5 Credit Hours
Graph linear and quadratic equations and linear inequalities. This course may be taken four times for credit. Prerequisite: Consent of instructor is required. (0.5 lecture hour)

MATHEMATICS (MATH) 0436
Algebra: Systems of Linear Equations
0.5 Credit Hours
Solving systems of linear equations including applications by graphing, elimination and substitution. This course may be taken four times for credit. Prerequisite: Consent of instructor is required. (0.5 lecture hour)

MATHEMATICS (MATH) 0438
Algebra: Radicals
0.5 Credit Hours
Simplifying algebraic expressions containing radicals by addition, subtraction, multiplication and division; radical equations; Pythagorean Theorem applications. This course may be taken four times for credit. Prerequisite: Consent of instructor is required. (0.5 lecture hour)

MATHEMATICS (MATH) 0440
Algebra: Quadratic Equations
0.5 Credit Hours
Solve quadratic equations by factoring and the quadratic formula. This course may be taken four times for credit. Prerequisite: Consent of instructor is required. (0.5 lecture hour)

MATHEMATICS (MATH) 0451
Essentials of Arithmetic I
2 Credit Hours
Fundamental skills in addition, subtraction, multiplication and division with respect to whole numbers, fractions, ratio and proportion, and decimals. Included are problem-solving techniques with practical application. Equivalent to the first half of Mathematics 0460. This course may be taken four times for credit. (2 lecture hours)

MATHEMATICS (MATH) 0452
Essentials of Arithmetic II
2 Credit Hours
Principles of arithmetic, review of fractions, exponents, order of operations, percents and applications, ratio and proportion, and applications. This course may be taken four times for credit. (2 lecture hours)

MATHEMATICS (MATH) 0455
Fundamentals of Algebra
2 Credit Hours
Covers essential fundamentals of algebra. Students begin with signed numbers, learn to solve equations and inequalities, apply properties of exponents, and perform fundamental operations with polynomials. Included are problem-solving techniques with practical application. This course may be taken four times for credit. (2 lecture hours)

MATHEMATICS (MATH) 0460
College Arithmetic
3 Credit Hours
Principles of arithmetic. Fundamental operations with whole numbers, common fractions and decimals. Percents and applications in the world of business. Rational numbers, exponents and powers. This course may be taken four times for credit. (3 lecture hours)

MATHEMATICS (MATH) 0465
Preparatory Mathematics for General Ed
5 Credit Hours
Content is designed to develop sufficient algebra proficiency for success in certain college-level general education mathematics courses. Collaborative project-based and technology-enabled group work includes modeling, problem solving, critical thinking, data analysis, algebra fundamentals, and both verbal and written communication of mathematical ideas. Prerequisite: Mathematics 0460 (or college equivalent) with a grade of C or better, or a qualifying score on the math placement exam. (5 lecture hours)

MATHEMATICS (MATH) 0470
Elementary Plane Geometry
3 Credit Hours
Points and lines in the plane, angles, triangles, quadrilaterals, polygonal regions, circles and their relationships. Prerequisite: Mathematics 0481 or college equivalent with a grade of C or better or a qualifying score on the mathematics placement test. (3 lecture hours)

MATHEMATICS (MATH) 0481
Foundations for College Mathematics I
5 Credit Hours
Topics from elementary algebra: sets of numbers, operations with real numbers, variables, integral exponents, scientific notation, simplification of algebraic expressions, solving linear equations and inequalities in one variable, graphing linear equations, writing equations of lines, solving linear inequalities in two variables, solving systems of linear equations in two or more variables, applications, problem solving, operations with polynomials, factoring polynomials, and solving equations using factoring. Prerequisite: Mathematics 0460 or college equivalent with a grade of C or better or a qualifying score on the mathematics placement test. (5 lecture hours)

MATHEMATICS (MATH) 0482
Foundations for College Mathematics II
5 Credit Hours

Topics from elementary algebra and intermediate algebra: operations with algebraic fractions, solving equations with the algebraic fractions, radicals and rational exponents, complex numbers, solving quadratic equations, variation, solving equations and inequalities involving absolute value, function notation, graphing functions, inverse functions, exponential and logarithmic functions, applications and problem solving. Prerequisite: Mathematics 0481 (or college equivalent) with a grade of C or better or a qualifying score on the mathematics placement test. (5 lecture hours)

MATHEMATICS (MATH) 0485
Algebra Refresher Workshop
0.5 Credit Hours
Designed as a focused review of the elementary and intermediate algebra techniques and associated problem solving skills required for a student to be successful in college level math. StuDents meeting mastery-level performance qualifications in the workshop can take a written departmental exit examination for potential placement. Prerequisite: Consent of instructor is required. (0.5 lecture hour)

MATHEMATICS (MATH) 1100
Business Mathematics
3 Credit Hours
Applications of mathematics to business transactions. Analysis and solution of the business problems in profit and loss, interest, installment transactions, percent discounts, taxes and payroll. Prerequisite: Mathematics 0460 or college equivalent with a grade of C or better or a qualifying score on the mathematics placement test. (3 lecture hours)

MATHEMATICS (MATH) 1102
Mathematics for Health Sciences
3 Credit Hours
Designed for health science majors. Topics include systems of measurements, use of formulas, dimensional analysis, percents, decimals, fractions, ratio and proportion, direct and inverse variation, solutions, and dosage calculations. Prerequisite: Mathematics 0465 or Mathematics 0481 or college equivalent with a grade of C or better or a qualifying score on the mathematics placement test. (3 lecture hours)

MATHEMATICS (MATH) 1104
Mathematics for Horticulture
3 Credit Hours
Designed for horticulture majors only. Topics include fractions, decimals, percents, systems of measurement, dimensional analysis, use of formulas, ratio and proportion, linear equations, perimeter, area, volume, and surface area as related to landscape, mixtures as related to seed, fertilizer and chemicals, estimation, scale drawings, sales including discount and markup, construction as related to landscape, and estimates and bids on landscaping projects. (3 lecture hours)

MATHEMATICS (MATH) 1108
Perspectives of Mathematics
3 Credit Hours
The course surveys some of the major ideas of mathematics and relationships to the arts, life sciences, physical sciences, social sciences, games, etc. Topics are selected from number systems, inductive and deductive reasoning, algebraic processes and methods, geometry, probability and statistics. Prerequisite: Demonstrated geometry competency (level 2), and Mathematics 0481 or college equivalent with a grade of C or better or a qualifying score on the mathematics placement test. (3 lecture hours)

MATHEMATICS (MATH) 1115
Technical Mathematics I
3 Credit Hours
For technical/occupational programs. Emphasizes problem-solving skills using elementary algebra, right angle trigonometry, and ratio and proportion. Prerequisite: Mathematics 0481 or college equivalent with a grade of C or better or a qualifying score on the mathematics placement test. (3 lecture hours)

MATHEMATICS (MATH) 1116
Technical Mathematics II
5 Credit Hours
A continuation of Technical Mathematics I emphasizing problem solving-skills using trigonometry, common logarithms and natural logarithms. Prerequisite: Mathematics 1115 with a grade of C or better. (5 lecture hours)

MATHEMATICS (MATH) 1120
Mathematical Foundations for Diagnostic
3 Credit Hours
Designed for Diagnostic Medical Imaging Sonography (DMIS) majors only. Mathematical applications and problem solving in the field of sonography are emphasized. Topics include systems of measurement, dimensional analysis, application of formulas, probability, and statistics. Prerequisite: Mathematics 0482 (or college equivalent) with a grade of C or better or a qualifying score on the mathematics placement test or a qualifying A.C.T. math score. (3 lecture hours)

MATHEMATICS (MATH) 1218 (IAI M1 904)
General Education Mathematics
3 Credit Hours
Designed to fulfill general education requirements and not designed as a prerequisite for any other college mathematics course. Focuses on mathematical reasoning and the solving of real-life problems, rather than routine skills. Logic and set theory are studied. Two other topics from the following list are to be studied in depth: counting techniques and probability, game theory, geometry, graph theory, statistics, and mathematics of finance. The regular use of calculators and/or computers are emphasized. Prerequisite: Demonstrated geometry competency (level 2), and Mathematics 0465 or Mathematics 0482 or college equivalent with a grade or C or better or a qualifying score on the mathematics placement test or a qualifying A.C.T. math score. (3 lecture hours)

MATHEMATICS (MATH) 1220 (IAI M1 901)
Quantitative Literacy
3 Credit Hours
Designed to fulfill general education requirements, and not designed as a prerequisite for any other college mathematics course. Provides the basic numeracy needed by a college graduate to reason about quantities, their magnitudes, and their relationships between and among other quantities. Topics include linear systems, linear programming, analysis and interpretation of graphs, logic and reasoning, descriptive statistics, the normal distribution, statistical inference, estimation and approximation. Prerequisite: Demonstrated geometry competency (level 2), and Mathematics 0465 or Mathematics 0482 or college equivalent with a grade of C or better or a qualifying score on the mathematics placement test or a qualifying A.C.T. math sub-score. (3 lecture hours)

MATHEMATICS (MATH) 1321
Math for Elementary School Teachers I
4 Credit Hours
Students interested in a career working with children from birth to grade 8 would benefit from taking this course. Students will explore sets, logic and mathematical reasoning, problem solving, numeration systems, and elementary number theory. Other topics will include properties, algorithms, and computation with the sets of whole numbers, integers, and rational and real numbers. Prerequisite: Demonstrated geometry competency (level 1), and Mathematics 0482 or college equivalent with a grade or C or better or a qualifying score on the mathematics placement test or a qualifying A.C.T. math sub-score. (4 lecture hours)

MATHEMATICS (MATH) 1322 (IAI M1 903)
Math for Elementary School Teacher II
3 Credit Hours
A continuation of Mathematics 1321. Designed for elementary education majors. Introduction to probability and statistics, measurement, geometric constructions, coordinate geometry and geometric transformations. Prerequisite: Mathematics 1321 or college equivalent with a grade of C or better and demonstrated geometry competency (level 1). (3 lecture hours)

MATHEMATICS (MATH) 1340
History of Mathematics
3 Credit Hours
The historical development of mathematics and certain mathematical concepts from ancient times to the present, with emphasis given to basic and intermediate mathematics concepts. The focus of this mathematics-driven course will be on the problems mathematicians have faced, and the theory and methodology that were developed to resolve these problems. Prerequisite: Mathematics 1218 or college equivalent with a grade of C or better. (3 lecture hours)

MATHEMATICS (MATH) 1428
College Algebra With Applications
3 Credit Hours
The study of algebra with emphasis on applications. This course should not be taken by students planning to enroll in calculus. Topics include, but are not limited to, matrices, functions, conic sections, polynomials, exponential and logarithmic functions, and sequences and series. Prerequisite: Demonstrated geometry competency (level 2), and Mathematics 0482 or college equivalent with a grade or C or better or a qualifying score on the mathematics placement test or a qualifying A.C.T. math score. (3 lecture hours)

MATHEMATICS (MATH) 1431
Precalculus I
5 Credit Hours
A formal study of algebra with emphasis on concepts needed for calculus. Topics include, but are not limited to, functions, conic sections, matrices and determinants, polynomial theory, rational functions, sequences and series, logarithmic and exponential functions, combinatorial mathematics, and mathematical induction. Prerequisite: Demonstrated geometry competency (level 2), and Mathematics 0482 or college equivalent with a grade or C or better or a qualifying score on the mathematics placement test or a qualifying A.C.T. math score. (5 lecture hours)

MATHEMATICS (MATH) 1432
Precalculus II/Trigonometry
3 Credit Hours
A formal study of trigonometry with emphasis on concepts needed for calculus. Topics include, but are not limited to, formal definition of trigonometric functions and circular functions, radian measure, inverse trigonometric functions, graphs of trigonometric functions and inverse trigonometric functions, trigonometric identities, trigonometric equations, DeMoivre's theorem, solution of triangles, polar coordinates and applications. Prerequisite: Mathematics 1431 or college equivalent with a grade of C or better or a qualifying score on the mathematics placement test or a qualifying A.C.T. math score. (3 lecture hours)

MATHEMATICS (MATH) 1533 (IAI M1 906)
Finite Mathematics
4 Credit Hours
Designed primarily for students planning to major in business, or the behavioral, social or biological sciences. Topics include sets, counting techniques, probability, modeling, systems of linear equations and inequalities, matrix algebra, linear programming, Markov chains and game theory. Applications are presented from business and the above sciences. Prerequisite: Mathematics 1428 or college equivalent with a grade of C or better or Mathematics 1431 or college equivalent with a grade of C or better or a qualifying score on the mathematics placement test or a qualifying A.C.T. math score. (4 lecture hours)

MATHEMATICS (MATH) 1635 (IAI M1 902/BUS 901)
Statistics
4 Credit Hours
Elementary statistics: elements of descriptive and inferential statistics. Communication with data descriptions and graphs. Probability principles and their use in developing probability distributions. Binomial, normal, student-t, chi-square and F distributions. Hypothesis testing, estimation, contingency tables, linear regression and correlation, and one-way ANOVA. Prerequisite: Mathematics 1428 or college equivalent with a grade of C or better or Mathematics 1431 or college equivalent with a grade of C or better or Mathematics 1533 or college equivalent with a grade of C or better or a qualifying score on the mathematics placement test or a qualifying A.C.T. math score. (4 lecture hours)

MATHEMATICS (MATH) 1820
Selected Topics I
1 to 3 Credit Hours
Introductory exploration and analysis of selected mathematics topics with a specific theme indicated by course title listed In college class schedule. May be taken three times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. The precise prerequisites will vary according to the specific mathematical selected topic. (1 to 3 lecture hours)

MATHEMATICS (MATH) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within Mathematics to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

MATHEMATICS (MATH) 2000
Survey of Calculus
3 Credit Hours
Students will study functions, limits, continuity, the derivative, rules for differentiation of algebraic, trigonometric, and the

transcendental functions, anti-derivatives and integration, the fundamental theorem of calculus, and techniques of integration. Note: Students may not receive credit for Math 2000 and Math 2134, or Math 2231 or Math 2232. Prerequisite: Mathematics 1431 or college equivalent with a grade of C or better and Mathematics 1432 or college equivalent with a grade of C or better or a qualifying score on the mathematics placement test or a qualifying A.C.T. math score (3 lecture hours)

MATHEMATICS (MATH) 2115 (IAI M1 905/CS 915)
Discrete Mathematics
3 Credit Hours
An introduction to the formal study of discrete structures in mathematics. Topics include set theory, combinatorial mathematics, logic, graph theory, Boolean algebra, formal languages. Prerequisite: Mathematics 1428 or college equivalent with a grade of C or better or Mathematics 1431 or college equivalent with a grade of C or better or a qualifying score on the mathematics placement test or a qualifying A.C.T. math score. (3 lecture hours)

MATHEMATICS (MATH) 2134 (IAI M1 900-B)
Calculus for Business and Social Science
4 Credit Hours
Designed primarily for students planning to major in business, or behavioral, social or biological sciences. The basic concepts of differential and integral calculus are taught with emphasis on a wide variety of applications. Prerequisite: Mathematics 1431 or college equivalent with a grade of C or better or a qualifying score on the mathematics placement test or a qualifying A.C.T. math score. (4 lecture hours)

MATHEMATICS (MATH) 2231 (IAI M1 900-1/MTH901)
Calculus and Analytic Geometry I
5 Credit Hours
Lines, circles, functions, limits, continuity, the derivative, rules for differentiation of algebraic, trigonometric, and the transcendental functions, related rates, mean value theorem, optimization and curve sketching, differentials, Newton's method, antiderivatives and integration, and the fundamental theorem of calculus. Prerequisite: Mathematics 1431 or college equivalent with a grade of C or better and Mathematics 1432 or college equivalent with a grade of C or better or a qualifying score on the mathematics placement test or a qualifying A.C.T. math score. (5 lecture hours)

MATHEMATICS (MATH) 2232 (IAI M1 900-2/MTH902)
Calculus and Analytic Geometry II
5 Credit Hours
Applications of the definite integral, techniques of integration, indeterminate forms, improper integrals, sequences and series, Taylor and Maclaurin expansions, power series, conics, parametric equations, polar coordinates, introduction to vectors, and operations on vectors. Prerequisite: Mathematics 2231 with a grade of C or better (5 lecture hours)

MATHEMATICS (MATH) 2233 (IAI M1 900-3/MTH903)
Calculus and Analytic Geometry III
4 Credit Hours
Geometry of space, cylindrical and spherical coordinate systems, vector functions with physics applications, arc length, curvature, multivariate functions, partial derivatives, multiple integrals and their applications, vector fields and their applications, line integrals and their applications, and Green's theorem in the plane. Prerequisite: Mathematics 2232 with a grade of C or better. (4 lecture hours)

MATHEMATICS (MATH) 2235
Additional Topics in Vector Calculus
1 Credit Hour
An extension of Calculus III, covering the curl of a vector field, surface integrals, Stoke's theorem, and the divergence theorem. Prerequisite: Mathematics 2233 with a grade of C or better (or college equivalent). (1 lecture hour)

MATHEMATICS (MATH) 2245 (IAI MTH 911)
Linear Algebra
4 Credit Hours
Geometric vectors and vector spaces, matrices and linear transformations, inner product spaces, eigenvalues and eigenvectors, the determinant function, and formal methods of mathematical proof. Prerequisite: Mathematics 2232 with a grade of C or better. (4 lecture hours)

MATHEMATICS (MATH) 2270 (IAI MTH 912)
Differential Equations
4 Credit Hours
Equations of first order with applications, homogeneous linear equations of higher order with constant coefficients, non-homogeneous linear equations of higher order with constant coefficients, Laplace transform methods, applications of higher order differential equations, linear equations with variable coefficients, power series solutions, systems of linear equations, and numerical solutions of first order equations. Prerequisite: Mathematics 2233 with a grade of C or better. (4 lecture hours)

MATHEMATICS (MATH) 2300
Mathematical Proof
3 Credit Hours
This course serves as a transition to upper level mathematics with a focus on writing proofs. Topics include: propositional logic, predicate logic, set theory, mathematical induction, number theory, relations and functions. Prerequisite: Mathematics 2232 with a grade of C or better. (3 lecture hours)

MATHEMATICS (MATH) 2820
Advanced Selected Topics I
1 to 3 Credit Hours
Advanced exploration and analysis of selected mathematical topics with a specific theme indicated by course title listed in college class schedule. This course may be taken three times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. The precise prerequisites will vary according to the specific mathematical selected topic. (1 to 3 lecture hours)

MATHEMATICS (MATH) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

MATHEMATICS (MATH) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

MATHEMATICS (MATH) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

MATHEMATICS (MATH) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

MEDICAL ASSISTANT

MEDICAL ASSISTANT (MASST) 1130
Introduction to Medical Assisting
3 Credit Hours
Students will be introduced to the medical assistant profession. Concepts of communication, responsibilities of a medical assistant with an emphasis on medical records, appointment scheduling, and basic administrative procedures are included. Prerequisite: Health Sciences 1110 with a grade of C or better, or equivalent or Anatomy and Physiology 1500 with a grade of C or better, or equivalent and Computer Information Systems 1110 with a grade of C or better, or equivalent or Computer Information Systems 1150 with a grade of C or better, or equivalent or Office Technology Information 1200 with a grade of C or better, or equivalent or consent of instructor. Students must complete the required pre-registration requirements as stated in the Registration Packet. (2 lecture hours, 2 lab hours)

MEDICAL ASSISTANT (MASST) 1133
Practice Finance for Medical Assistants
3 Credit Hours
Students will be introduced to billing, coding, and health care insurance as it relates to physician offices. Introduction to accounts receivable functions and accounts payable procedures is also included. Prerequisite: Concurrent enrollment is required in Computer Information Systems 1110 or Computer Information Systems 1150 or consent of instructor. Students must complete the required pre-registration requirements as stated in the Registration Packet. (2 lecture hours, 2 lab hours)

MEDICAL ASSISTANT (MASST) 2211
Legal and Ethical Aspects of Health Care
3 Credit Hours
Legal and ethical aspects of health care with an emphasis on patient's rights, confidentiality, liability, code of ethics, documentation, consent, release of information and standard of care as they apply to medical assisting. Prerequisite: Health Sciences 1110 with a grade of C or better or equivalent or consent of instructor. Students must complete the required pre-registration requirements as stated in the Registration Packet. (3 lecture hours)

MEDICAL ASSISTANT (MASST) 2233
Pathophysiology for Med Assisting
3 Credit Hours
Students will explore the functional changes that accompany injuries, disorders, and disease states as they relate to medical assisting. Prerequisite: Concurrent enrollment is required in Medical Assisting 1130 and Anatomy & Physiology 1500 with a grade C or better, or equivalent or Anatomy & Physiology 1551 and Anatomy & Physiology 1552 with a grade of C or better, or equivalent, or Anatomy & Physiology 1571 and Anatomy & Physiology 1572 with a grade of C or better, or equivalent or consent of instructor. Students must complete the required pre-registration requirements as stated in the Registration Packet. (3 lecture hours)

MEDICAL ASSISTANT (MASST) 2237
Assisting With Medical Specialties
3 Credit Hours
Students will be introduced to clinical skills required for medical assistants in a variety of physician specialty offices including urgent care settings. Prerequisite: Medical Assistant 1130 with a grade of C or better, or equivalent or consent of instructor. Students must complete the required pre-registration requirements as stated in the Registration Packet. (2 lecture hours, 3 lab hours)

MEDICAL ASSISTANT (MASST) 2239
Medical Assistant Clinical Procedures
3 Credit Hours
Students will study clinical procedures performed by a medical assistant with an emphasis on medication administration, vital signs, patient navigation, nutrition, health promotion, and patient preparation. Prerequisite: Medical Assistant 1130 with a grade of C or better, or equivalent or consent of instructor. Students must complete the required pre-registration requirements as stated in the Registration Packet. (2 lecture hours, 3 lab hours)

MEDICAL ASSISTANT (MASST) 2245
Workplace Developmt for Medicl Assistant
2 Credit Hours
Students will be introduced to professionalism and communication skills for medical office personnel with an emphasis on successfully securing and retaining employment. Prerequisite: Medical Assistant

1130 with a grade of C or better or equivalent or consent of instructor. Students must complete the required pre-registration requirements as stated in the Registration Packet. (1 lecture, 2 lab hours)

MEDICAL ASSISTANT (MASST) 2250
Medical Assistant Practicum
3 Credit Hours
Integrated clinical practice in medical assisting with a minimum of 180 clinical contact hours in a qualified medical office. Prerequisite: Consent of instructor is required. Students must complete the required pre-registration requirements as stated in the Registration Packet.

MEDICAL ASSISTANT (MASST) 2253
Certified Medical Assistant Exam Prep
1 Credit Hour
Students will prepare for the medical assistant certification exam offered by the American Association of Medical Assisting (AAMA). The class will include a review of the theory and skills required for medical assisting. Prerequisite: Medical Assistant 1130 or consent of instructor. Students must complete the required pre-registration requirements as stated in the Registration Packet. (1 lecture hour)

MICROBIOLOGY

MICROBIOLOGY (MICRO) 1420
Microbiology
4 Credit Hours
The study of bacteria, viruses and other microbes. Included are identification techniques, microbial genetics, immunology, growth and control, an overview of those microbes important to man, and modern molecular issues. Intended for students in health, food and environmental fields as well as biology majors. BIOLO-1151 is strongly recommended. Prerequisite: Course requires Reading Placement Test Score-Category One (3 lecture hours, 3 lab hours)

MICROBIOLOGY (MICRO) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within microbiology to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

MICROBIOLOGY (MICRO) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

MICROBIOLOGY (MICRO) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

MICROBIOLOGY (MICRO) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Associate Dean from the academic discipline where the student is planning to earn credit.

MOTION PICTURE/TELEVISION

MOTION PICTURE/TELEVISION (MPTV) 1011
Intro to Motion Pictures & Television
3 Credit Hours
Hands-on introduction to motion pictures and television, emphasizing basic pre-production, production and post-production in animation, audio, television commercials and digital film shorts. Cameras, microphones and basic non-linear editing systems are used. (1 lecture hour, 4 lab hours)

MOTION PICTURE/TELEVISION (MPTV) 1020
Editing for Motion Pictures & Television
3 Credit Hours
Introduction to picture and sound editing for motion pictures and television. Explores editing aesthetics, theory and techniques using a non-linear editing system. Emphasis on creation and critique of pieces for in-class use. Material for editing is provided. (6 lab hours)

MOTION PICTURE/TELEVISION (MPTV) 1022 (IAI MC 915)
Audio for Motion Pictures and Television
3 Credit Hours
Introduction to audio production and post-production for motion pictures and television. Explores audio aesthetics, theory and techniques. Includes field and studio recording, multi-track mixing and audio editing. Prerequisite: Motion Picture/Television 1011 or consent of instructor. (6 lab hours)

MOTION PICTURE/TELEVISION (MPTV) 1111
Film/Video Aesthetics
3 Credit Hours
An introduction to film and video as an art form, including a study of the aesthetic and production elements of the medium. Emphasizes the use of visual and audio designs in cinematic storytelling.

Screenings, lectures and production projects will be used. (3 lecture hours)

MOTION PICTURE/TELEVISION (MPTV) 1113
Film History
3 Credit Hours
An international survey of the historical development of film, emphasizing a study of films and innovations in film production that have had significant influence on film as an art form. Screenings, lectures, discussions and production projects are used. (3 lecture hours)

MOTION PICTURE/TELEVISION (MPTV) 1120
Cinematography
3 Credit Hours
An introduction to camera and lighting techniques used in film and video productions. Emphasizes aesthetics, light placement, exposure, equipment, movement and crew roles. Prerequisite: Motion Picture/Television 1111 or consent of instructor. (6 lab hours)

MOTION PICTURE/TELEVISION (MPTV) 1213
History of Television
3 Credit Hours
A survey of the historical development of television, emphasizing a study of television innovations in television broadcast production. Screenings, discussions, and production projects will be used. (3 lecture hours)

MOTION PICTURE/TELEVISION (MPTV) 1220 (IAI MC 916)
Intro to Television Studio Production
3 Credit Hours
Introduction to multi-camera studio production and location video recording. Explores directing, techniques, operation of studio and control room, conceptualization, basic script writing, audio board operations and lighting in a studio setting. (6 lab hours)

MOTION PICTURE/TELEVISION (MPTV) 1222
Writing for Television
3 Credit Hours
Explores concepts and techniques relevant to screenwriting for sitcom, sketch, drama, news and corporate video production using the television medium. Utilizes screenwriting software. (3 lecture hours)

MOTION PICTURE/TELEVISION (MPTV) 1311
Introduction to Animation
3 Credit Hours
An introduction to the animated story and character creation using traditional techniques of character animation. (6 lab hours)

MOTION PICTURE/TELEVISION (MPTV) 1313
History of Animation
3 Credit Hours
Study the animated film from its origins through current times focusing on animation firsts, experimental animations, short subject, propaganda and features. The student explores animation as an art form and a means of self-expression. (1 lecture hour, 4 lab hours)

MOTION PICTURE/TELEVISION (MPTV) 1320
Experimental Animation
3 Credit Hours
Continued exploration of two-dimensional animation through the creation and screening of experimental animation projects. Students will be exposed to a variety of animation and story-telling techniques. Emphasis will be placed on non-traditional approaches to animation and story telling. Students will have the opportunity to develop their personal visual language through creating and screening their own experimental animations. (6 lab hours)

MOTION PICTURE/TELEVISION (MPTV) 1324
Motion Graphics and Special Effects I
3 Credit Hours
Explores basic and intermediate aspects of compositing, animating and creating special effects and motion graphics with compositing software. The student learns to add effects or enhance the look of existing footage or create entire animations from inception. Practical application and use of compositing software in the commercial world. (6 lab hours)

MOTION PICTURE/TELEVISION (MPTV) 1422
Writing & Reporting for TV News I
3 Credit Hours
Examines the fundamentals of television news style writing, including techniques for writing strong leads and conversational style scripts, as well as techniques of news gathering, reporting, and interviewing. Students face real time constraints while examining ethical issues and challenges facing today's broadcasters. (3 lecture hours)

MOTION PICTURE/TELEVISION (MPTV) 1423
Announcing and Performing Broadcast News
3 Credit Hours
Explores the role of on-camera talent in various television formats. Focuses on speech improvement through the study and practice of voice control, proper breathing, and diction. Includes an understanding of the role of the reporter and television news anchor, as well as the role of talent in entertainment genres. Prerequisite: Motion Picture/Television 1422 or equivalent or concurrent enrollment in Motion Picture/Television 1422 or consent of instructor. (6 lab hours)

MOTION PICTURE/TELEVISION (MPTV) 1431
Intro to Field Production & Editing
3 Credit Hours
Introduction to basic television news camera usage and editing, focusing on techniques used to gather video and sound for proper storytelling. Explores editing aesthetics, theory, and practices using a non-linear editing system. Prerequisite: Motion Picture/Television 1422 or equivalent or consent of instructor. (3 lecture hours)

MOTION PICTURE/TELEVISION (MPTV) 1800
Special Project
1 to 3 Credit Hours
Special project courses in the discipline cover topics not otherwise covered by general education courses and other courses in the catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30% but not to exceed 70%. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of the discipline concepts, theories, principles, and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic

requirements, field preparation, logistics, etc.) This course may be taken four times for credit as long as different titles are chosen.

MOTION PICTURE/TELEVISION (MPTV) 1820
Selected Topics I
3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (3 lecture hours)

MOTION PICTURE/TELEVISION (MPTV) 1822
Selected Topics II
3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (1 lecture hour, 4 lab hours)

MOTION PICTURE/TELEVISION (MPTV) 1823
Selected Topics III
3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (6 lab hours)

MOTION PICTURE/TELEVISION (MPTV) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (2 to 8 lab hours)

MOTION PICTURE/TELEVISION (MPTV) 2022
Screenwriting for Short Forms
3 Credit Hours
An introduction to screenwriting for motion pictures using short forms. Explores concepts and techniques relevant to screenwriting for features, shorts, television and individual scenes, including structure, characters, dialogue, action, and format. Credit cannot be given for both English 2255 and Motion Picture/Television 2022. (3 lecture hours)

MOTION PICTURE/TELEVISION (MPTV) 2031
Pre-Production for Motion Picture & TV
3 Credit Hours
An introduction to the duties of the motion picture or television producer in commercials, news, documentaries or narrative films. The pre-production process is emphasized, including the areas of problem solving, prioritization, team building, budgeting and scheduling. Prerequisite: Motion Picture/Television 1011 or consent of instructor. (3 lecture hours)

MOTION PICTURE/TELEVISION (MPTV) 2131
Film/Video Production
3 Credit Hours
An intermediate study in film and video production, integrating basic skills in screenwriting, producing and directing with further work in cinematography, sound and editing. Includes pre-production, production and post-production on short digital film or video projects for portfolio or festival use. Prerequisite: Motion Picture/Television 1020, Motion Picture/Television 1120 and Motion Picture/Television 2022 or consent of instructor. (6 lab hours)

MOTION PICTURE/TELEVISION (MPTV) 2133
Directing for Film/Video
3 Credit Hours
An introduction to concepts and techniques used in directing narrative motion pictures. Emphasizes script analysis, pre-visualization, casting, working with actors and working with crew. Prerequisite: Motion Picture/Television 1020, Motion Picture/Television 1120 and Motion Picture/Television 2022 or consent of instructor. (6 lab hours)

MOTION PICTURE/TELEVISION (MPTV) 2134
On-Location TV Production
3 Credit Hours
Emphasizes techniques for multi-camera on-location productions. Demonstrates how to produce live event production (sports, concerts, and government meetings). Introduces television production skills, the fundamentals of advanced directing, and offers in-depth, hands-on experiences with various television equipment. (6 lab hours)

MOTION PICTURE/TELEVISION (MPTV) 2140
Advanced Film/Video Production
3 Credit Hours
An advanced workshop in film and video production, emphasizing further work in producing and directing. Includes pre-production and production on one longer digital film or video project for portfolio or festival use. Prerequisite: Motion Picture/Television 2031, Motion Picture/Television 2131 and Motion Picture/Television 2133 or consent of instructor. (6 lab hours)

MOTION PICTURE/TELEVISION (MPTV) 2231
TV News Field Production
3 Credit Hours
The study and practice of techniques employed in shooting and editing television news. Emphasis is placed on proper field shooting techniques and news story editing. (6 lab hours)

MOTION PICTURE/TELEVISION (MPTV) 2233
Documentary Production
3 Credit Hours
Students are introduced to documentary filmmaking, emphasizing the technical and aesthetic aspects of documentary production. Production projects are geared toward the development of technical proficiency in small-format documentary pre-production, production and post-production. Prerequisite: Motion Picture/Television 1020 or consent of instructor (6 lab hours)

MOTION PICTURE/TELEVISION (MPTV) 2240
Advanced Television Production
3 Credit Hours
An advanced production course that emphasizes producing and directing techniques for television news. This class builds television production skills, introduces the fundamentals of advanced script writing, and offers more in-depth, hands-on experiences with various television equipment. (6 lab hours)

MOTION PICTURE/TELEVISION (MPTV) 2331
3-D Animation I
3 Credit Hours

An introduction to three-dimensional computer animation, including creating and modifying simple models, lights and camera placement, creating materials, and rendering. (6 lab hours)

MOTION PICTURE/TELEVISION (MPTV) 2333
Motion Graphics and Special Effects II
3 Credit Hours
Explores intermediate and advanced aspects of compositing, animating and creating special effects and motion graphics with compositing software. The student learns to add effects or enhance the look of existing footage or create entire animations from inception. Practical application and use of compositing software in the commercial world. Prerequisite: Motion Picture/Television 1324 with a grade of C or better, or consent of instructor (6 lab hours)

MOTION PICTURE/TELEVISION (MPTV) 2340
Three-Dimensional Animation II
3 Credit Hours
Advanced concepts in three-dimensional computer animation, allowing students to complete a portfolio-level animated project. Prerequisite: Motion Picture/Television 2331 or equivalent or consent of instructor. (6 lab hours)

MOTION PICTURE/TELEVISION (MPTV) 2342
Animation Portfolio
3 Credit Hours
Capstone course of the animation program assesses student competencies through problem-solving activities of the animation industry. Students focus on skill reinforcement and portfolio development. Prerequisite: Motion Picture/Television 1311, 1324 and 2331 with a grade of C or better or equivalent or consent of instructor. (6 lab hours)

MOTION PICTURE/TELEVISION (MPTV) 2422
Writing and Reporting II
3 Credit Hours
Expands on the fundamentals of television news style writing. Includes learning all facets of writing a television news package and the practice of writing more complex stories, such as features, profiles, follow-up stories, and sidebars. Prerequisite: Motion Picture/Television 1422 or equivalent or consent of instructor. (3 lecture hours)

MOTION PICTURE/TELEVISION (MPTV) 2431
Television News Producing
3 Credit Hours
Focuses on the skills necessary to create content and produce a television news rundown: choosing newsworthy stories, allotting time, and determining transitions with organization, variety, and structure. Students will produce a live television newscast. Prerequisite: Motion Picture/Television 2422 or equivalent or concurrent enrollment in Motion Picture/Television 2422 or consent of instructor. (6 lab hours)

MOTION PICTURE/TELEVISION (MPTV) 2440
Advanced On-Air Broadcasting
3 Credit Hours
Capstone production course that emphasizes creating a student produced newscast. Students practice and experience anchoring, reporting, producing, shooting, and editing regularly scheduled on-air programming. Students will have the opportunity to create a resume portfolio. Prerequisite: Motion Picture/Television 2133, Motion Picture/Television 2431 and Motion Picture/Television 2422 or consent of instructor. (6 lab hours)

MOTION PICTURE/TELEVISION (MPTV) 2820
Advanced Selected Topics I
3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (3 lecture hours)

MOTION PICTURE/TELEVISION (MPTV) 2822
Advanced Selected Topics II
3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: At least one course in the discipline or consent of instructor. (1 lecture hour, 4 lab hours)

MOTION PICTURE/TELEVISION (MPTV) 2823
Advanced Selected Topics III
3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: At least one course in the discipline or consent of the instructor. (6 lab hours)

MOTION PICTURE/TELEVISION (MPTV) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

MOTION PICTURE/TELEVISION (MPTV) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

MUSIC

MUSIC (MUSIC) 1100 (IAI F1 900)
Music Appreciation
3 Credit Hours
A general introductory course designed to enhance listening enjoyment and ability. Emphasis on the elements of music, the

characteristic styles of major historical periods, and the lives and works of key composers within the Western musical tradition. Course includes in-class demonstrations and attendance at outside musical events. No previous musical study required. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

MUSIC (MUSIC) 1101
Music Theory I
3 Credit Hours
Introductory studies in music including fundamentals, figured bass realization, analysis of small structures and music writing. Emphasis on diatonic harmony. Simultaneous enrollment in Music 1107 and Music 1171 is required. Prerequisite: Concurrent enrollment in Music 1107 and Music 1171 is required or consent of instructor. Course requires Reading Placement Test Score-Category One. (3 lecture hours)

MUSIC (MUSIC) 1102
Music Theory II
3 Credit Hours
Continued studies in music including figured bass realization, analysis of small forms and music writing. Emphasis on diatonic harmony. Simultaneous enrollment in Music 1108 and Music 1172 is required. Prerequisite: Music 1101 with grade of C or better, or equivalent and concurrent enrollment in Music 1108 and Music 1172 is required or consent of instructor. Course requires Reading Placement Test Score-Category One. (3 lecture hours)

MUSIC (MUSIC) 1104 (IAI F1 904)
Introduction to American Music
3 Credit Hours
A survey of various American contributions to the world's musical culture, with an emphasis on understanding musical terminology and developing the ability to listen intelligently. No previous musical experience is required. Musical examples will include 19th century classical compositions and subsequent gospel, blues, jazz and popular music, presented within a general overview of American culture of the time. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

MUSIC (MUSIC) 1105
Music Literature
3 Credit Hours
Introduction to the characteristic styles of major historical periods and to representative composers. Provides exposure to different performing media and musical forms. Includes in-class demonstrations, extensive listening, and attendance at outside musical events. Assumes a fundamental knowledge of the elements of music. Designed to increase the understanding of music literature through emphasis on development of musical vocabulary. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

MUSIC (MUSIC) 1106
Fundamentals of Music
3 Credit Hours
An introduction to the rudiments of music theory and musical notation, including pitch, rhythm, meter, intervals, scales, chords, and musical terminology. Includes elementary ear-training and sight-singing, as well as the study of keyboard geography. No previous musical experience is required. Does not count toward the AFA degree in music. (3 lecture hours)

MUSIC (MUSIC) 1107
Aural Skills I
1 Credit Hour
The study of eartraining and sightsinging utilizing diatonic materials. Course content includes the recognition of intervals, scales and modes, as well as dictation of melodic, harmonic and rhythmic material reinforcing concepts presented in Music 1101. Student must be registered concurrently in Music 1101 and Music 1171. Prerequisite: Concurrent enrollment in Music 1101 and Music 1171 is required or consent of instructor. Course requires Reading Placement Test Score - Category One. (3 lab hours)

MUSIC (MUSIC) 1108
Aural Skills II
1 Credit Hour
The continued study of eartraining and sightsinging utilizing diatonic materials. Course content includes the recognition of chords and dictation of melodic, harmonic and rhythmic material reinforcing concepts presented in Music 1102. Student must be registered concurrently in Music 1102 and Music 1172. Prerequisite: Music 1107 with grade of C or better, or equivalent and concurrent enrollment in Music 1102 and Music 1172 is required or consent of instructor. Course requires Reading Placement Test Score-Category One. (3 lab hours)

MUSIC (MUSIC) 1113
Survey of Music Business
3 Credit Hours
An overview of the business of music as practiced in the United States. Explores several facets of the music industry, including music merchandising, production, publishing, online distribution, public relations, and diverse career paths in arts management. (3 lecture hours)

MUSIC (MUSIC) 1115 (IAI F1 903N)
Introduction to World Music
3 Credit Hours
An introduction to the great variety of musical styles from around the world. Examines representative music of the non-Western world, with an emphasis on its function within the culture of which it is a part. No previous musical experience is required. Emphasizes an understanding of basic musical terminology and the development of improved listening skills. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

MUSIC (MUSIC) 1120
College of Dupage Concert Choir
1 Credit Hour
The Concert Choir is a non-auditioned ensemble that sings outstanding choral works of many styles, genres and eras. Repertoire includes short and medium-length works. This course may be taken four times for credit. (3 lab hours)

MUSIC (MUSIC) 1125
College of Dupage Jazz Choir
1 Credit Hour
The Jazz Choir performs vocal jazz literature representing many styles, including swing, ballad, bebop, Latin and contemporary selections. Study includes improvisation, ensemble singing and microphone technique. This course may be taken four times for credit. Prerequisite: Audition required. (3 lab hours)

MUSIC (MUSIC) 1130
College of Dupage Chamber Singers
1 Credit Hour
The Chamber Singers specialize in vocal chamber music of all periods with particular emphasis on Renaissance madrigal and motets, music of the 20th century, and the music of many cultures. Contemporary music includes major composers, avant-garde music and arrangements of folk, ethnic and popular music. This course may be taken four times for credit. Prerequisite: Audition required and consent of instructor. (3 lab hours)

MUSIC (MUSIC) 1140
Symphony Orchestra
1 Credit Hour
Preparation and performance of standard orchestral literature. Placement audition recommended. This course may be taken four times for credit. Prerequisite: Placement audition may be requested of new members. (3 lab hours)

MUSIC (MUSIC) 1141
Chamber Orchestra
1 Credit Hour
Preparation and performance of music for small orchestra. This course may be taken four times for credit. Prerequisite: Placement audition may be requested of new members. (3 lab hours)

MUSIC (MUSIC) 1150
Dupage Chorale
1 Credit Hour
A large community chorus that performs choral concerts, often in conjunction with a professional orchestra. Repertoire includes standard choral works by Bach, Handel, Mozart and Brahms, as well as modern masterpieces by Orff, Poulenc, Stravinsky and others. Also performs shorter choral works, sacred and secular, American and international, contemporary and historical. No audition necessary. This course may be taken four times for credit. (3 lab hours)

MUSIC (MUSIC) 1170
Class Voice
2 Credit Hours
A basic introduction to the art of singing and the techniques of voice production. Breathing, phrasing and interpretation. Participation in choral performance groups strongly recommended. (2 lecture hours)

MUSIC (MUSIC) 1171
Class Piano I
1 Credit Hour
Introductory piano for the music major with little or no prior keyboard study. Emphasizes development of basic keyboard skills, music reading, and conceptual understanding pertinent to early level study. Includes introduction to transposition, harmonization, sight reading, improvisation, and basic keyboard repertoire. Prerequisite: Concurrent enrollment in Music 1101 and Music 1107 is required or consent of instructor. (2 lab hours)

MUSIC (MUSIC) 1172
Class Piano II
1 Credit Hour
Continued group piano study for the non-keyboard music major. Emphasizes major and minor scales, arpeggios, chord inversions, seventh chords, modes, and pedaling, as well as further exploration of transposition, harmonization, sight reading, improvisation, and later elementary-level repertoire. Prerequisite: Music 1171 with a grade of C or better or equivalent and concurrent enrollment in Music 1102 and Music 1108 or consent of instructor. (2 lab hours)

MUSIC (MUSIC) 1175
Applied Music: Non-Major
1 Credit Hour
Private instrumental or vocal instruction to develop musical skills primarily for personal enrichment. Concurrent enrollment in one of the college's instrumental or vocal groups is recommended. This course may be taken four times for credit. (0.5 lecture hour, 1 lab hour)

MUSIC (MUSIC) 1178
Voice Performance Workshop
1 Credit Hour
A workshop for the development of the student's complete vocal performance. Class focuses on interpretation, dramatic presentation and musicianship of the singer. This course may be taken four times for credit. Prerequisite: Music 1170 or equivalent or Music 1175 or equivalent in voice, or Music 1185 or equivalent in voice, or consent of instructor. (2 lab hours)

MUSIC (MUSIC) 1180
Community Band
1 Credit Hour
A community band without audition, open to wind, brass and percussion players of all ages. Performances feature marches, orchestral transcriptions, popular works for band, and solos by band members. Rehearsals include concert preparation, sight reading and sectional practice in a supportive atmosphere. This course may be taken four times for credit. (3 lab hours)

MUSIC (MUSIC) 1181
Dupage Community Jazz Ensemble
1 Credit Hour
DuPage Community Jazz Ensemble is a big band with expanded traditional instrumentation that rehearses weekly and performs at least three times during the academic year. Placement audition is recommended. This course may be taken four times for credit. (3 lab hours)

MUSIC (MUSIC) 1185
Applied Music Ii: Music Major
2 Credit Hours
Private instrumental or vocal instruction for students planning to continue music studies at a baccalaureate-granting institution. Concurrent enrollment in one of the college's instrumental or vocal groups is recommended. This course may be taken four times for credit. Faculty assessment recommended to determine if student has technical skills necessary for baccalaureate study. (1 lecture hour, 2 lab hours)

MUSIC (MUSIC) 1190
Small Group Jazz Ensemble
1 Credit Hour
An ensemble designed to address the fundamental concepts of jazz performance. Includes reading a jazz lead sheet, improvising over various forms common in jazz, and constructing small-group arrangements. This course may be taken four times for credit. Placement audition recommended. (3 lab hours)

MUSIC (MUSIC) 1192
Percussion Ensemble
1 Credit Hour
A chamber ensemble that studies and performs repertoire written specifically for the percussion family as well as transcriptions adaptable to percussion. This course may be taken four times for credit. Prerequisite: Audition required. (3 lab hours)

MUSIC (MUSIC) 1193
Guitar Ensemble
1 Credit Hour
Guitar Ensemble is a large chamber ensemble that performs 20th century American music. This course may be taken four times for credit. (2 lab hours)

MUSIC (MUSIC) 1195
Opera Workshop
1 Credit Hour
Study of opera and musical theatre repertoire as developed through ensemble participation. Students will develop performances of solos and ensembles from musical theatre and opera works with emphasis on text and character analysis, musical and dramatic decision-making, and presentation. This course may be taken four times for credit. Prerequisite: Music 1170 or equivalent or Music 1175 or equivalent in voice, or Music 1185 or equivalent in voice, or consent of instructor. (3 lab hours)

MUSIC (MUSIC) 1200
Group Piano for Non-Music Majors
1 Credit Hour
An introduction to the basics of piano playing, including keyboard skills, musical notation, aural awareness, music theory fundamentals, and elementary repertoire. Designed to accommodate students with little or no prior musical training. Does not count toward the Associate in Fine Arts degree in music. (2 lab hours)

MUSIC (MUSIC) 1820
Selected Topics I
1 to 3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (1 to 3 lecture hours)

MUSIC (MUSIC) 1840
Independent Study - Individualized
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. Course requires Reading Placement Test Score-Category One. (1 to 4 lecture hours)

MUSIC (MUSIC) 2201
Music Theory III
3 Credit Hours
Continued studies in music including figured bass realization, analysis of larger musical forms, and music writing. Emphasis on chromatic harmony. Simultaneous enrollment in Music 2207 and Music 2271 is required. Prerequisite: Music 1102 with a grade of C or better, or equivalent and concurrent enrollment in Music 2207 and Music 2271 is required or consent of instructor. Course requires Reading Placement Test Score-Category One. (3 lecture hours)

MUSIC (MUSIC) 2202
Music Theory IV
3 Credit Hours
Continued studies in music including figured bass realization, music analysis and music writing. Emphasis on post-romantic and 20th century techniques and styles. Simultaneous emrollment in Music 2208 and Music 2272 is required. Prerequisite: Music 2201 with a grade of C or better, or equivalent and concurrent enrollment in Music 2208 and Music 2272 is required or consent of instructor. Course requires Reading Placement Test Score-Category One. (3 lecture hours)

MUSIC (MUSIC) 2207
Aural Skills III
1 Credit Hour
Continued study of eartraining and sightsinging utilizing chromatic materials. Includes recognition of melodic and harmonic chromaticism, as well as dictation of melodic, harmonic and rhythmic material reinforcing concepts presented in Music 2201. Student must be registered concurrently in Music 2201 and Music 2271. Prerequisite: Music 1108 with a grade of C or better, or equivalent and concurrent enrollment in Music 2201 and Music 2271 is required or consent of instructor. Course requires Reading Placement Test Score-Category One. (3 lab hours)

MUSIC (MUSIC) 2208
Aural Skills IV
1 Credit Hour
Continued study of eartraining and sightsinging. Includes the recognition of chromatic and 20th century melodic and harmonic techniques, and dictation of melodic, harmonic and rhythmic material reinforcing concepts presented in Music 2202. Student must be registered concurrently in Music 2202 and Music 2271. Prerequisite: Music 2207 with a grade of C or better, or equivalent and concurrent enrollment in Music 2202 and Music 2271 is required or consent of instructor. Course requires Reading Placement Test Score-Category One. (3 lab hours)

MUSIC (MUSIC) 2211
Recording Techniques I
3 Credit Hours
An introduction to studio recording techniques. Examines the history of electro-acoustic music as well as the basics of physical acoustics. The audio production console, microphones and effect processing are examined in detail. Different methods of sound synthesis are explained with an emphasis on microcomputer applications and the MIDI (Musical Instrument Digital Interface) standard. Recommended: Music 1100 or Music 1101 with a grade of C or better, or equivalent. Prerequisite: Course requires Reading Placement Test Score-Category One. (2 lecture hours, 3 lab hours)

MUSIC (MUSIC) 2212
Recording Techniques II
3 Credit Hours
Theory and techniques of digital recording and editing with an overview of analog tape recording. Studio construction, synchronization methods, CD production and magneto-optical media are studied. Formats of digital storage are presented with an emphasis on surround sound and high definition audio. Prerequisite: Music 2211 with a grade of C or better, or equivalent. Course requires Reading Placement Test Score-Category One. (2 lecture hours, 3 lab hours)

MUSIC (MUSIC) 2271
Class Piano III
1 Credit Hour
Continued group piano study for the non-keyboard music major. Includes major and minor scales, major and minor triads, arpeggios, chord inversions, seventh chords, secondary chords, modulation, sonata, and variation form, as well as further exploration of transposition, harmonization, sight reading, score reading, accompaniment, ensemble pieces, and early intermediate-level repertoire. Prerequisite: Music 1172 with a grade of C or better and concurrent enrollment in Music 2201 and Music 2207 or consent of instructor. (2 lab hours)

MUSIC (MUSIC) 2272
Class Piano IV
1 Credit Hour
ntinued group piano study for the non-keyboard music major. Includes major and minor scales, major and minor triads, arpeggios, chord inversions, seventh chords, secondary chords, modulation, augmented sixth chords, the Neapolitan sixth chord, modes, sonata form, variation form, and rondo form, as well as further exploration of transposition, harmonization, sight reading, score reading, accompaniment and ensemble pieces, and intermediate-level repertoire. Prerequisite: Music 2271 with a grade of C or better and concurrent enrollment in Music 2202 and Music 2208 or consent of instructor. (2 lab hours)

MUSIC (MUSIC) 2275
Introduction to Piano Pedagogy
2 Credit Hours
A study in the art of teaching piano, with emphasis given to the teaching of beginning and elementary level students. Examines theoretical and practical concepts related to the teaching of piano. Open to those who have no previous teaching experience, as well as those who may already be teaching piano. Prerequisite: At least two years previous piano study. Course requires Reading Placement Test Score-Category One. (2 lecture hours)

MUSIC (MUSIC) 2820
Advanced Selected Topics I
3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college course schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: At least one course in the discipline or consent of instructor. (3 lecture hours)

MUSIC (MUSIC) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

MUSIC (MUSIC) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

MUSIC (MUSIC) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

MUSIC (MUSIC) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

NURSING

NURSING (NURSI) 1100
Introduction to Health Care
3 Credit Hours
Concepts and principles related to health, health care delivery and nursing. Emphasis is placed on the communication process and the impact of culture, ethnicity and spirituality on health-seeking behaviors. Concepts of interdisciplinary health teams and theoretical foundation of beginning nursing skills are introduced. Strategies for success in the nursing program are introduced. Prerequisite: Admission to Nursing program or consent of instructor. (3 lecture hours)

NURSING (NURSI) 1101
Nursing I: Fundamentals
3 Credit Hours
Fundamentals of nursing practice including major concepts, basic knowledge, and nursing skills related to the care of clients are introduced. Assessment of the client such as physical assessment, culture, pharmacology, and the nursing process are a main focus. Lecture, discussion, and college and clinical practice

laboratories are used as learning experiences. Clinical experiences include acute and/or non-acute settings. Prerequisite: Admission to Nursing program, Nursing 1100, current CNA in Illinois, Anatomy & Physiology 1552 or Anatomy & Physiology 1572. (1.5 lecture hours, 4 lab hours)

NURSING (NURSI) 1102
Nursing 2: Mental Health
3 Credit Hours
Enhancement of the mental health of individuals across the life span. Nursing management of the major clinical syndromes, primary prevention, early intervention of alterations in thoughts, moods, and behavior. Role of the professional nurse as a partner in a multidisciplinary team. Clinical experiences include acute care hospitals, behavioral health centers, and related treatment settings. Prerequisite: Nursing 1101. (2 lecture hours, 4 lab hours)

NURSING (NURSI) 1103
Nur 3: Periop/Musculo
3 Credit Hours
Care of the surgical client during the perioperative period and clients experiencing musculoskeletal problems. Lecture, discussion, laboratory, and clinical practice are used as learning experiences. Nursing skills basic to the care of the medical-surgical client. Clinical experiences include acute and/or non-acute settings. Prerequisite: Nursing 1101. (1 lecture hour, 5 lab hours)

NURSING (NURSI) 1104
Introduction to Physical Assessment
1 Credit Hour
Theory and skills related to history taking, physical assessment and completing a head-to-toe assessment of the adult patient. Significant assessment differences in the pediatric patient is discussed. Prerequisites: Admission to Nursing program and Nursing 1100 with a grade of C or better or equivalent. (1 lecture hour)

NURSING (NURSI) 1105
Medical-Surgical I
7 Credit Hours
Principles of nursing practice including major concepts, basic knowledge and nursing skills related to the care of patients are introduced. Pharmacology, pain control, nursing process, care of the surgical patient, and care of patients with alterations in: musculoskeletal system, skin integrity, fluid and electrolytes and shock states (hypovolemic and septic) are main foci. Lecture, discussion, college laboratories and clinical practice are used as learning experiences. Clinical experiences include acute and/or non-acute settings. Prerequisite: Admission to Nursing program, Nursing 1100 with a grade of C or better, Anatomy & Physiology 1552 or Anatomy & Physiology 1572 with a grade of C or better and current CNA in Illinois. (4 lecture hours, 8 lab hours)

NURSING (NURSI) 1120
Role of the Nurse I
1 Credit Hour
Introduction to essential concepts and core values of the nursing profession within the context of the four domains: nursing, individual, health, and environment. Emphasis is placed on nursing process, communication, health promotion, practice standards, and the various roles of the nurse in the delivery of healthcare. Prerequisite: Admission to Nursing program and Microbiology 1420 with a grade of C or better, or equivalent or concurrent enrollment in Microbiology 1420. (1 lecture hour)

NURSING (NURSI) 1130
Introduction to Core Concepts
4 Credit Hours
Introduction to essential concepts and core values of health within the context of the four domains: nursing, individual, health, and environment. Emphasis on development, functional ability, nutrition, elimination, homeostasis, care giving, and safety. Prerequisite: Admission to Nursing program and Nursing 1120 with a grade of C or better or equivalent, Nursing 1140 with a grade of C or better, or equivalent, Microbiology 1420 with a grade of C or better, or equivalent and Nursing 1150 with a grade of C or better, or equivalent or concurrent enrollment in Nursing 1150. (2 lecture hours, 4 lab hours)

NURSING (NURSI) 1140
Physical Assessment
2 Credit Hours
Theoretical basis for assessing the health status of individuals with an emphasis on cultural diversity and age related differences. Application of cognitive, psychomotor, communication, and critical thinking skills in conducting a health assessment. Assists the students in identifying and communicating normal and abnormal findings. Prerequisite: Admission to Nursing program and Microbiology 1420 with a grade of C or better, or equivalent or concurrent enrollment in Microbiology 1420. (1 lecture hour, 2 lab hours)

NURSING (NURSI) 1150
Pathophysiology-Altered Health Concepts
3 Credit Hours
Principles of normal and altered physiology. Disease states and alterations in health status throughout the lifespan, incorporating diverse populations. Overview of common disease processes and their impact on homeostasis. Prerequisite: Admission to Nursing program and Microbiology 1420 with a grade of C or better, or equivalent or concurrent enrollment in Microbiology 1420. (3 lecture hours)

NURSING (NURSI) 1160
Foundations of Pharmacology
2 Credit Hours
Students will be introduced to the principles of pharmacodynamics, pharmacokinetics, and medication administration. Students learn preparations for safe administration of pharmaceutical agents to populations across the lifespan. The emphasis is on drug classification, dosage calculation, drug action, side effects, nursing implications, and patient education. Prerequisite: Admission to the Nursing program is required and Nursing 1120 with a grade of C or better, or equivalent, Nursing 1140 with a grade of C or better, or equivalent, Nursing 1150 with a grade of C or better, or equivalent and Microbiology 1420 with a grade of C or better, or equivalent or concurrent enrollment in Microbiology 1420. (2 lecture hours)

NURSING (NURSI) 1204
Nur 4: Integ/Geri/Oncology
4 Credit Hours
Special needs and care of the geriatric client. The integumentary system, men's and women's health, oncology, grieving, death and dying will be introduced. Laboratory introduces additional nursing skills basic to the care of medical-surgical clients. Clinical experiences include acute and/or non-acute settings. Prerequisite: Nursing 1103. (2 lecture hours, 7 lab hours)

NURSING (NURSI) 1205
Nursing 5: Childbearing Family
4 Credit Hours
Nursing care of the family during the reproductive years. Emphasis on the childbearing process, wellness of the family, and maintenance of health. Adverse outcomes of pregnancy and care of the well child are presented. Clinical experiences include acute and/or non-acute settings. Prerequisite: Nursing 1103. (2 lecture hours, 6 lab hours)

NURSING (NURSI) 1206
Medical-Surgical 2
3 Credit Hours
Application of the nursing process in the care of patients with diabetes mellitus, gerontological, oncological, acid-base and male reproductive disorders. Lecture, discussion, laboratory and clinical practice are used as learning experiences. Clinical Experiences include acute and/or non-acute settings. Prerequisite: Nursing 1104, Nursing 1105 and Psychology 2237 or consent of instructor. (1 lecture, 5.5 lab hours)

NURSING (NURSI) 1207
Childbearing Family
5 Credit Hours
Nursing care of the woman and family during the reproductive years. Focus on the childbearing process and wellness of the family in the childbearing years. Women's health and wellness is emphasized. Adverse outcomes of pregnancy are presented. Care of the well and hospitalized child and family are discussed. Clinical experiences include acute and ambulatory care settings, as well as community based experiences. Prerequisites: Nursing 1104, Nursing 1105 and Psychology 2237 or consent of instructor. (2.5 lecture hours, 7 lab hours)

NURSING (NURSI) 1208
Neuropsychiatric Nursing
5 Credit Hours
Application of the nursing process to management of psychiatric and neuropsychiatric disorders. Mental health enhancement of diverse populations. Not the role of the professional nurse as partner in a multidisciplinary team. Lecture discussion, laboratory, and clinical practice are used as learning experiences. Prerequisite: Nursing 1104, Nursing 1105 and Psychology 2237 or consent of instructor. (2.5 lecture hours, 7 lab hours)

NURSING (NURSI) 1210
LPN to ADN Transition
4 Credit Hours
Advanced concepts and skills used by the Registered Nurse when caring for patients with normal and common health problems requiring perinatal, mental health, and general medical/ surgical interventions. Application of the nursing process for health promotion, health maintenance, and disease prevention. Nursing skills and techniques are developed and demonstrated in the nursing skills laboratory. Includes intravenous therapy and medications administered through central lines. Prerequisite: Students must be a licensed practical nurse and provisionally admitted to the Nursing program. (2.5 lecture hours, 3 lab hours)

NURSING (NURSI) 1220
Health and Illness Concepts I
5 Credit Hours
Expands upon the essential concepts of health and illness within the context of the four domains: nursing, individual, health, and environment. Emphasis on human response to chronic alterations in multidimensional processes and restoration of homeostasis. Prerequisite: Nursing 1130 with a grade of C or better or equivalent, Nursing 1160 with a grade of C or better or equivalent, Microbiology 1420 with a grade of C or better, or equivalent and English 1101 with a grade of C or better, or equivalent or concurrent enrollment in English 1101 and Psychology 2237 with a grade of C or better, or equivalent or concurrent enrollment in Psychology 2237. (2 lecture hours, 6 lab hours)

NURSING (NURSI) 1230
Family Health Concepts I
5 Credit Hours
Conceptual principles and values of providing multidimensional nursing care to individuals, children, and families within the context of the four domains: nursing, Individual, health, and the environment. Emphasis on health, wellness, and illness throughout the lifespan. Prerequisite: Nursing 1130 with a grade of C or better, or equivalent, Nursing 1160 with a grade of C or better, or equivalent, Microbiology 1420 with a grade of C or better, or equivalent and English 1101 with a grade of C or better, or equivalent or concurrent enrollment in English 1101 and Psychology 2237 with a grade of C or better, or equivalent or concurrent enrollment in Psychology 2237. (2 lecture hours, 6 lab hours)

NURSING (NURSI) 1305
Pharmacotherapeutics
2 Credit Hours
Concepts necessary for the pharmacological management of common health problems. Includes dosage calculations. Prerequisite: Admission to Nursing Program and Nursing 1105 or consent of instructor. (2 lecture hours)

NURSING (NURSI) 1328
Physical Assessment of the Adult Client
2 Credit Hours
Theory and skills relevant to history taking and physical assessment of adult patients. Head-to-toe assessment of the adult and special populations are included. Prerequisite: Practicing RN or completion of Nursing 1205 or consent of instructor; program admission approval required. (0.5 lecture hour, 3 lab hours)

NURSING (NURSI) 1840
Independent Study - Individualized
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

NURSING (NURSI) 2100
Review of Basic Nursing Skills
0.5 Credit Hours
A laboratory course for ADN students that provides for the practice of nursing skills basic to the practice of nursing. Prerequisite: Nursing 1206 or equivalent or consent of instructor; Admission to Nursing program is required. (1 lab hour)

NURSING (NURSI) 2106
Nursing 6: Cardiac/Respiratry/Hosp Child
4 Credit Hours

Application of the nursing process in the care of clients of all age groups with cardiovascular and respiratory disorders. Care of the hospitalized child is included. Laboratory introduces additional nursing skills basic to the care of the cardiac/respiratory client. Clinical experiences include acute and/or non-acute settings. Prerequisite: Nursing 1205, Microbiology 1420, Culinary Arts 1110, and Psychology 2230 or Psychology 2237. (2 lecture hours, 5.5 lab hours)

NURSING (NURSI) 2107
Nursing 7: Renal/Endocrine
4 Credit Hours
Application of nursing process in the care of clients of all age groups with renal, endocrine, diabetes, hepatic, biliary, and pancreatic disorders. Laboratory introduces additional nursing skills basic to the care of the diabetic patient. Clinical experiences include acute and/or non-acute settings. Prerequisite: Nursing 1205. (2 lecture, 6.50 lab hours)

NURSING (NURSI) 2109
Medical-Surgical 3
5 Credit Hours
Application of the nursing process in the care of clients of all age groups with cardiovascular, respiratory, and endocrine disorders. Clinical experiences include acute and/or non-acute settings. Lecture, discussion and clinical practice are used as learning experiences. Prerequisite: Nursing 1206 with a grade of C or better, or equivalent, Nursing 1207 with a grade of C or better, or equivalent and Nursing 1208 with a grade of C or better, or equivalent. (2.5 lecture hours, 7.5 lab hours)

NURSING (NURSI) 2110
Contemporary Issues in Nursing
2 Credit Hours
Current issues and trends in professional nursing are explored. Career opportunities for professional registered nurses are discussed. Components of professional nurse practice act are explored. Prerequisite: Admission to Nursing program is required and Nursing 1206 with a grade of C or better and Nursing 1207 with a grade of C or better or Nursing 1208 with a grade of C or better, or Nursing 1210 with a grade of C or better for ADN bridge students (2 lecture hours)

NURSING (NURSI) 2120
Health and Illness Concepts II
5 Credit Hours
Further explores concepts of health and illness within the context of the four domains: nursing, individual, health, and environment. Emphasis on human response to acute alterations in multidimensional processes and restoration of homeostasis. Prerequisite: Nursing 1220 with a grade of C or better or equivalent, Nursing 1230 with a grade of C or better, or equivalent, English 1101 with a grade of C or better, or equivalent and Psychology 2237 with a grade of C or better or equivalent. (2 lecture hours, 6 lab hours)

NURSING (NURSI) 2130
Family Health Concepts II
5 Credit Hours
Further explores the conceptual principles and values of providing multidimensional nursing care to individuals, children, and families within the context of the four domains: nursing, individual, health, and the environment. Emphasis on health, wellness, and illness throughout the lifespan. Prerequisite: Nursing 1220 with a grade of C or better, or equivalent, Nursing 1230 with a grade of C or better, or equivalent, English 1101 with a grade of C or better, or equivalent, and Psychology 2237 with a grade of C or better, or equivalent. (2 lecture hours, 6 lab hours)

NURSING (NURSI) 2160
Pharmacology & Disease Processes
1 Credit Hour
Students will explore the relationship between medication and disease processes. Emphasis will be on reactions to medications, both therapeutically and adversely, in order to predict potential drug interactions. The focus is on critically ill patients across the lifespan, emphasizing medication management of intravenous therapy, drug titration, parenteral nutrition, and medication administration via central lines and epidural routes. Prerequisite: Admission to the Nursing Program is required. Nursing 1160 with a grade of C or better, or equivalent and Nursing 1220 with a grade of C or better, or equivalent and Nursing 1230 with a grade of C or better or equivalent or consent of instructor. (1 lecture hour)

NURSING (NURSI) 2201
Medical-Surgical 4
10 Credit Hours
Application of the nursing process in the care of patients of all age groups with burns, gastrointestinal, hepatic, pancreatic, biliary, renal, hematological, immunological, neurological, and sensory (eye/ear) disorders. Integration of theory for the management of acute and chronic conditions including concepts of emergency care, basic first aid, sexually transmitted diseases and domestic violence. Concepts of community nursing including home care are introduced. Clinical experiences include acute and/or non-acute settings. Prerequisite: Nursing 2109. (5 lecture hours, 15 lab hours)

NURSING (NURSI) 2202
Clinical Decision Making
1 Credit Hour
Cumulative integration of concepts learned throughout the nursing curriculum. Emphasis will be placed on analysis of critical thinking skills and synthesis of clinical decision making through evaluation of case studies and clinical simulations. Prerequisite: Nursing 2109. (1 lecture hour)

NURSING (NURSI) 2208
Nursing 8: GI/Neuro/Eye
4 Credit Hours
Application of the nursing process in the care of clients of all age groups with gastrointestinal, neurological, and sensory (eye and ear) disorders. Laboratory introduces additional nursing skills basic to the care of the gastrointestinal client. Clinical experiences include acute and/or non-acute settings. Prerequisite: Nursing 2107. (2 lecture hours, 6 lab hours)

NURSING (NURSI) 2209
Nursing 9: Heme/Immun/Emerg
3 Credit Hours
Integration of theory with nursing skills for the management of acute and chronic conditions including hematological and immunological disorders. Examines care of the organ transplant client. Integrates previously learned disorders with nursing management of clients with traumatic injury and/or organ failure. Principles of client triaging are introduced. Clinical experiences include acute and/or non-acute settings. Prerequisite: Nursing 2107. (2 lecture hours, 4 lab hours)

NURSING (NURSI) 2210
Nursing 10: Community/Burns/Dom Violence
2 Credit Hours
Concepts of community nursing including home care are introduced. Care of the burn victim and the victim of domestic violence is included. Emphasis is placed on the application of the nursing process to clients requiring healthcare in community settings. Laboratory introduces additional nursing skills basic to the care of the client in the community setting. Clinical experiences include acute and non-acute settings. Prerequisite: Nursing 2107. (2 lecture hours, 3 lab hours)

NURSING (NURSI) 2320
Complex Health Problems
5 Credit Hours
Students will explore complex health and illness concepts within the context of the four domains: nursing, individual, health, and environment. Prerequisite: Nursing 2120 with a grade of C or better or equivalent, Nursing 2130 with a grade of C or better, or equivalent, Nursing 2160 with a grade of C or better, or equivalent and Speech 1100 or Speech 1120 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 6 lab hours)

NURSING (NURSI) 2330
Role of the Nurse II
1 Credit Hour
Synthesis of concepts and 2302 context of the four domains: nursing, individual, health and environment. Emphasis is placed on leadership, professionalism, collaboration and safety as a member of an interdisciplinary healthcare team in a dynamic healthcare system. Prerequisite: Nursing 2120 with a grade of C or better, or equivalent, Nursing 2130 with a grade of C or better, or equivalent, Nursing 2160 with a grade of C or better, or equivalent and Speech 1100 or Speech 1120 with a grade of C or better, or equivalent or consent of instructor. (1 lecture hour)

NURSING (NURSI) 2340
Clinical Decision Making Practicum
3 Credit Hours
Assimilation of concepts within the context of the four domains: nursing, individual, health, and environment. Emphasis on accountability for practice, collaboration as a member of the health care team, and management of the care of a group of patients. Prepares the student to transition to the role of registered professional nurse under the guidance and supervision of a nurse preceptor. Prerequisite: Nursing 2320 with a grade of C or better, or equivalent, Nursing 2330 with a grade of C or better or equivalent and Speech 1100 or Speech 1120 with a grade of C or better, or equivalent or consent of instructor. (9 lab hours)

NURSING (NURSI) 2350
Nursing Update
7 Credit Hours
Intended for the registered nurse who has been inactive in nursing for a period of time or whose license has lapsed. Theoretical and clinical foundations of nursing practice. Nursing knowledge and skills are applied in acute and/or non-acute settings. Prerequisite: Eligibility for registered nurse licensure in Illinois. (4 lecture hours, 9 lab hours)

NURSING (NURSI) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

NURSING (NURSI) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

NURSING ASSISTANT

NURSING ASSISTANT (NURSA) 1105
Basic Nurse Assistant Training Program
6 Credit Hours
Basic Nursing Assistant Training Program (BNATP) prepares students for employment as nurse assistants through a combination of classroom theory, laboratory skills practice, and clinical sessions conducted at area healthcare facilities. This program is approved by the Illinois Department of Public Health and emphasizes basic nursing assistant skills and related knowledge. Upon successful completion of the Basic Nurse Assistant Training program, students are eligible to take the Illinois written competency exam for Nurse Assistant Training certification. In order to qualify for the IDPH exam students also need to: Have a valid social security number, meet health requirements, and pass a fingerprint criminal background check. Prerequisite: Program admission is required. Advising session attendance or equivalent; select health requirements as explained at the Advising Session. Reading Placement test required - Category 1. Minimum age of 16 due to Illinois state law. (3 lecture hours, 7 lab hours)

OFFICE TECHNOLOGY INFORMATION

OFFICE TECHNOLOGY INFORMATION (OFTI) 1100
Keyboarding and Document Fundamentals
3 Credit Hours
Beginning keyboarding course designed for the student with limited keyboarding experience. (3 lecture hours)

OFFICE TECHNOLOGY INFORMATION (OFTI) 1105
Speed Development Keyboarding
3 Credit Hours
Keyboarding course designed for the student with some keyboarding experience. Includes touch system keyboard review of alphabetic, alphanumeric, symbol, and ten-keypad. Focus on speed, accuracy, and concentration development using diagnostic

software. This course can be taken two times for credit. (3 lecture hours)

OFFICE TECHNOLOGY INFORMATION (OFTI) 1110
Document Formatting
3 Credit Hours
Format and produce academic, business, and personal documents using word processing software in mailable format. Knowledge of word processing is recommended. Completion of Office Technology Information 1100 or 1105 with a grade of C or better or 25 words per minute keyboarding speed is recommended. (3 lecture hours)

OFFICE TECHNOLOGY INFORMATION (OFTI) 1130
Business Correspondence
3 Credit Hours
Basic instruction and practice in developing the vital employment skills of planning, writing and formatting effective business communication including sentences, paragraphs, memos, letters, e-mail, and formal and informal reports. Includes current business spelling, punctuation and grammar skills. Keyboarding skills and word processing knowledge are recommended for successful completion of this course. (3 lecture hours)

OFFICE TECHNOLOGY INFORMATION (OFTI) 1200
MS Office for Professional Staff
3 Credit Hours
Introductory course in Microsoft Office utilizing the basic functions of file management, operating system, browser, word processing, spreadsheet, electronic presentation, and database software. Designed for the office professional or individuals wishing to learn and/or upgrade software skills. May not be substituted for Computer Information Systems 1205. Keyboarding skills recommended. (3 lecture hours)

OFFICE TECHNOLOGY INFORMATION (OFTI) 1203
E-Mail and Electronic Communication
3 Credit Hours
Introductory course using Microsoft Outlook emphasizing efficient use of e-mail, calendar, tasks, and notes. Social media for business professionals will be included. Keyboarding skills and knowledge of Windows operating system are recommended. (3 lecture hours)

OFFICE TECHNOLOGY INFORMATION (OFTI) 1210
Word Processing I
3 Credit Hours
Word processing functions using a specific word processing software package, which may include insert, delete, cut, paste, find, replace, document formatting, margins, tabs, spell checker, thesaurus, grammar checker, pagination, page numbering, indent, printing, line spacing, justification, centering, view modes, multiple windows, footnotes, endnotes, headers, footers, disk maintenance, folders and document formats. Introduces merge, tables, borders, images and drawing objects. Keyboarding skills required for successful completion. (3 lecture hours)

OFFICE TECHNOLOGY INFORMATION (OFTI) 1215
Adv Word Processing/Desktop Publishing
3 Credit Hours
Advanced word processing course that integrates desktop publishing applications. Prerequisite: Office Technology Information 1210 with a grade of C or better, or equivalent. (3 lecture hours)

OFFICE TECHNOLOGY INFORMATION (OFTI) 1250
Electr Presentatn-Business Professionals
3 Credit Hours
Design, prepare and present effective business presentations utilizing current electronic presentation software and design techniques. Techniques for assessing a business presentation situation and delivering a successful electronic presentation. Keyboarding skills recommended for successful completion of this course. (3 lecture hours)

OFFICE TECHNOLOGY INFORMATION (OFTI) 1300
Virtual Office Assistant
3 Credit Hours
Explores fundamentals of providing administrative support remotely through technology. Virtual Office Assistant (VOA) topics include telecommuting, types of virtual offices, setup and management of a virtual office, technologies and skills needed, effective communication, and job opportunities. (3 lecture hours)

OFFICE TECHNOLOGY INFORMATION (OFTI) 1820
Selected Topics in Office Technology Inf
3 Credit Hours
Introductory discussion, review and analysis of a selected topic in Office Technology Information, which will be specified in the subtitle of the course as listed in the Class Schedule. Specifically designed to address topics that necessitate a broader scope, greater depth and fuller assimilation of the course materials. This course may be taken four times for credit if different topics are selected each time. (3 lecture hours)

OFFICE TECHNOLOGY INFORMATION (OFTI) 1824
Selected Topics in Office Technology Inf
2 Credit Hours
Introductory discussion, review and analysis of a selected topic in Office Technology Information, which will be specified in the subtitle of the course as listed in the class schedule. Specifically designed to address topics that necessitate a broader scope, greater depth and fuller assimilation of the course materials. This course may be taken four times for credit if different topics are selected each time. (2 lecture hours)

OFFICE TECHNOLOGY INFORMATION (OFTI) 1827
Selected Topics in Office Technology Inf
1 Credit Hour
Introductory discussion, review and analysis of a selected topic in Office Technology Information, which will be specified in the subtitle of the course as listed in the class schedule. Specifically designed to address topics that necessitate a broader scope, greater depth and fuller assimilation of the course materials. This course may be taken four times for credit if different topics are selected each time. (1 lecture hour)

OFFICE TECHNOLOGY INFORMATION (OFTI) 1840
Independent Study - Individualized
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

OFFICE TECHNOLOGY INFORMATION (OFTI) 2500
Professional Office Capstone
3 Credit Hours
Capstone course designed with an emphasis on the professional role of the office support staff. Focus is on technological advances, decision making, and problem-solving skills. Trends in electronic mail, calendaring, and scheduling will be presented. Includes collecting and presenting data, utilizing software application, maintaining financial records, developing telephone techniques, arranging travel plans, and organizing conferences. Prerequisite: Office Technology Information 1110, Office Technology Information 1130 and Office Technology Information 1200; all with a grade of C or better or equivalent or consent of instructor. (3 lecture hours)

OFFICE TECHNOLOGY INFORMATION (OFTI) 2600
Professional Development
3 Credit Hours
Capstone course designed to develop "people skills" essential in the working environment. For students who have completed at least 60 percent of the credits required for a certificate or degree program. Topics include human relations, professional presence, team building, ethics, stress management, diversity and communication skills relating to individuals, organizations and client relations. Emphasis is placed on employment opportunities including job search skills, advancement opportunities, networking, and interviewing. Keyboarding skills recommended for successful completion of this course. (3 lecture hours)

OFFICE TECHNOLOGY INFORMATION (OFTI) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

OFFICE TECHNOLOGY INFORMATION (OFTI) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

OPERATING ROOM PATIENT CARE TECHNICIAN

OPERATING ROOM PATIENT CARE TECHNICIAN (ORPCT) 1001
OR Patient Care Technician Principles
5 Credit Hours
Students will be introduced to the operating room patient care team and discover how to assist in providing quality surgical patient care. Students will focus on the role of the operating room patient care technician team, scope of practice, and specific duties of the operating room patient care technician. Prerequisite: Surgical Technology 1000 with a grade of C or better, or equivalent or concurrent enrollment in Surgical Technology 1000 and Nursing 1105 with a grade of C or better, or equivalent and consent of instructor is required. (2 lecture hours, 6 lab hours)

OPHTHALMIC TECHNICIAN

OPHTHALMIC TECHNICIAN (OPTH) 2101
Ophthalmic Technician I
4 Credit Hours
Students will be introduced to the profession of ophthalmic technician, including education on career options in optometry/ ophthalmology. Basic eye care assistant knowledge and skills will be expanded on and intermediate skills introduced. Concepts such as clinical optics and biometry will be introduced. Prerequisite: consent of instructor. (3 lecture hours, 8 clinical hours)

OPHTHALMIC TECHNICIAN (OPTH) 2102
Ophthalmic Technician II
5 Credit Hours
Students will expand their skills of clinical optics and biometry. Students will also be introduced to various eye diseases and disease processes. Prerequisite: OPTH 2101 with a grade of C or better. (4 lecture hours, 8 clinical hours)

OPHTHALMIC TECHNICIAN (OPTH) 2103
Ophthalmic Technician III
5 Credit Hours
Ophthalmic Technician III will be a culmination of information and skills learned as an eye care assistant and ophthalmic technician. Introduction of systemic diseases and how they affect the eyes will be discussed. Preparation for the Certified Ophthalmic Technician examination is included. Prerequisite: OPTH 2102 with a grade of C or better. (4 lecture hours, 8 clinical hours)

PARALEGAL STUDIES

PARALEGAL STUDIES (PLGL) 1100
Introduction to Paralegal Studies
3 Credit Hours
Designed to give students a basic understanding of the various functions of the paralegal/legal assistant's role in the American legal system. Builds a foundation of basic knowledge and skills necessary for someone seeking a career in the paralegal/legal assistant field. Prerequisite: English 1101 with a grade of C or better, or equivalent or a score in the Writing Placement Test to place into English 1101 or consent of instructor. (3 lecture hours)

PARALEGAL STUDIES (PLGL) 1150
Drafting Legal Documents
3 Credit Hours
Introduction to purposes and uses of various legal document drafting formats. Focus is on creation of basic legal documents that meet professional standards. Prerequisite: English 1101 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

PARALEGAL STUDIES (PLGL) 1200
Civil Litigation
3 Credit Hours
Designed to give paralegal students an understanding of the litigation process commencing from the initial fact-gathering stage through post-judgment proceedings. Builds a foundation of the procedural rules governing litigation as well as practice in comprehending and drafting litigation documents. Equal emphasis will be placed on practical application and theoretical knowledge. Prerequisite: Concurrent enrollment in Paralegal Studies 1100 or consent of instructor. (3 lecture hours)

PARALEGAL STUDIES (PLGL) 1250
Legal Ethics/Law Office Organization
3 Credit Hours
Covers the rules of legal ethics and the regulation of the legal profession. Law office organization and management are discussed. Hands-on exercises using law office technology are also included. Prerequisite: Concurrent enrollment in Paralegal Studies 1100 or consent of instructor. (3 lecture hours)

PARALEGAL STUDIES (PLGL) 1500
Intro to Legal Research and Writing
3 Credit Hours
Instruction in the basic techniques and skills necessary to conduct legal research and to summarize the results of that research in appropriate written form. Students learn to use legal research tools (both online and print) and develop legal reasoning skills to craft written documents such as legal correspondence, legal memoranda, and legal briefs. Practical skills are developed through sequential written assignments which build analytical, research, and writing skills throughout the semester. Prerequisite: Paralegal Studies 1150 with a grade of C or better, or equivalent and concurrent enrollment in Paralegal Studies 1100 or consent of instructor. (3 lecture hours)

PARALEGAL STUDIES (PLGL) 1820
Selected Topics I
1 to 3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college cLASS schedule. This course may be taken four times for credit as long as different topics are selected. (1 to 3 lecture hours)

PARALEGAL STUDIES (PLGL) 2100
Advanced Legal Research and Writing
3 Credit Hours
Advanced techniques and skills in legal research and legal writing. Focus on analytical skills in the examination of case law and precedent to prepare a trial court memorandum of law and portions of an appellate court brief. Prerequisite: Paralegal Studies 1500 with a grade of C or better or equivalent. (3 lecture hours)

PARALEGAL STUDIES (PLGL) 2150
Bankruptcy Law
3 Credit Hours
Introduction to bankruptcy proceedings including the initiation of a case, schedule preparation, and debtors' and creditors' rights under Chapters 7, 11, and 13 of the U.S. Bankruptcy Code. Prerequisite: Concurrent enrollment in Paralegal Studies 1100 or consent of instructor. (3 lecture hours)

PARALEGAL STUDIES (PLGL) 2200
Criminal Law and Procedure
3 Credit Hours
Overview of criminal law and court procedures including criminal investigations, witness interviews, pre-trial procedures, drafting court documents, trial preparation, and trial assistance. Prerequisite: Concurrent enrollment in Paralegal Studies 1100 or consent of instructor. (3 lecture hours)

PARALEGAL STUDIES (PLGL) 2225
Contract Law
3 Credit Hours
Overview of the law of contracts. Introduces concepts of contract formation, performance and non-performance,termination, breach, and remedies. Rules of contract interpretation are also discussed. Prerequisite: Concurrent enrollment in Paralegal Studies 1100 or consent of instructor. (3 lecture hours)

PARALEGAL STUDIES (PLGL) 2250
Corporations/Other Business Organization
3 Credit Hours
Law of corporations and other business organizations. Includes the laws and business practices involved in sole proprietorships, general and limited partnerships, limited liability partnerships, and limited liability companies, and the legal forms that are commonly used in this practice area. Prerequisite: Concurrent enrollment in Paralegal Studies 1100 or consent of instructor. (3 lecture hours)

PARALEGAL STUDIES (PLGL) 2275
Environmental Law
3 Credit Hours
Introduces concepts of environmental law, including the major federal and state statutes. The roles of administrative agencies, the court system, and the paralegal are all explained. Ethical issues that may arise in the practice of environmental law are also explored. Prerequisite: Concurrent enrollment in Paralegal Studies 1100 or consent of instructor. (3 lecture hours)

PARALEGAL STUDIES (PLGL) 2280
Elder Law
3 Credit Hours
Introduction to legal, moral and ethical issues in elder law resulting from the increase in the elderly population. Topics of discussion include guardianship, housing, health care, estate planning, abuse and neglect, and discrimination. Prerequisite: Paralegal Studies 1100 or equivalent or consent of instructor. (3 lecture hours)

PARALEGAL STUDIES (PLGL) 2300
Estate Planning and Probate Law
3 Credit Hours
Overview of the laws of wills, trusts and estates, and the role of the paralegal in estate planning and administration. Prerequisite: Paralegal Studies 1100 or equivalent, or consent of instructor. (3 lecture hours)

PARALEGAL STUDIES (PLGL) 2350
Family Law
3 Credit Hours
Overview of the basic concepts of family law, covering marriage, divorce, property division, spousal support, child custody, visitation, and support, tax consequences of separation, and divorce. Focus on preparation of related necessary court documents. Prerequisite: Concurrent enrollment in Paralegal Studies 1100 or consent of instructor. (3 lecture hours)

PARALEGAL STUDIES (PLGL) 2380
Immigration Law
3 Credit Hours
Explores the immigration and naturalization process in the U.S. Introduces visa categories and their requirements, other legal paths to immigration and bars to immigration. Prerequisite: Paralegal Studies 1100 or equivalent or consent of instructor. (3 lecture hours)

PARALEGAL STUDIES (PLGL) 2400
Intellectual Property Law
3 Credit Hours
Overview of intellectual property law. Introduces concepts of ownership of intellectual property. Includes patents, copyrights, trademarks and trade secrets, and how to prepare applications for protection of these rights. Prerequisite: Paralegal Studies 1100 or equivalent, or consent of instructor. (3 lecture hours)

PARALEGAL STUDIES (PLGL) 2410
Labor and Employment Law
3 Credit Hours
Introduction to legal issues that may arise as a result of the employer-employee relationship. Topics covered include history of employment law, federal and state laws regarding wage and hour issues, collective bargaining agreements, tort and contract law, and discrimination in employment. Prerequisite: Paralegal Studies 1100 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

PARALEGAL STUDIES (PLGL) 2425
Law Office Technology
3 Credit Hours
Introduction to software applications specific to law offices. Students will learn to format legal documents and use timekeeping, billing, litigation support, and case management software. Prerequisite: Paralegal Studies 1100 with a grade of C or better or equivalent and Office Technology Information 1200 with a grade of C. or better or equivalent or consent of instructor. (3 lecture hours)

PARALEGAL STUDIES (PLGL) 2450
Real Property Law
3 Credit Hours
Focus on principles of residential and commercial real property law. Includes information concerning recording of documents, title protection, legal descriptions, deeds, leases, mortgages, and closing papers. Prerequisite: Paralegal Studies 1100 or equivalent, or consent of instructor. (3 lecture hours)

PARALEGAL STUDIES (PLGL) 2500
Personal Injury, Tort and Insurance Law
3 Credit Hours
Focuses on basic elements of personal injury, tort and insurance law. Includes intent, negligence, damages, and liability without fault, as well as issues in malpractice and products liability and related insurance issues. Incorporates instruction in reviewing and analyzing medical records. Prerequisite: Concurrent enrollment in Paralegal Studies 1100 or consent of instructor. (3 lecture hours)

PARALEGAL STUDIES (PLGL) 2600
Paralegal Practicum
3 Credit Hours
Capstone course integrating the application of all course work in the paralegal program. Students work in a law office under the supervision of an attorney and faculty advisor. Required seminars provide a forum for discussing issues related to working in the paralegal field, guidance in searching for jobs, and instruction about how to create a professional portfolio. Prerequisite: Paralegal Studies 1200, Paralegal Studies 1250 and Paralegal Studies 1500 or equivalent and consent of instructor. Students must have been accepted into the program pursuant to the program admission requirements or obtain written consent of the instructor before enrolling in class. (3 lecture hours)

PARALEGAL STUDIES (PLGL) 2700
Paralegal Practicum II
3 Credit Hours
A continuation of Paralegal 2600 for students wishing to gain further on-the-job experience in employment sites related to their career objective. Designed to provide enhanced law office experience for a student desiring additional internship work. Cannot be used in place of required courses or electives within the paralegal curriculum. Prerequisite: Paralegal Studies 2600 with a grade of C or better or equivalent and consent of instructor. Student must submit application for enrollment at least 6 weeks prior to the start of the semester. (3 lecture hours)

PARALEGAL STUDIES (PLGL) 2820
Advanced Selected Topics I
1 to 3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Paralegal Studies 1100 with a grade of C or better, or consent of instructor. (1 to 3 lecture hours)

PARALEGAL STUDIES (PLGL) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

PARALEGAL STUDIES (PLGL) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite:

Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

PHILOSOPHY

PHILOSOPHY (PHILO) 1100 (IAI H4 900)
Introduction to Philosophy
3 Credit Hours
Introduces the student, through the study of knowledge, reality and human conduct, to the discipline that inquires into human nature and the world. Designed to increase the student's self-awareness and ability to think. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

PHILOSOPHY (PHILO) 1110 (IAI H4 904)
Ethics
3 Credit Hours
Study of the elements of ethics, including principle ethical theories, principles, concepts and meanings, and their practical application to moral problems, dilemmas and decisions. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

PHILOSOPHY (PHILO) 1112
Biomedical Ethics
3 Credit Hours
Study of the theories and principles of ethics as applied to the major areas of biomedical ethical concern: moral problems in the professional/patient relationship, in life and death, in allocation of scarce medical resources, and in medical and health care on a social scale. Current issues such as abortion, euthanasia and genetic research are considered. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

PHILOSOPHY (PHILO) 1114
Business Ethics
3 Credit Hours
A study of moral issues in business and the broader issues of economic justice through a study of ethical theories and their application to actual case studies. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

PHILOSOPHY (PHILO) 1116 (IAI H4 904)
Environmental Ethics
3 Credit Hours
Study of the themes, problems, theories, and moral issues related to the environment from both an anthropocentric and non-anthropocentric perspective. Analysis of and critical response to an environmental issue from a moral perspective. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

PHILOSOPHY (PHILO) 1120 (IAI H4 906)
Logic
3 Credit Hours
Introduces the student to the art and science of reasoning. Skills developed include analyzing formal and informal reasoning; identifying errors in reasoning and learning to avoid them; distinguishing different species of reasoning, including deductive and inductive styles of argumentation; and analyzing language for both logical and rhetorical force. Experience in non-remedial, college-level mathematics is strongly recommended. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

PHILOSOPHY (PHILO) 1125 (IAI H4 906)
Critical Thinking
3 Credit Hours
An investigation into and application of the principles of effective thinking in order to develop and enhance one's ability to consciously direct focused mental activity to solve problems, achieve desired goals, evaluate beliefs and guide actions. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

PHILOSOPHY (PHILO) 1130
Social and Political Philosophy
3 Credit Hours
Philosophical inquiry into the basis of social and political authority and practices, as well as the proper relationships between individual and society and government. The nature of society, the state, rights, law and justice are considered with reference to contemporary social and political issues. Philosophy 1100 is strongly recommended. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

PHILOSOPHY (PHILO) 1150 (IAI H5 904N)
World Religions
3 Credit Hours
An introductory investigation of the main ideas from the world's major living religions, including Christianity, Islam, Hinduism, Buddhism, Taoism, Confucianism, Shintoism and primal religions. Credit cannot be given for both Philosophy 1150 and Religious Studies 1150. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

PHILOSOPHY (PHILO) 1160
History and Philosophy of Education
3 Credit Hours
Development of Western educational philosophy in historical context. Significant philosophical theories and their influence on modern education. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

PHILOSOPHY (PHILO) 1800
Special Project
1 to 4 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.). Prerequisite: Course requires Reading Placement Test Score-Category One.

PHILOSOPHY (PHILO) 1840
Independent Study - Individualized
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. Course requires Reading Placement Test Score-Category One. (1 to 4 lecture hours)

PHILOSOPHY (PHILO) 2010 (IAI H4 901)
Western Philosophy: Greek-Renaissance
3 Credit Hours
Surveys philosophy as it developed from the classical period in Greece to the early advocates of scientific method, examining major philosophical figures in their historical contexts with an attention to how philosophy developed in response to historical, social and political events. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

PHILOSOPHY (PHILO) 2011 (IAI H4 902)
Wesn Philosophy: Enlightenment - Present
3 Credit Hours
Surveys philosophy as it developed from the modern period to the current era, examining major philosophical figures in their historical contexts with attention to how philosophy developed in response to historical, social, and political events. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

PHILOSOPHY (PHILO) 2150 (IAI H4 905)
Philosophy of Religion
3 Credit Hours
Introduces the student to the philosophical analysis and examination of basic religious concepts and beliefs, such as the nature of Ultimate Reality (e.g., God, Tao) and arguments for the existence of the Ultimate Reality. Other topics include religious experience, reason and faith, religion and morality, immortality and others. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

PHILOSOPHY (PHILO) 2200
Introduction to Philosophy of Science
3 Credit Hours
The foundations of scientific theory and methodology approached by means of philosophical analysis of the fundamental concepts in science, such as cause, prediction, function, motion, event, inductive generalization, statistical probability, and the space/time continuum. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

PHILOSOPHY (PHILO) 2250
Introduction to Philosophy of Art
3 Credit Hours
Philosophical theories of the creative process in art. The course offers the study and analysis of ideas and concepts about art as a basis for critical assessment of artistic pursuits. Credit cannot be given for both Art 2216 and Philosophy 2250. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

PHILOSOPHY (PHILO) 2260
Indian Philosophy
3 Credit Hours
The course traces early history and development of Indian philosophy. Philosophical themes common to six orthodox and three heterodox systems are investigated. Themes include the theory of reality, epistemology, ontology, metaphysics, self, perception, consciousness, creation, causality, and ethics. Additionally, the course looks at some of the modern developments in Indian philosophy. A number of prominent Indian thinkers and their attempt to relate Indian philosophy to the Western audience are examined. It is recommended that students have completed course work in a related subject area such as Introduction to Philosophy, Logic, or World Religions. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

PHILOSOPHY (PHILO) 2800
Special Project
1 to 4 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline, while building upon academic knowledge and skills acquired in introductory-level classes. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of more complex discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) Prerequisite: At least one course in the discipline or consent of the instructor. Course requires Reading Placement Test Score-Category One.

PHILOSOPHY (PHILO) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

PHILOSOPHY (PHILO) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the

dean from the academic discipline where the student is planning to earn credit.

PHILOSOPHY (PHILO) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

PHILOSOPHY (PHILO) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

PHOTOGRAPHY

PHOTOGRAPHY (PHOTO) 1100
Fundamentals of Photography
3 Credit Hours
An exploration of the fundamental principles, techniques and application of camera-based image making. (3 lecture hours)

PHOTOGRAPHY (PHOTO) 1101
Foundations of Digital Photography
3 Credit Hours
Explores the techniques and applications of acquiring, manipulating, and outputting digitized photographic images utilizing Adobe Lightroom and Adobe Photoshop. (6 lab hours)

PHOTOGRAPHY (PHOTO) 1102
Foundations of Film Photography
3 Credit Hours
Explores the techniques and applications for developing and projection printing of film camera images in the chemical darkroom. (6 lab hours)

PHOTOGRAPHY (PHOTO) 1105
History of Photography
3 Credit Hours
A visually oriented history of the development of photography in both its commercial and creative aspects. (3 lecture hours)

PHOTOGRAPHY (PHOTO) 1200
Photographic Composition
3 Credit Hours
An exploration of various expressive devices contributing to aesthetic interpretation of a photograph. Emphasis is on the development of the student's self-expression. Prerequisite: Photography 1101 or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

PHOTOGRAPHY (PHOTO) 1201
Tools & Techniques-Digital Photography
3 Credit Hours
Technical skills for digital photography are covered including refinement of exposure, post-image capture processing, and manipulation. Issues addressing controlled output of digital images are also covered. Prerequisite: Photography 1200 or equivalent, or concurrent enrollment in Photography 1200 or consent of instructor. Course requires Reading Placement Test Score-Category One. (6 lab hours)

PHOTOGRAPHY (PHOTO) 1202
Tools & Techniques for Film Photography
3 Credit Hours
Technical skills for film photography are covered, including refinement of exposure, development and printing of black-and-white images. Criteria for selection of appropriate equipment and materials are also covered. Prerequisite: Photography 1102 or equivalent and Photography 1200 or consent of instructor. (6 lab hours)

PHOTOGRAPHY (PHOTO) 1250
Advanced Digital Imaging
3 Credit Hours
An advanced seminar in digital image-making concepts and techniques, allowing in-depth exploration of extended computer-based photo projects. Prerequisite: Photography 1201 or equivalent or consent of instructor. (6 lab hours)

PHOTOGRAPHY (PHOTO) 1260
Alternative Photographic Processes
3 Credit Hours
Designed to meet the needs of the creative photographer. Allows experimentation with a variety of camera and darkroom options for producing photographic images. Prerequisite: Photography 1102 with a grade of C or better or equivalent or consent of instructor. (6 lab hours)

PHOTOGRAPHY (PHOTO) 1300
Studio Photography 1
3 Credit Hours
Introduction to making photographs in the studio. Techniques of using light as a creative tool are explored by using tungsten light and electronic flash. Prerequisites: Photography 1101 or equivalent and Photography 1102 or equivalent or consent of instructor. (6 lab hours)

PHOTOGRAPHY (PHOTO) 1400
Color Photography 1
3 Credit Hours
An introduction to color photographic theory and aesthetics emphasizing the use of transparency and negative film materials. Color applications for digital photography are also addressed. Prerequisite: Photography 1101 or equivalent or consent of instructor. (6 lab hours)

PHOTOGRAPHY (PHOTO) 1450
Nature Photography
3 Credit Hours
Introduces specialized techniques for photographing the natural environment. Emphasizes application of techniques in field situations. Prerequisite: Photography 1400 or equivalent or consent of instructor. (6 lab hours)

PHOTOGRAPHY (PHOTO) 1500 (IAI MC 921)
Visual Storytelling
3 Credit Hours
The application of camera, lenses, and digital media in the production of newsworthy photographs and videos suitable for publication in newspapers, magazines, and other visual communications media. Location photography is required. Prerequisite: Photography 1201 or equivalent, or concurrent enrollment in Photography 1201 or consent of instructor. (6 lab hours)

PHOTOGRAPHY (PHOTO) 1820
Selected Topics 1
1 Credit Hour
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Photography 1100 or equivalent, Photography 1101 or equivalent and Photography 1102 or equivalent or consent of instructor. (2 lab hours)

PHOTOGRAPHY (PHOTO) 1821
Selected Topics 2
2 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Photography 1100 or equivalent, Photography 1101 or equivalent and Photography 1102 or equivalent or consent of instructor. (4 lab hours)

PHOTOGRAPHY (PHOTO) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: 32 semester credits in Photography and consent of instructor. (1 to 4 lecture hours)

PHOTOGRAPHY (PHOTO) 2100
Extended Photographic Project
3 Credit Hours
A continued exploration of photography as a creative medium, allowing student time to pursue individual and/or commercial photographic interests while stressing critical thinking skills. Prerequisite: Photography 1201 or equivalent, Photography 1202 or equivalent and Photography 1400 or equivalent or consent of instructor. (6 lab hours)

PHOTOGRAPHY (PHOTO) 2200
Portrait Photography
3 Credit Hours
Explores all genres of portrait photography, including commercial portraits, formal and informal studio portraits, and environmental portraiture with film and digital media. Prerequisite: Photography 1201 or equivalent or Photography 1202 or equivalent and Photography 1300 or equivalent or consent of instructor. (6 lab hours)

PHOTOGRAPHY (PHOTO) 2300
Studio Photography 2
3 Credit Hours
Advanced concepts for solving complex visual communication problems in the studio. Emphasis is on the aesthetic aspects of creating studio photographs. Prerequisite: Photography 1300, Photography 1400 and Photography 1201 or Photography 1202 or equivalent or consent of instructor. (6 lab hours)

PHOTOGRAPHY (PHOTO) 2400
Color Photography 2
3 Credit Hours
Advanced concepts in color photographic theory and aesthetics using transparency film, negative film, and/or digital materials. Prerequisite: Photography 1201 and Photography 1400 or equivalent or consent of instructor. (6 lab hours)

PHOTOGRAPHY (PHOTO) 2700
Professional Photographic Practices
3 Credit Hours
Capstone photography course that provides basic information for conducting business, with emphasis on the financial, legal, organizational, promotional, interpersonal and ethical strategies specific to the practice of photography as an occupation or a fine art. Development and creation of marketing materials and plans are also covered. Prerequisite: Student must have completed 20 semester hours of photography course credit or equivalent prior to taking this course or consent of instructor. (2 lecture hours, 2 lab hours)

PHOTOGRAPHY (PHOTO) 2750
Portfolio Presentation
3 Credit Hours
Preparation and presentation of work in portfolio form as required by most employers, galleries and transfer schools. Each student assembles a portfolio of images appropriate to their professional, educational or personal goals. Prerequisite: Minimum of 33 semester credits in Photography or consent of instructor. (6 lab hours)

PHOTOGRAPHY (PHOTO) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

PHOTOGRAPHY (PHOTO) 2865
Internship-Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

PHYSICAL EDUCATION

PHYSICAL EDUCATION (PHYS) 1101
Aerobic Fitness Lab I
1 Credit Hour
Aerobic training and strength training are emphasized in a personally designed fitness program that uses target heart rate and training zone techniques. Weight machines and cardiovascular machines are used in an activity program designed to develop three important results of physical fitness: strength, flexibility and endurance. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1102
Aerobic Fitness Lab II
1 Credit Hour
Aerobic training and strength training are emphasized in a personally designed fitness program that uses target heart rate and training zone techniques. Weight machines and cardiovascular machines are used in an activity program designed to develop three important results of physical fitness: strength, flexibility and endurance. Prerequisite: Physical Education 1101. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1103
Aerobic Fitness Lab III
1 Credit Hour
Aerobic training and strength training are emphasized in a personally designed fitness program that uses target heart rate and training zone techniques. Weight machines and cardiovascular machines are used in an activity program designed to develop three important results of physical fitness: strength, flexibility and endurance. Prerequisite: Physical Education 1102. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1104
Aerobic Fitness Lab IV
1 Credit Hour
Aerobic training and strength training are emphasized in a personally designed fitness program that uses target heart rate and training zone techniques. Weight machines and cardiovascular machines are used in an activity program designed to develop three important results of physical fitness: strength, flexibility and endurance. Prerequisite: Physical Education 1103. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1106
Aerobics I
1 Credit Hour
Aerobic fitness choreographed to music. Performance of basic exercise movements, patterns and dance steps to improve cardiovascular endurance, muscular endurance, muscle tone, flexibility and rhythmic coordination. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1107
Aerobics II
1 Credit Hour
A continuation of Aerobics I. Further improvement in cardiovascular endurance, muscular endurance, muscle tone, flexibility and rhythmic coordination. Increasing intensity of workouts and improving performance are main goals. Prerequisite: Physical Education 1106 or equivalent experience or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1108
Sit & Stand-Chair Aerobics I
0.5 to 1 Credit Hours
Balance, agility, flexibility, cardiovascular and muscular endurance are all enhanced as students exercise while sitting and standing. Participants are encouraged to work at their own level. Special populations and those who desire some portion of the class in non-weight bearing positions are targeted. (1 to 2 lab hours)

PHYSICAL EDUCATION (PHYS) 1109
Sit & Stand-Chair Aerobics II
0.5 to 1 Credit Hours
A continuation of Physical Education 1108. Exercises to increase balance, agility, flexibility, cardiovascular and muscular endurance are done while sitting and standing. More standing exercises (with or without support) are included. Participants are encouraged to work at their own level. Prerequisite: Physical Education 1108 with a grade of S or better or equivalent instructor. (1 to 2 lab hours)

PHYSICAL EDUCATION (PHYS) 1111
Bench Step Aerobics I
1 Credit Hour
A high-intensity, low-impact exercise program that involves stepping up and down a step platform while simultaneously performing upper body strength training movements to the accompaniment of music. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1112
Bench Step Aerobics II
1 Credit Hour
A continuation of Bench Step Aerobics I. Involves stepping up and down a step platform while simultaneously performing upper body strength training movements. Higher-intensity bench step moves and combinations are taught. Prerequisite: Physical Education 1111 or equivalent experience or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1113
Power Step Aerobics
1 Credit Hour
A high-intensity, low-impact exercise program designed for the advanced step participant. Designed to further challenge the cardiovascular and muscle endurance systems with a variety of high-intensity propulsion movements, combined with basic and advanced step movement combinations. Prerequisite: Physical Education 1112 or equivalent, or bench step experience or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1115
Wheelchair Aerobics
1 Credit Hour

Exercise class designed for those with limited mobility or confined to wheelchairs. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1123
Boot Camp Fitness I
1 Credit Hour
A total body conditioning class with a "back to basics" non-choreographed approach. Traditional calisthenics and exercises, current training techniques and drills are used to improve all components of fitness. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1124
Boot Camp Fitness II
1 Credit Hour
A continuation of Boot Camp Fitness I. Fitness workouts with a "back to basics" approach. Higher intensity exercises and workouts. Prerequisite: Physical Education 1123 with a grade of S or better, or equivalent. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1125
BOSU Training I
1 Credit Hour
A total body conditioning class that utilizes the BOSU training device to improve all components of fitness. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1126
BOSU Training II
1 Credit Hour
A continuation of BOSU Training I. Workouts designed to further improve fitness levels. Prerequisite: Physical Education 1125 with a grade of S or better, or equivalent or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1131
Cardio Kickboxing I
1 Credit Hour
An exercise course that combines boxing, kickboxing, martial arts, aerobics and physical conditioning exercises to enhance cardiovascular and muscular endurance. All done to music. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1132
Cardio Kickboxing II
1 Credit Hour
An intermediate cardiovascular endurance activity that combines boxing, kickboxing, martial arts, aerobics, and physical conditioning exercises to further increase skill and endurance. Prerequisite: Physical Education 1131 or equivalent experience or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1135
Cardio Mixer I
0.5 Credit Hours
A challenging aerobic workout is provided using a mix of cardio training methods such as kickboxing, step, and basic aerobic dance moves. (1 lab hour)

PHYSICAL EDUCATION (PHYS) 1136
Cardio Mixer II
0.5 Credit Hours
A continuation of Cardio Mixer I. Prerequisite: Physical Education 1135 with a grade of S or better or equivalent. (1 lab hour)

PHYSICAL EDUCATION (PHYS) 1141
Cross Training I
1 Credit Hour
A personal fitness program that aims to develop cardiovascular endurance, muscle strength, flexibility and skills using the following facilities: (1) the Aerobic Fitness Lab, (2) the Al Zamsky Natatorium, and (3) the Strength Complex. Target heart rate and training zone techniques are emphasized. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1142
Cross Training II
1 Credit Hour
A personal fitness program that aims to develop cardiovascular endurance, muscle strength, flexibility and skills using the following facilities: (1) the Aerobic Fitness Lab, (2) the Al Zamsky Natatorium, and (3) the Strength Complex. Target heart rate and training zone techniques are emphasized. Prerequisite: Physical Education 1141 or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1143
Aerobic Fitness Combo I
1 Credit Hour
An aerobic conditioning course that combines methods and styles of a variety of fitness courses. May include bench step, calisthenics, aerobic dance, cardio kickboxing, circuit training, body sculpting and walking/jogging. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1144
Aerobic Fitness Combo II
1 Credit Hour
A continuation of Aerobic Fitness Combo I. Methods and styles of a variety of fitness classes with emphasis on a high intensity workout. Prerequisite: Physical Education 1143 with a grade of S or better or equivalent. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1151
Fitness Walking I
1 Credit Hour
Fitness walking, power walking and cross country walking techniques. Students assess personal fitness levels and work to improve cardiovascular fitness and set personal goals. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1152
Fitness Walking II
1 Credit Hour
A continuation of Fitness Walking I. Improvement of cardiovascular fitness through increased intensity and/or distance. Prerequisite: Physical Education 1151 or equivalent experience or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1153
Jogging I
1 Credit Hour
A graduated program of jogging and running geared to each individual's fitness level and goals. Various jogging techniques, practices and safety procedures. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1154
Jogging II
1 Credit Hour
A continuation of Jogging I. A graduated program of running geared to each individual's fitness level and goals. Further improvement or maintenance of cardiovascular fitness is a main goal. Prerequisite:

Physical Education 1153 or equivalent experience or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1161
Physical Fitness I
1 Credit Hour
A personal fitness program that includes progressive conditioning methods. Training exercises include: stretching, core training, jogging, sprinting, weight lifting and weight training. Also included: calisthenics, isometric and isotonic exercises, plyometrics, footwork agility drills and sport specific exercises. Prerequisite: Consent of instructor is required. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1162
Physical Fitness II
1 Credit Hour
An advanced personal fitness program that includes progressive conditioning methods. Training exercises include: stretching, core training, jogging, sprinting, weight lifting and weight training. Also included: calisthenics, isometric and isotonic exercises, plyometrics, footwork agility drills and sport specific exercises. Prerequisite: Physical Education 1161 or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1171
Weight Training I
1 Credit Hour
An introduction to weight training. Application of the fundamentals of strength training through the use of machine and free weights. Basic anatomy and physiology associated with weight training and safe lifting procedures. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1172
Weight Training II
1 Credit Hour
Fundamentals of an advanced weight training program. Application of strength training using weight machines and free weights. Anatomy and physiology associated with weight training and safe lifting procedures, along with the design of an individualized strength training program. Prerequisite: Physical Education 1171 or previous weight lifting experience or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1181
Spinning I
1 Credit Hour
A 50-minute fitness class using "spinning" (stationary) bicycles. Cardiovascular endurance (aerobic and anaerobic) and muscular strength and endurance are developed. Music is used as a tool to motivate and inspire, as well as establish the pace, rhythm and energy level of the class. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1182
Spinning II
1 Credit Hour
A 50-minute fitness class using "spinning" (stationary) bicycles. Advanced spinning techniques are implemented to further improve fitness level. Aerobic and anaerobic training are used. Music is used to motivate and inspire, as well as to establish the pace, rhythm and energy level of the class. Prerequisite: Physical Education 1181 or previous cycling experience or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1183
Step/Slide/Sculpt
1 Credit Hour
Utilizing cross-training principles with the guidance of an instructor, this conditioning program uses the bench step, slide, high-low aerobics moves, resistance tubing and hand weights to improve overall fitness. Achieving improved muscular strength, endurance, cardiovascular endurance and body composition with a variety of exercise formats are the main goals. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1184
Body Sculpting I
1 Credit Hour
A toning and conditioning course that utilizes a variety of resistance tools to firm and strengthen the entire body. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1185
Body Sculpting II
1 Credit Hour
A continuation of Body Sculpting I. Workouts designed to further improve muscle endurance and tone. Prerequisite: Physical Education 1184 with a grade of S, or equivalent experience or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1190
SAQSP Training
1 Credit Hour
Physical conditioning theories and drills for improvement in speed, agility, quickness, strength and power (SAQSP). Applications to individual and team sports, plyometrics and other high intensity fitness activities are covered. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1191
Power Lifting I
1 Credit Hour
An introductory course in power lifting and training. Basic mechanics of major lifting techniques in the overall Olympic lifts. Prerequisite: Physical Education 1171 or previous weight lifting experience or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1192
Power Lifting II
1 Credit Hour
A continuation of Power Lifting I. The course advances and builds on the techniques and intensity of the work performed in power lifting. Prerequisite: Physical Education 1191 or previous power lifting skills or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1300
Baseball
1 Credit Hour
An introduction to the development of proper baseball fundamental skills, techniques and strategies. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1301
Basketball I
1 Credit Hour
Beginning basketball emphasizing offensive and defensive fundamentals through team play. The following offensive fundamental skills are included: shooting, passing, ball handling, dribbling and player spacing. The following defensive fundamental skills are also included: body position, footwork, arm movements and court position. Team play is emphasized. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1302
Basketball II
1 Credit Hour
Intermediate basketball emphasizing offensive and defensive fundamentals through team play. Offensive skills included are: jump shooting, movement passing, dribbling with both hands and ball handling with faking. Defensive skills included are: body position, advanced footwork, advanced arm movements and court awareness. Team play concepts and strategies are introduced. Prerequisite: Physical Education 1301 or equivalent. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1311
Golf I
1 Credit Hour
Beginning golf. Topics include: grips, stances, chips, putts, full swings, sand shots and club selection. Irons and woods are both used to develop the rhythm and timing of the swing. Also included are terminology, etiquette, scoring, pace of play and golf safety. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1312
Golf II
1 Credit Hour
Intermediate golf. Progressive development in the fundamental grips, stances and strokes using irons and woods. Swing thoughts, ball flight laws, principles of contact and course management are emphasized. Prerequisite: Physica Education 1311. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1313
Golf III
1 Credit Hour
The mental aspects of golf are emphasized. Topics include methods to better golf, various thought processes, statistical analysis and time management. Prerequisite: Physical Education 1312 or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1321
Pickleball I
1 Credit Hour
Introduction to the skills and practice of pickleball. Serving, forehand drives, volleys, strategies, rules and scoring. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1322
Pickleball II
1 Credit Hour
Advanced skills, knowledge and strategies of pickleball. Emphasis on volleying, lobbing, net control, and advanced singles and doubles strategies. Prerequisite: Physical Education 1321 or equivalent skill or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1331
Racquetball I
1 Credit Hour
Fundamentals of racquetball with emphasis on basic strokes, serves and the rules of the game. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1332
Racquetball II
1 Credit Hour
Competitive racquetball with emphasis on advanced skills, strategies and tournament play. Prerequisite: Physical Education 1331 or equivalent. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1334
Racquet Sports
2 Credit Hours
Tennis, badminton, pickleball and racquetball. Skills, rules, competitive strategies, and basic teaching methods are covered. (1 lecture hour, 2 lab hours)

PHYSICAL EDUCATION (PHYS) 1335
Selected Team Sports
3 Credit Hours
Soccer, Softball/Baseball, Volleyball, and Basketball. Skills, rules, competitive strategies, and basic teaching methods. Prepares for teaching, coaching or personal performance. (2 lecture hours, 2 lab hours)

PHYSICAL EDUCATION (PHYS) 1341
Soccer I
1 Credit Hour
Introduction to the fundamental skills and techniques of kicking, heading, passing and trapping. Team play, strategy and review of the rules. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1342
Soccer II
1 Credit Hour
A continuation of Soccer I. Soccer II is designed for students with skill and knowledge of the sport. Emphasis placed on intermediate skills, strategies and team play. Prerequisite: Physical Education 1341 or equivalent, or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1351
Softball
1 Credit Hour
Fundamentals of softball: history, rules, strategy, basic skills of fielding, throwing, batting, pitching, base running, and team offensive and defensive philosophies. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1361
Tennis I
1 Credit Hour
Beginning tennis. Topics covered include grips, stances, hitting positions, racquet-face control, forehand, backhand, serve and serve return. Basic tennis rules, scoring and etiquette are also emphasized. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1362
Tennis II
1 Credit Hour
Intermediate tennis. Topics covered include forehand, backhand, serve, serve return, volley, overhead shots, approach shots and dump volley skills. Instruction in singles and doubles is strategy-based and emphasizes high-percentage shot-making. Rules, etiquette and doubles communication are also included. Prerequisite: Physical Education 1361. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1370
Track and Field
1 Credit Hour
Overview of basic techniques used in track and field events. Training principles and methodology for competitive track and field. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1381
Volleyball I
1 Credit Hour
Introduction to the basic rules, skills, techniques and strategies of volleyball and their application to game play. Team play and intersquad competition. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1382
Volleyball II
1 Credit Hour
Advanced skills, techniques and strategies of volleyball and their application to competitive game play. Designed for players with advanced skill and knowledge. Emphasis on team strategies and intersquad competition. Prerequisite: Physical Education 1381 or previous competitive volleyball skill or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1400
Aqua Step
1 Credit Hour
Introduction to water fitness using bench stepping techniques for cardiovascular and muscle conditioning. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1401
Swimming I
1 Credit Hour
Beginning and advanced beginning swimming skills (based on American Red Cross). Water acclimation, floats, glides, kicks, front crawl, combined back stroke, breath control, rhythmic breathing, elementary back stroke, deep water comfort and safety skills. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1402
Swimming II
1 Credit Hour
A continuation of Swimming I. Further refinement of front crawl and elementary back stroke. Intermediate and advanced swimming strokes and skills: turns, back stroke, breast stroke, side stroke, butterfly and lap swimming for fitness. Prerequisite: Physical Education 1401 or equivalent skill or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1411
Swim Conditioning I
1 Credit Hour
Students will participate in lap swimming using interval training, timed sets, and stroke techniques drills to improve their swimming ability, cardiovascular endurance and muscular endurance. Individualized swimming workouts are given. Participants should be comfortable in the water and be able to swim 25 yards. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1412
Swim Conditioning II
1 Credit Hour
A continuation of Swim Conditioning I. Lap swimming and interval training to enhance cardiovascular and muscular endurance. Includes intermediate and advanced swimming work-outs, training methods and techniques. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1420
Deep Water Fitness
1 Credit Hour
Introduction to low impact deep water aerobic conditioning, emphasizing cardiovascular fitness, strength, flexibility and endurance conditioning. This form of exercise uses the natural buoyancy of the body in the water, allowing for a decrease in the stress and strain on muscles, joints and ligaments. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1421
Water Aerobics I
1 Credit Hour
Introduction to low impact aquatic aerobic conditioning, emphasizing cardiovascular fitness, strength, flexibility and endurance conditioning. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1422
Water Aerobics II
1 Credit Hour
A continuation of Water Aerobics I. A variety of aquatic exercises to further develop strength, flexibility and cardiovascular fitness in the water. Prerequisite: Physical Education 1421 or equivalent. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1425
Aquasize I
0.5 Credit Hours
A water aerobic workout that improves cardiovascular and endurance in a challenging yet low-impact style. Swimming ability is not needed. Bench step and muscle toning exercises are included. (1 lab hour)

PHYSICAL EDUCATION (PHYS) 1426
Aquasize II
0.5 Credit Hours
A continuation of Aquasize I. Prerequisite: Physical Education 1425 with a grade of S or better, or equivalent. (1 lab hour)

PHYSICAL EDUCATION (PHYS) 1500
Performance Nutrition
1 Credit Hour
Provides an understanding of consumption of specific nutrients at the right time and in appropriate amounts to enhance fitness and performance. Addresses formulation of eating plans, nutrition fueling, and specific guidelines for development of strength, power and endurance. (1 lecture hour)

PHYSICAL EDUCATION (PHYS) 1551
Anatomy Tuneup
1 Credit Hour
An overview of basic anatomy designed for those who are preparing for certification in fitness, yoga or massage. (1 lecture hour)

PHYSICAL EDUCATION (PHYS) 1554
Healthy Eating
1 Credit Hour
Basic and practical nutrition information that addresses misconceptions about the nature of food and nutrition in terms of overall wellness. Designed to provide personal appreciation, understanding and awareness of good nutrition and healthy eating. (1 lecture hour)

PHYSICAL EDUCATION (PHYS) 1555
Personal Fitness Program
1 Credit Hour
Assessments of components of physical fitness are covered. These components include cardiovascular fitness, muscular strength, muscular endurance, flexibility, body composition, stress and

nutrition. Students then use the information ascertained from the assessments to design a personalized exercise prescription. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1556
Stress Management
1 Credit Hour
Exploration of the dimensions, sources, and physiological responses to stress. Emphasis is on the development of skills and techniques for managing stress (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1557
Women's Health Issues
1 Credit Hour
Wellness topics specific to the needs, concerns and issues impacting women's health. (1 lecture hour)

PHYSICAL EDUCATION (PHYS) 1558
Men's Health Issues
1 Credit Hour
Wellness topics specific to the needs, concerns and issues impacting men's health. (1 lecture hour)

PHYSICAL EDUCATION (PHYS) 1559
Senior Health Issues
1 Credit Hour
Wellness topics specific to the needs, concerns and issues impacting senior health. (1 lecture hour)

PHYSICAL EDUCATION (PHYS) 1601
Dancercise I
1 Credit Hour
An aerobic fitness class choreographed to music using ballet, jazz and other dance styles. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1602
Dancercise II
1 Credit Hour
A continuation of Dancercise I. Prerequisite: Physical Education 1601 with a grade of S or better or equivalent. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1603
Zumba I
0.5 to 1 Credit Hours
A dance exercise class that is a fusion of Latin & International music and dance moves that creates a dynamic, exciting, and effective workout. Zumba uses a simple dance style borrowing moves from such dances as the merengue, salsa, tango, flamenco. This is combined with aerobic fitness interval training and resistance training to maximize both cardiovascular fitness and body toning benefits. (1 to 2 lab hours)

PHYSICAL EDUCATION (PHYS) 1604
Zumba I
0.5 to 1 Credit Hours
A continuation of the Latin infused dance exercise class Zumba I. Increased level of intensity and choreography Prerequisite: Physical Education 1604 with a grade of S or better, or equivalent or consent of instructor. (1 to 2 lab hours)

PHYSICAL EDUCATION (PHYS) 1611
Ballet I
1 Credit Hour
Beginning ballet skills. Introduction to the movements and dance skills of classical and contemporary ballet, including basic positions, barre work, center floor work and simple dances. Credit cannot be given for both Dance 1101 and Physical Education 1611. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1612
Ballet II
1 Credit Hour
A continuation of Ballet I. Further work on the movements and dance skills of classical and contemporary ballet with emphasis on intermediate and advanced skills. Credit cannot be given for both Dance 1102 and Physical Education 1612 Prerequisite: Physical Education 1611 or equivalent skill level or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1621
Modern Jazz I
1 Credit Hour
An introduction to the movements and dance skills characteristic of jazz dance. This course provides an opportunity to condition the body in the areas of muscle and cardiovascular endurance, coordination, rhythm and balance. Class consists of isolated body movements, technique work, basic steps, step combinations, and traveling movements across the floor. Credit cannot be given for both Dance 1107 and Physical Education 1621. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1622
Modern Jazz II
1 Credit Hour
A continuation of the movements and dance skills of Modern Jazz I. This course gradually adds advanced dance movements and step combinations. Increased opportunity for creative exploration and performance of jazz dance. Credit cannot be given for both Dance 1108 and Physical Education 1622. Prerequisite: Physical Education 1621 or equivalent experience or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1623
Tap Dancing I
0.5 to 1 Credit Hours
An introduction to tap techniques and styles (including rhythm tap and Broadway tap) as well as historical origins and current trends. Emphasis on fundamental skills and rhythms, time steps, footwork, short combinations and styling. Credit cannot be given for both Dance 1110 and Physical Education 1623. (1 to 2 lab hours)

PHYSICAL EDUCATION (PHYS) 1624
Modern Dance I
1 Credit Hour
Introduction to body awareness, and movement in space. Technique, placement, and creative experiences are included in this course. Concepts of dance composition are studied through improvisation, vocabulary, and special awareness. Credit cannot be given for both Dance 1104 and Physical Education 1624. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1625
Modern Dance II
1 Credit Hour
A continuation of Modern Dance I. Further work on body awareness, and movement in space. Technique, placement, and creative experiences are included in this course. Concepts of dance composition are studied through improvisation, vocabulary, and

spatial awareness. Credit cannot be given for both Dance 1105 and Physical Education 1625. Prerequisite: Physical Education 1624 with a grade of C or better, or equivalent or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1631
Social Dance
1 Credit Hour
Traditional and modern ballroom dancing for those who desire to learn techniques of leading and following in a social dance setting. Waltz, foxtrot, swing and polka, as well as contemporary and/or novelty dances. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1641
Recreational Dance
1 Credit Hour
Fundamental techniques of folk and square dancing. Etiquette, history, culture and music appreciation for specific dances are also covered. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1642
Choreography & Composition of Dance
2 Credit Hours
Explores the process of using movement to give outward expression of inner sensations and feelings. Includes techniques for releasing tensions, developing imagery, improvisation, and discussion of aesthetic concepts. Credit cannot be given for both Dance 1122 and Physical Education 1642. Prerequisite: Physical Education 1611, 1621, 1623, 1624 or 1644 or equivalent, or consent of instructor. (1 lecture hour, 2 lab hours)

PHYSICAL EDUCATION (PHYS) 1643
Dance Appreciation
3 Credit Hours
Various aspects of dance as a concert theatre art form and as entertainment with an emphasis on history, dancers, choreographers, trends, and major works of dance in the tradition of western civilization. Credit cannot be given for both Dance 1100 and Physical Education 1643. (3 lecture hours)

PHYSICAL EDUCATION (PHYS) 1644
Dance Production & Performance
1 to 3 Credit Hours
Performance experiences as a dance company and practicum experience in production areas of theatre, dance, design technology, and theatre management. Students audition, rehearse, and perform dance in a college dance production. This course may be taken four times for credit. Credit cannot be given for both Dance 1120 and Physical Education 1644. Prerequisite: Consent of instructor is required. (2 to 6 lab hours)

PHYSICAL EDUCATION (PHYS) 1645
Dance Pedagogy
3 Credit Hours
Exploration of the key approaches to teaching dance. Provides practicum experience in the dance teaching process including study of instructional modes, dance learning styles, and factors affecting dance teaching and learning. Credit cannot be given for both Dance 1130 and Physical Education 1645. (2 lecture hours, 2 lab hours)

PHYSICAL EDUCATION (PHYS) 1701
Aikido I
1 Credit Hour
A Japanese martial art based on harmony and non-aggression. The learning and performance of basic skills of the activity are stressed. Knowledge and techniques with special emphasis on safety, attitude and etiquette. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1702
Aikido II
1 Credit Hour
A continuation of Aikido I. A Japanese martial art based on harmony and non-aggression. The learning and performance of basic skills of the activity are stressed. Knowledge and techniques with special emphasis on safety, attitude and etiquette. Prerequisite: Physical Education 1701 or equivalent experience or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1711
Hapkido I
1 Credit Hour
Hapkido is Korean martial art that emphasizes defensive techniques and Ki (inner power) through the coordination of mind and body. Hapkido teaches blocks, kicks and strikes, but emphasizes joint-locking and pressure points. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1712
Hapkido II
1 Credit Hour
A continuation of Hapkido I. Hapkido is a Korean martial art that emphasizes defensive techniques and Ki (inner power) through the coordination of mind and body. Hapkido teaches blocks, kicks and strikes, but emphasizes joint-locking and pressure points. These skills allow for effective control of an opponent. Prerequisite: Physical Education 1711 or equivalent. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1721
Judo I
1 Credit Hour
The learning performance of fundamental psycho-motor skills and techniques of judo, individually and/or as part of a team, with special emphasis on safety and sportsmanship. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1722
Judo II
1 Credit Hour
A continuation of Judo I. Competition is encouraged when available, and more advanced techniques and strategies are explored. Prerequisite: Physical Education 1721 or equivalent, or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1731
Jujutsu I
1 Credit Hour
(Miyama Ryu) The art of Japanese Samurai from which judo and aikido were derived. JuJutsu is based on mechanical principles and is used only for defensive purposes. Benefits are improved fitness, coordination and defensive skill training. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1732
Jujutsu II
1 Credit Hour
A continuation of JuJutsu I. Advanced techniques and applications. Prerequisite: Physical Education 1731 or equivalent. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1741
Karate I
1 Credit Hour
An introduction to karate and the basics of the martial arts called Tang Soo Do. Stance, blocks, punches, kicks, elbow strikes, techniques of self-defenses, and physical and mental conditioning. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1742
Karate II
1 Credit Hour
Continued practice of Tang Soo Do skills and techniques with emphasis on intermediate to advanced level self defense skills. Prerequisite: Physical Education 1741 or equivalent. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1751
Personal Defense
1 Credit Hour
Introduction to personal defense skills. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1761
Personal Safety for Women
1 Credit Hour
Emphasizes non-violent options (beyond traditional self-defense) to offset assault on women. Safety awareness, de-escalation techniques and physical techniques are included. Social conditioning that creates the "victim" profile, the differences between passive, assertive and aggressive behavior, and the most common ways women are assaulted are also included. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1771
Malay Silat I
1 Credit Hour
Malaysian martial art form that involves defensive principles, self-awareness, skill and sensitivity training. Encompassing both soft and hard styles, the main emphasis is on self-preservation, deception skills and keeping a low profile. Music and a form of dance are also a part of this practice. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1772
Malay Silat II
1 Credit Hour
A continuation of Malay Silat I. Malay Silat techniques with emphasis on intermediate to advanced level self defense skills. Also includes the philosophy of the art. Prerequisite: Physical Education 1171 with a grade of S or better or college equivalent or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1774
Flow Yoga I
0.5 to 1 Credit Hours
A subset of hatha yoga, vinyasa flow is series of poses (asanas) joined together to create a smooth flow. Each asana or movement is synchronized with the breath and each movement is connected to the next. A slower moderate pace differentiates this from power yoga. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1775
Flow Yoga II
0.5 to 1 Credit Hours
A continuation of Flow Yoga I, with additional sequences; incorporating intermediate level skills or longer duration of poses. Continued emphasis on the connection of breath and movement. Prerequisite: Physical Education 1774 with a grade of S or better, or equivalent. (1 to 2 lab hours)

PHYSICAL EDUCATION (PHYS) 1778
Relaxation & Meditation Techniques
0.5 to 1 Credit Hours
A variety of relaxation and meditation techniques are used to enable students to decrease stress, improve focus and develop an everyday peace of mind in the face of today's busy lifestyle. (1 to 2 lab hours)

PHYSICAL EDUCATION (PHYS) 1800
Special Project
1 to 3 Credit Hours
Special project courses in Physical Education cover topics not otherwise covered by general education courses and other courses in the Catalog for the Physical Education discipline. These courses require direct experience and focused reflection in an in-depth study of a specific Physical Education topic and/or the critical analysis of contemporary issues in physical education. They are targeted to self-selected students with an interest in the subject matter and involve active participation: The course delivery incorporates an experiential component of no less than 50 percent but not to exceed 75 percent. This experiential component may include field studies, interdisciplinary learning and/or the practical application of physical education concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics etc.)

PHYSICAL EDUCATION (PHYS) 1801
Bowling I
1 Credit Hour
Introduction to the fundamental skills and techniques of bowling. Etiquette, scoring, game procedure and rules are covered. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1802
Bowling II
1 Credit Hour
Prepares students to advance from the level of a recreational bowler to competitive league bowler. Etiquette, scoring, advanced bowling technique, strategy and a review of the rules. Prerequisite: Physical Education 1801 or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1804
Bicycle Touring
1 Credit Hour
Outdoor cycling for recreation and fitness. Riding skills, equipment, training techniques, nutrition and planning for bike trips and/or touring. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1805
Angling
1 Credit Hour
Bait, spin-casting, still-fishing techniques, equipment care, and general fishing skills and practices. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1810
Canoeing
1 Credit Hour
Fundamental skills of canoeing including basic strokes, safety and canoe camping. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1811
Backpacking
1 Credit Hour
Basics of backpacking including wilderness survival skills, equipment, conditioning, first aid, environmental issues and etiquette. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1813
Outdoor Environment Skills
1 Credit Hour
Weekend and/or weeklong outdoor strip allow for development of wilderness survival and safety skills primarily through experiences in camping. Rock climbing, backpacking, hiking and canoeing experiences, depending on trip. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1820
Selected Topics
0.5 to 3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (.5 to 3 lecture hours, .5 to 3 lab hours)

PHYSICAL EDUCATION (PHYS) 1821
Fencing I
1 Credit Hour
Beginning fencing. Topics include the grip, the lunge, parry, riposte, body positions, footwork, and movements for advance and retreat. Rules, etiquette, fencing equipment, scoring, safety, playing courtesies and open bouting are also included. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1822
Fencing II
1 Credit Hour
Builds on the skill of Fencing I by adding more advanced strategies of attack and defend. Footwork and speed drills are done with emphasis on good alignment. Time is divided equally between skill-building drills and practice bouts. Advanced strategies, rules, safety and etiquette are also emphasized. Prerequisite: Physical Education 1821 or equivalent. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1831
Marksmanship
1 Credit Hour
Marksmanship skills for police academy trainees. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within physical education to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with, and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

PHYSICAL EDUCATION (PHYS) 1841
Rock Climbing
1 Credit Hour
An introduction to rock climbing, emphasizing basic skills and techniques. Also included: equipment usage, care of equipment, terminology and safety. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1851
Downhill Skiing I
1 Credit Hour
Downhill skiing emphasizing the development of basic skills and an understanding of safety procedures. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1852
Downhill Skiing II
1 Credit Hour
Downhill skiing emphasizing the practice and development of intermediate skiing techniques. Safety procedures and practices are also stressed. Prerequisite: Physical Education 1851. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1854
Cross Country Skiing I
1 Credit Hour
Introduction to cross country skiing skills. Skiing techniques, safety methods, winter survival techniques, care of equipment, orienteering and physical conditioning. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1855
Cross Country Skiing II
1 Credit Hour
A continuation of Cross Country Skiing I skills. Advanced cross country skiing techniques, increased physical conditioning, orienteering and leadership skills. Prerequisite: Physical Education 1854 or equivalent. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1901
Hatha Yoga I
1 Credit Hour
Exploration and practice of the yogic system of mind/body awareness and fitness. Students improve muscular strength, endurance, flexibility and concentration. Release of stress and tension through yoga asanas (postures), pranayama (breath control) and meditation. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1902
Hatha Yoga II
1 Credit Hour
A continuation of Hatha Yoga I. Further exploration of the yogic system of mind/body awareness and fitness. Challenging asanas that require higher levels of strength and balance, as well as increased practice of inversions, twists and backbends are covered. The chakra system of energy flow studied with the asana movements. Prerequisite: Physical Education 1901 or equivalent experience or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1904
Gentle Yoga I
1 Credit Hour
A hatha yoga class designed to be less stressful on the joints. Asanas (poses) are chosen to emphasize flexibility and relaxation. Meditation techniques and restorative poses are emphasized. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1905
Gentle Yoga II
1 Credit Hour
A continuation of Gentle Yoga I. Prerequisite: Physical Education 1904 with a grade of S or better, or equivalent. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1908
Vinyasa Flow Yoga I
0.5 Credit Hours
A type of hatha yoga that links the breath with each movement to create a seamless and easy transition from one pose to the next. (1 lab hour)

PHYSICAL EDUCATION (PHYS) 1909
Vinyasa Flow Yoga II
0.5 Credit Hours
A continuation of Vinyasa Flow Yoga I. Prerequisite: Physical Education 1908 with a grade of S or better, or equivalent. (1 lab hour)

PHYSICAL EDUCATION (PHYS) 1911
Pilates I (Mat)
1 Credit Hour
Students participate in a series of stretching and strengthening exercises based on the Joseph Pilates (pil-LAH-teez) method of body conditioning. Designed to develop muscle strength and tone. This is a mat course; machines are not used. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1912
Pilates II (Mat)
1 Credit Hour
A continuation of Pilates I. Stretching and strengthening exercises based on the Joseph Pilates method of body conditioning. This is a mat course; machines are not used. Prerequisite: Physical Education 1911 with a grade of S or better, or equivalent. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1921
Power Yoga I
1 Credit Hour
Yoga postures (asanas) are coordinated specifically to the breath and in a continuous flow to not only enhance flexibility, muscular strength and endurance, but also to improve cardiovascular fitness to a further degree than basic yoga. Release of stress through yoga postures, pranayama (breathing), and meditative techniques are also covered. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1922
Power Yoga II
1 Credit Hour
A continuation of Power Yoga I. Increasingly advanced yoga moves (asanas) are coordinated specifically to the breath and in a continuous flow so as to further the components of physical fitness and overall wellness. Emphasis is on a more challenging workout. Release of stress through yoga postures, pranayama (breathing) and meditative techniques. Prerequisite: Physical Education 1921 or equivalent experience or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1931
NIA Aerobics I
1 Credit Hour
An introduction to neuromuscular integrative action (NIA) aerobics. A holistic exercise course that combines martial arts, yoga, dance, physical, mental, emotional and spiritual exercises, and conditioning techniques. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 1932
NIA Aerobics II
1 Credit Hour
A continuation of NIA aerobics. Further neuromuscular integrative action (NIA) activities provide a unique workout that combines basic conditioning techniques, martial arts, yoga and dance, as well as emotional and spiritual exercises. Prerequisite: Physical Education 1931 or equivalent experience or consent of instructor. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 2200
Introduction to Physical Education
3 Credit Hours
A study of the history and development of physical education and the related areas of recreation, health, safety and athletics. Special emphasis is devoted to the aims and objectives of physical education. (3 lecture hours)

PHYSICAL EDUCATION (PHYS) 2201
Introduction to Coaching
3 Credit Hours
Principles, practices and philosophy of sports coaching for students interested in pursuing a coaching career at the youth, interscholastic or intercollegiate level. (3 lecture hours)

PHYSICAL EDUCATION (PHYS) 2202
Introduction to Athletic Programs
3 Credit Hours
A study of the organizational management and administration of athletic programs at the elementary, secondary, collegiate and professional levels. Emphasis is on both philosophical and practical aspects of athletics. (3 lecture hours)

PHYSICAL EDUCATION (PHYS) 2203
Teaching Sports Skills
3 Credit Hours
Motor learning, educational methods, and effective techniques for teaching sport and physical skills to school-aged children and adults. Experience in applying teaching techniques to others. (3 lecture hours)

PHYSICAL EDUCATION (PHYS) 2204
Theory and Practice of Baseball
3 Credit Hours
An introduction to baseball skills in the classroom and on the field covering skill progressions, strategies and teaching pedagogy of all nine positions of the game. (2 lecture hours, 2 lab hours)

PHYSICAL EDUCATION (PHYS) 2205
Theory and Practice of Soccer
3 Credit Hours
Knowledge, progressions and skills are emphasized in this fundamental approach to soccer. Offensive progressions include: fundamental skills, offensive moves, position breakdown, team formations and special plays. Defensive progressions include: team concepts, individual concepts, man-to-man defenses, zone defenses and special defensive formations. Team play and rules of the game are emphasized. (2 lecture hours, 2 lab hours)

PHYSICAL EDUCATION (PHYS) 2206
Theory and Practice of Basketball
3 Credit Hours
Knowledge, progressions and skills are emphasized in this fundamental approach to basketball. Offensive progressions include: fundamental skills, offensive moves, position breakdown, team offenses and special offenses. Defensive progressions include: team concepts, individual concepts, neutralization of offensive skills, man-to-man defenses, zone defenses and special

defenses. Team play and rules of the game are emphasized. (2 lecture hours, 2 lab hours)

PHYSICAL EDUCATION (PHYS) 2208
Theory and Practice of Football
3 Credit Hours
Analysis, instruction and demonstration of the fundamental skills in football. A study of the various systems of play and the strengths and weaknesses of each. (2 lecture hours, 2 lab hours)

PHYSICAL EDUCATION (PHYS) 2210
Sports in Society
3 Credit Hours
This course will provide the students with a basic understanding of the theories and principles related to sociocultural issues, ethics, and morality in the sports industry. Students will be exposed to the current issues and trends that are prevalent in the sports industry. Topics may include, legal issues, amateur vs. professional athletes, technology and the media, issues related to gender, race, and or sexual orientation, and the globalization of the sports industry. (3 lecture hours)

PHYSICAL EDUCATION (PHYS) 2224
Theory and Practice of Track and Field
3 Credit Hours
Track and field coaching and teaching theories including skill technique for each event, season and daily practice preparation, and coaching methodology. Sprints, relays, hurdles, middle distance, shot put, discus, javelin, hammer, long jump, triple jump, high jump, pole vault and the multi-events are covered. (2 lecture hours, 2 lab hours)

PHYSICAL EDUCATION (PHYS) 2230
Theory and Practice of Volleyball
3 Credit Hours
Analysis, instruction, demonstration and teaching progression of the fundamentals of volleyball for the physical education major, player and/or future coach. Teaching and coaching methods, offensive and defensive systems and strategies, history and rule interpretations are included. (2 lecture hours, 2 lab hours)

PHYSICAL EDUCATION (PHYS) 2233
Theory and Practice of Fastpitch Softbal
3 Credit Hours
An introduction to fastpitch softball skills in the classroom and on the field covering skill progressions, strategies and teaching pedagogy of all nine positions of the game. (2 lecture hours, 2 lab hours)

PHYSICAL EDUCATION (PHYS) 2238
Skin and Scuba Diving
3 Credit Hours
Development of skills for floating weightless in the campus' 15-foot deep pool. Safety and survival underwater skills are achieved in classroom and pool sessions. Stresses understanding the environment, diving equipment and limitation of the individual. Successful completion of this course prepares the student for open water scuba diving. Scuba equipment is provided. Prerequisite: Demonstrate comfort in the water with reasonable swimming proficiency. (2 lecture hours, 2 lab hours)

PHYSICAL EDUCATION (PHYS) 2239
Skin and Scuba Diving II
3 Credit Hours
A continuation of Physical Education 2238. Refinement of previously learned skills and introduction to advanced skills. Prerequisite: Physical Education 2238 with a grade of S or better and/or certification or consent of instructor (2 lecture hours, 2 lab hours)

PHYSICAL EDUCATION (PHYS) 2240
Introduction to Sport Psychology
3 Credit Hours
An examination of the psychological reasons for people participating in various types of competitive and non-competitive sports. Application of psychological concepts to improve the athletes personal growth and development with attention to the coach's role in accomplishing these objectives. Topics covered include: attainment of optimal arousal level, improvement of concentration, mental rehearsal for events, positive reinforcement, goal setting, relaxation techniques, and self fulfillment through non-competitive sports. (3 lecture hours)

PHYSICAL EDUCATION (PHYS) 2244
Lifeguard Training
2 Credit Hours
Students are trained and prepared to fulfill the requirements of the American Red Cross Life Guard Training certification. Topics include water safety, accident prevention, assist and rescue techniques, and the job requirements of a lifeguard. American Red Cross cards will be issued to those who qualify. Must be able to pass a swimming skills test at the beginning of class. Prerequisite: Swimming test at the discretion of the instructor. (Swimming skills at the level of "Swimmer" of the American Red Cross program recommended). (1 lecture hour, 2 lab hours)

PHYSICAL EDUCATION (PHYS) 2251
Living With Health
3 Credit Hours
Personal and community health issues. Achieving overall wellness and implementing behavior changes through knowledge of current health research. Major topics may include: stress management, anxiety and mood disorders, relationships, nutrition, physical fitness and exercise, weight management, drug use and abuse, cancer, cardiovascular diseases, AIDS and other sexually transmitted diseases. (3 lecture hours)

PHYSICAL EDUCATION (PHYS) 2253
CPR Training
1 Credit Hour
Cardiopulmonary resuscitation (CPR) for adult, child and infant. Automatic external defibrillator (AED) training. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 2254
First Aid and CPR
3 Credit Hours
The value and need for training in emergency first aid, cardiopulmonary resuscitation and automatic external defibrillators are emphasized with certification granted upon successful completion of the course. (3 lecture hours)

PHYSICAL EDUCATION (PHYS) 2255
Care and Prevention of Athletic Injuries
3 Credit Hours
Introduction to the responsibilities and duties of an athletic trainer including basic fundamentals and techniques, injury care and prevention, injury recognition, emergency care, supportive strapping and wrapping techniques, ordering of supplies, budgeting

and the general operation of a training room facility. (3 lecture hours)

PHYSICAL EDUCATION (PHYS) 2256
Applied Procedures and Techniques
3 Credit Hours
Training room techniques and procedures. Applications to both hands-on practice and competitive field experience under the supervision of certified athletic trainers. (1 lecture hour, 4 lab hours)

PHYSICAL EDUCATION (PHYS) 2257
Athletic Taping Techniques
1 Credit Hour
Study and practice of supportive strapping, wrapping and taping techniques. Emphasis on proper techniques and appropriate injury situations requiring added support. (2 lab hours)

PHYSICAL EDUCATION (PHYS) 2258
The Science of Nutrition
3 Credit Hours
Fundamentals of human nutrition. Basic biochemistry and physiology of all nutrients. Topics include anatomy and physiology of digestion, nutritional requirements and metabolism. Supplements, diets, and exercise applications are also addressed. (3 lecture hours)

PHYSICAL EDUCATION (PHYS) 2260
The Science of Physical Fitness
2 Credit Hours
Basic exercise physiology principles as applied to the development of personal and professional fitness programs. Major topics include muscle cell physiology, energy metabolism during exercise, nutrition for fitness, cardiovascular training, and muscular conditioning. (2 lecture hours)

PHYSICAL EDUCATION (PHYS) 2261
Applied Kinesiology
3 Credit Hours
Functional anatomy and physiology essential to those in fitness and physical education professions. Special emphasis on the musculoskeletal system. Includes basic biomechanics and movement analysis for exercise and sport applications. (3 lecture hours)

PHYSICAL EDUCATION (PHYS) 2262
Fitness Instructor Training-Group
2 Credit Hours
Application of exercise and teaching principles for leading group exercise classes. Practical experience in leading a variety of fitness classes in preparation for teaching and/or national certification. (1 lecture hour, 2 lab hours)

PHYSICAL EDUCATION (PHYS) 2263
Fitness Instructor Training-Personal
2 Credit Hours
Application of exercise and teaching principles for personal fitness instruction. Practical experience in leading a variety of exercise methods and techniques in preparation for teaching and/or certification. (1 lecture hour, 2 lab hours)

PHYSICAL EDUCATION (PHYS) 2264
Sports Mechanics for Coaches
2 Credit Hours
Provides an understanding of sport science, the mechanics of human movement, and their application to athletic performance. Addresses sport protocols, coaching techniques, and kinesiology. (2 lecture hours)

PHYSICAL EDUCATION (PHYS) 2265
Biophysical Foundations/Human Movement
2 Credit Hours
Provides an understanding of anatomical, mechanical, physiological, neural, and psychological bases of human movement. (2 lecture hours)

PHYSICAL EDUCATION (PHYS) 2270
Introduction to Sports Marketing
3 Credit Hours
This course will cover the basic theories and principles of sports marketing and communications from sports and recreational facilities to professional and amateur sports. Reveals how to study and understand the market, develop a marketing strategy, clarify a sports organization's needs and goals, and implement marketing plans through sponsorship, fundraising, licensing, pricing, promotions, advertising, broadcasting and sales. (3 lecture hours)

PHYSICAL EDUCATION (PHYS) 2800
Special Project
1 to 3 Credit Hours
Special project courses in physical education cover topics not otherwise covered by general education courses and other courses in the Catalog for the Physical Education discipline, while building upon academic knowledge and skills acquired in introductory-level Physical Education classes. These courses require direct experience and focused reflection in an in-depth study of a specific physical education topic and/or the critical analysis of contemporary issues in physical education. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 50 percent but not to exceed 75 percent. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of more complex physical education concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) Prerequisite: At least one course in Physical Education or consent of instructor

PHYSICAL EDUCATION (PHYS) 2840
Experimental/Pilot Class
1 to 6 Credit Hours
Exploration and analysis of topics within Physical Education. This course is used to pilot a proposal for a permanent discipline course. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required

PHYSICAL EDUCATION (PHYS) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point

average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

PHYSICAL EDUCATION (PHYS) 2863
Internship (Career & Technical Ed)
3 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 225 clock hours for three semester credit hours. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

PHYSICAL EDUCATION (PHYS) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

PHYSICAL EDUCATION (PHYS) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

PHYSICAL EDUCATION (PHYS) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

PHYSICAL THERAPIST ASSISTANT

PHYSICAL THERAPIST ASSISTANT (PHYTA) 1100
Introduction to Physical Therapy
2 Credit Hours
Students will be introduced to an overview of the physical therapy profession within the health care delivery system from a historical, philosophical, and organizational context. Students will explore the physical therapy frame of reference in various practice and treatment areas and discuss personal and professional qualities of the health care provider, professional ethics, and the psychological aspects of treatment. Prerequisite: Consent of instructor is required. (2 lecture hours)

PHYSICAL THERAPIST ASSISTANT (PHYTA) 1109
Basic Health Care Skills and Principles
3 Credit Hours
Students will be instructed in basic health care skills used in physical therapy. Other topics will include identification of anatomical structures and therapeutic intervention techniques. Prerequisite: Admission to Physical Therapist Assistant program or consent of instructor. (2 lecture hours, 3 lab hours)

PHYSICAL THERAPIST ASSISTANT (PHYTA) 1112
PTA Kinesiology II
3 Credit Hours
Continuation of application of biomechanical principles and analysis of human movement. Explores in detail the relationship of these principles to the elbow, forearm, wrist, hand, lower extremity, head, neck, trunk, and to gait and posture. Prerequisites: Admission to Physical Therapist Assistant program and Physical Therapist Assistant 1111 with a grade of C or better or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

PHYSICAL THERAPIST ASSISTANT (PHYTA) 1114
PTA Total Patient Care
1 Credit Hour
Students will discuss topics related to the physical therapy profession, including psycho-emotional aspects of caring for the patient, psycho-social problems of the ill and disabled, aging, medical ethics and professional ethics. Prerequisite: Admission to Physical Therapist Assistant program or consent of instructor. (1 lecture hour)

PHYSICAL THERAPIST ASSISTANT (PHYTA) 1202
PTA Therapeutic Exercise
2 Credit Hours
Continuation of therapeutic exercise for all ages, including stretching exercise. Emphasis is on the development of exercise programs for correction of postural dysfunction and gait abnormalities including the use of orthotic devices relevant to mobility and daily function. Focus on therapeutic intervention for the patient following an amputation, including the use of prosthetic devices relevant to mobility and daily function. Assessment and intervention of Activities of Daily Living (ADL) issues are also emphasized. Prerequisite: Admission to Physical Therapist Assistant program and Physical Therapist Assistant 1211 with a grade of C or better or consent of instructor. (1 lecture hour, 2 lab hours)

PHYSICAL THERAPIST ASSISTANT (PHYTA) 1205
PTA Kinesiology
5 Credit Hours

Students will study and analyze human movement utilizing principles of biomechanics, musculoskeletal anatomy, and neuromuscular physiology. Emphasis will be on basic biomechanics, the articular system, the skeletal system, the muscular system, the nervous system, and development of exercise programs for correction of postural dysfunction and gait abnormalities. Prerequisite: Admission to Physical Therapist Assistant program is required. Anatomy and Physiology 1551 with a grade of B or better, or equivalent or Anatomy and Physiology 1571 with a grade of B or better, or equivalent or consent of instructor. (4 lecture hours, 2 lab hours)

PHYSICAL THERAPIST ASSISTANT (PHYTA) 1207
PTA Pathophysiology
2 Credit Hours
Students will study diseases and disorders commonly seen in physical therapy practice. Students will be provided an overview of etiology, manifestations, and treatment of significant diseases with an emphasis on the musculoskeletal, nervous, and cardiopulmonary systems. Prerequisite: Admission to Physical Therapist Assistant program or consent of instructor. Anatomy and Physiology 1551 with a grade of B or better, or equivalent or Anatomy and Physiology 1571 with a grade of B or better, or equivalent. (2 lecture hours)

PHYSICAL THERAPIST ASSISTANT (PHYTA) 1211
PTA Therapeutic Assessment & Basic Int
4 Credit Hours
Students will learn the basic principles of exercise, basic evaluation skills pertaining to joint and muscle function, the development of exercise programs for correction of specific conditions, and goniometric and manual muscle testing assessment. Prerequisite: Admission to Physical Therapist Assistant Program is required and Physical Therapist Assistant 1109 with a grade of B or better, or equivalent or consent of instructor. (2.5 lecture hours, 4.5 lab hours)

PHYSICAL THERAPIST ASSISTANT (PHYTA) 1221
PTA Clinical Practicum I
1 Credit Hour
Provides initial opportunity to implement a variety of physical therapy treatment plans. Students will be oriented to the roles and responsibilities of the physical therapist assistant (PTA) and will have their initial supervised contact with clients having physical dysfunction. Prerequisite: Admission to Physical Therapist Assistant program and Physical Therapist Assistant 1201 with a grade of C or better or consent of instructor.

PHYSICAL THERAPIST ASSISTANT (PHYTA) 1301
PTA Therapeutic Modalities
4 Credit Hours
Students will learn therapeutic intervention utilizing physical agents in the treatment of acute and chronic diseases and injuries. Students will be introduced to wound care, burn care, and infection control. Prerequisite: Admission to Physical Therapist Assistant program and Physical Therapist Assistant 1205 with a grade of B or better, equivalent or consent of instructor. (2.5 lecture hours, 4.5 lab hours)

PHYSICAL THERAPIST ASSISTANT (PHYTA) 1840
Independent Study - Individualized
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

PHYSICAL THERAPIST ASSISTANT (PHYTA) 2103
PTA Neuromuscular/Cardiopulmonary Rehab
4 Credit Hours
Students will learn physical therapy techniques used in the assessment and intervention of patients with neurological disorders and cardiovascular and pulmonary disorders. Prerequisite: Physical Therapist Assistant 1301 with a grade of B or better, or equivalent or consent of instructor. (2.5 lecture hours, 4.5 lab hours)

PHYSICAL THERAPIST ASSISTANT (PHYTA) 2104
PTA Special Patient Populations
3 Credit Hours
Students will be provided with an overview of physical therapy for special patient populations including pediatrics, geriatrics, bariatrics, lymphedema, women's health, post-amputation, and patients with prosthetics. Prerequisite: Physical Therapist Assistant 1301 with a grade of B or better, or equivalent or consent of instructor. (2.5 lecture hours, 1.5 lab hours)

PHYSICAL THERAPIST ASSISTANT (PHYTA) 2110
PTA Documentation
1.5 Credit Hours
Observation, interviewing and medical note-writing techniques. Subject matter to include various assessment, treatment plan, progress note, and discharge summary formats. Emphasis on writing style, reimbursement guidelines and legal aspects of note writing. Prerequisite: Admission to Physical Therapist Assistant program or consent of instructor. (1.5 lecture hours)

PHYSICAL THERAPIST ASSISTANT (PHYTA) 2112
PTA Advanced Orthopedic Rehabilitation
4 Credit Hours
Students will focus on orthopedic disorders and appropriate therapeutic intervention. Students will continue their study of therapeutic exercise, with a focus on principles and application of progressive-resistive exercise, upper and lower extremity joint mobilization, and exercise progression. Prerequisite: Admission to Physical Therapist Assistant Program or consent of instructor. Physical Therapist Assistant 1301 with a grade of B or better, or equivalent. (2.5 lecture hours, 4.5 lab hours)

PHYSICAL THERAPIST ASSISTANT (PHYTA) 2122
PTA Clinical Practicum I
1.5 Credit Hours
Students are provided an initial opportunity to implement a variety of physical therapy treatment plans in the clinic. Students will be oriented to the roles and responsibilities of the physical therapist assistant (PTA) and will have their initial supervised contact with clients. Students are provided opportunities to follow established treatment programs, provide individual patient treatments, and practice hands-on techniques. This course can only be taken on a pass/fail basis. Prerequisite: Admission to Physical Therapist Assistant Program or consent of instructor and Physical Therapist Assistant 1301 with a grade of B or better or consent of instructor.

PHYSICAL THERAPIST ASSISTANT (PHYTA) 2212
PTA Advanced Orthopedic Rehabilitation
4 Credit Hours
Continuation of the study of therapeutic exercise. Focus is on principles and application of progressive-resistive exercise, upper and lower extremity joint mobilization, and exercise

progression. Emphasis is on orthopedic disorders and appropriate therapeutic intervention. Prerequisite: Admission to Physical Therapist Assistant Program and Physical Therapist Assistant 1202 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 4 lab hours)

PHYSICAL THERAPIST ASSISTANT (PHYTA) 2214
PTA Professional Issues
1 Credit Hour
Students will review and discuss topics related to the Physical Therapy profession, including Medicare Prospective Payment System (PPS), current trends, pharmacology, cultural diversity, research, licensure, and other legal and ethical aspects that influence current practice. Prerequisite: Physical Therapist Assistant 2103 with a grade of B or better, or equivalent or consent of instructor. (1 lecture hour)

PHYSICAL THERAPIST ASSISTANT (PHYTA) 2223
PTA Clinical Practicum II
2.5 Credit Hours
Students continue their clinical experience with opportunities to further improve their intervention skills. Students will reinforce concepts of proper body mechanics, therapist and client safety, communication skills, documentation of goals, intervention plans, and patient progress. This course can only be taken on a pass/fail basis. Prerequisite: Physical Therapist Assistant 2122 with a grade of S or better, or equivalent.

PHYSICAL THERAPIST ASSISTANT (PHYTA) 2224
PTA Clinical Practicum III
3 Credit Hours
Students' clinical experiences conclude with the opportunity to build upon knowledge and skills developed in prior clinical experiences. Focus is on entry level competencies in providing comprehensive and consecutive interventions within the larger framework of departmental operations. This course can only be taken on a pass/fail basis. Prerequisite: Physical Therapist Assistant 2223 with a grade of S or better, or equivalent.

PHYSICAL THERAPIST ASSISTANT (PHYTA) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

PHYSICAL THERAPIST ASSISTANT (PHYTA) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

PHYSICS

PHYSICS (PHYSI) 1100 (IAI P1 900L)
Physics
4 Credit Hours
Conceptual study of laws of motion, forces, energy and momentum, properties and states of matter, heat and thermodynamics, wave motion, sound, light, electricity and magnetism, and atomic and nuclear physics. Prerequisite: Mathematics 0465 or Mathematics 0481 (or college equivalent) with a grade of C or better or qualifying score on the mathematics placement test or a qualifying A.C.T. math score. Course requires Reading Placement Test Score-Category One. (3 lecture hours, 3 lab hours)

PHYSICS (PHYSI) 1115
Lab Microprocessors and Microcontrollers
1 Credit Hour
Students will be introduced to basic programming of microprocessors and microcontrollers that may be used in physics. This class will taught in a lab format with hands-on projects. (2 lab hours)

PHYSICS (PHYSI) 1150 (IAI P1 901)
Physics and Society
3 Credit Hours
The applications of physics to society are studied. This may specifically include the study of energy, thermodynamics, electrical power generation, electric circuits, nuclear power, nuclear weapons and modern particle physics. Prerequisite: Mathematics 0465 or Mathematics 0482 with a grade of C or better or a qualifying score on the mathematics placement test or a qualifying A.C.T. math score. Course requires Reading Placement Test Score-Category One. (3 lecture hours)

PHYSICS (PHYSI) 1152
Applications of Physics in Society
4 Credit Hours
Study of applications of physics to society. Includes the study of energy, thermodynamics, electrical power generation, electric circuits, nuclear power, nuclear weapons, and modern particle physics. Lab component included. Students receive credit for either Physics 1150 or 1152. Prerequisite: Mathematics 0465 or Mathematics 0481 with a grade of C or better or a qualifying score on the mathematics placement test. (3 lecture hours, 3 lab hours)

PHYSICS (PHYSI) 1161
Technical Physics I
4 Credit Hours
Conceptual and algebra-based study of classical mechanics, electricity and magnetism including laws of motions, forces, momentum, work, energy, rotational motion, electric charges, electric currents, circuits, magnetism, magnetic effects and electromagnetic induction. Emphasis is on physical concepts as applied to industrial/technical fields through completion of team projects. Prerequisite: Mathematics 0481 with a grade of C or better or equivalent and Mathematics 1115 or Mathematics 1432 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours, 3 lab hours)

PHYSICS (PHYSI) 1162
Technical Physics II
4 Credit Hours
Conceptual and algebra-based study of matter properties, temperature and heat, ideal gases, wave motion, sound, light, AC electricity, and select topics of modern physics. Emphasis is on physical concepts as applied to industrial/technical fields in a series of team projects. Prerequisite: Physics 1161 with a grade of C or better, or equivalent. (3 lecture hours, 3 lab hours)

PHYSICS (PHYSI) 1201 (IAI P1 900L)
General Physics I
5 Credit Hours
Algebra and trigonometry-based study of classical linear and rotational kinematics and dynamics (including work, energy, impulse, momentum, and collisions), fluids, heat, thermodynamics, periodic motion, and wave motion. Course is intended for students that have taken high school physics and have experience with right-angle trigonometry. (Students without high school physics are encouraged to complete Physics 1100 before enrolling in this course.) Prerequisite: Mathematics 1115 (or college equivalent) or Mathematics 1431 (or college equivalent) either with a grade of C or better or a qualifying score on the mathematics placement test or a qualifying A.C.T. math score. Course requires Reading Placement Test Score-Category One. (4 lecture, 2 lab hours)

PHYSICS (PHYSI) 1202
General Physics II
5 Credit Hours
Algebra-based study of electrostatics, electric fields, Gauss' law, capacitance, current, resistance, magnetic forces and fields, electromagnetic induction, DC and AC circuits, electromagnetic waves, mirrors, lenses, optics, and modern physics. Note: The standard prerequisite is Physics 1201. While Physics 2111 may serve as an alternative prerequisite for taking this COD course, students are advised to check with their intended transfer institution(s) to ensure that the thermodynamics covered in Physics 1201 is not a requirement prior to embracing this alternative. Prerequisite: Physics 1201 or Physics 2111 with a grade of C or better. (4 lecture hours, 2 lab hours)

PHYSICS (PHYSI) 1800
Special Project
1 to 3 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.)

PHYSICS (PHYSI) 1820
Selected Topics
1 to 3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (1 to 3 lecture hours)

PHYSICS (PHYSI) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

PHYSICS (PHYSI) 2111 (IAI P2 900L/PHY 911)
Physics for Science and Engineering I
5 Credit Hours
Calculus-based study of classical linear and rotational kinematics and dynamics, including work, energy, impulse, momentum, collisions, gravitation, periodic motion, and wave motion. (Students without a strong high school physics background are encouraged to complete PHYSI-1201 before enrolling in this course.) Prerequisite: Mathematics 2231 (or college equivalent) with a grade of C or better. (4 lecture hours, 3 lab hours)

PHYSICS (PHYSI) 2112 (IAI PHY 912)
Physics for Science and Engineering II
5 Credit Hours
Calculus-based study of electrostatics, electric fields, Gauss' Law, capacitance, current, resistance, magnetic forces and fields, electromagnetic induction, AC circuits, Maxwell's equations, electromagnetic waves, geometric optics and physical optics. Prerequisite: Physics 2111 with a C or better. (4 lecture hours, 3 lab hours)

PHYSICS (PHYSI) 2115
Physics for Science and Engineering III
4 Credit Hours
Calculus-based study of fluids, thermodynamics, special relativity, introductory quantum mechanics, nuclear physics and particle physics. Prerequisite: Physics 2112 with a grade of C or better. (3 lecture hours, 3 lab hours)

PHYSICS (PHYSI) 2800
Special Project
1 to 3 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the discipline, while building on academic knowledge and skills acquired in introductory-level classes. These courses require direct experience and focused reflection in an in-depth study of a specific topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of more complex geographic concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) Prerequisite: At least one course in the discipline or consent of instructor.

PHYSICS (PHYSI) 2820
Advanced Selected Topics
1 to 3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: At least one course in the discipline or consent of instructor. (1 to 3 lecture hours)

PHYSICS (PHYSI) 2827
Advanced Selected Topics II
1 Credit Hour
Advanced exploration and analysis of selected topics with a specific theme indicated by the course title listed in the college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: At least one course in the discipline or consent of instructor. (1 lecture hour)

PHYSICS (PHYSI) 2840
Experimental/Pilot Class
1 to 6 Credit Hours
Exploration and analysis of topics within the discipline. This course is used to pilot a proposal for a permanent discipline course. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required.

PHYSICS (PHYSI) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

PHYSICS (PHYSI) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

PHYSICS (PHYSI) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

PHYSICS (PHYSI) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

POLITICAL SCIENCE

POLITICAL SCIENCE (POLS) 1100 (IAI S5 903)
Introduction to Political Science
3 Credit Hours
An introduction to the study of political behavior, processes and institutions. Course includes a discussion and comparison of political ideas, theories, systems and policies. Focus on analysis of political problems on a national and global level, as well as a definition of central concepts. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

POLITICAL SCIENCE (POLS) 1101 (IAI S5 900)
American Politics
3 Credit Hours
Analysis of the dynamics and processes of the evolving American constitutional democracy: its origins, structure and problems. Areas of study include an in-depth discussion of the U.S. Constitution, federalism, civil liberties, interest groups, political parties, campaigns, elections, mass media, Congress, the courts and the presidency. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

POLITICAL SCIENCE (POLS) 1105 (IAI S5 902)
State and Local Politics
3 Credit Hours
Students will be introduced to the basic principles of state constitutions and the institutions they create. Additional topics will include the structure and function of state legislatures, courts and chief executives. The structure and function of city, county and other local governments is also considered as is the role of political parties, pressure groups and public opinion. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

POLITICAL SCIENCE (POLS) 1160
Modern Political Ideologies
3 Credit Hours
Introduction to major political philosophies and ideologies from John Locke to present-day political ideas. Topics may include Communism, Fascism, Liberalism, Conservatism, Utilitarianism, Capitalism, post-modernism, social contract theory

and Libertarianism. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

POLITICAL SCIENCE (POLS) 1800
Special Project
1 to 3 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). The experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.)

POLITICAL SCIENCE (POLS) 1820
Selected Topics I
3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (3 lecture hours)

POLITICAL SCIENCE (POLS) 1821
Selected Topics II
3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (2 lecture hours, 2 lab hours)

POLITICAL SCIENCE (POLS) 1822
Selected Topics III
3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (1 lecture hour, 4 lab hours)

POLITICAL SCIENCE (POLS) 1823
Selected Topics IV
3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (6 lab hours)

POLITICAL SCIENCE (POLS) 1824
Selected Topics V
2 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (2 lecture hours)

POLITICAL SCIENCE (POLS) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

POLITICAL SCIENCE (POLS) 2101
Urban Politics
3 Credit Hours
Students will examine the development, forms, functions, powers, and problems of urban government in the United States. An emphasis will be placed on the struggle for and development of power and influence in metropolitan areas and intergovernmental relations. Pressure group activity, administrative organization, and fiscal responsibilities will also be introduced. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

POLITICAL SCIENCE (POLS) 2203 (IAI S5 905)
Comparative Politics
3 Credit Hours
Introduction to the comparative study of developed and developing political systems. The politics and governments of selected countries are analyzed in their appropriate historical, social, economic and political settings. Prerequisite: Course requires Reading Placement Test Score-Category On. (3 lecture hours)

POLITICAL SCIENCE (POLS) 2220 (IAI S5 904)
World Politics
3 Credit Hours
Introduction to international relations and global politics. Discussion of different ideological perspectives such as Idealism and Realism, structure and function of international organizations, foreign policy and the role of diplomacy. Analysis of causes and consequences of war, poverty, international trade, international law, treaties, increase in population and global environmental destruction. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

POLITICAL SCIENCE (POLS) 2221
Politics of the Middle East
3 Credit Hours
Acquaints students with one of the key contemporary political problems in today's international arena. Few regions of the world provoke more interest, controversy or international crises than the Middle East. This course surveys the geography, history, politics and social development of this dynamic and volatile region for those with no previous knowledge or study of the Middle East. Prerequisite: Political Science 1100 or equivalent, or consent of instructor. Course requires Reading Placement Test Score-Category One. (3 lecture hours)

POLITICAL SCIENCE (POLS) 2230
Introduction to Peace & Conflict Studies
3 Credit Hours
An overview of a broad spectrum of factors that prevent a peaceful solution to human conflicts. Define and analyze different conceptions of peace, explore various forms of violence and examine its conditions. Evaluate strategies that lead to peaceful methods of conflict resolution and management of existing conflict. (3 lecture hours)

POLITICAL SCIENCE (POLS) 2240
Introduction to U.S. Foreign Policy
3 Credit Hours
An overview of U.S. foreign policy with six decades. The course provides a theoretical and historical overview of the major perspectives of the field as well as an evaluation of the actors and institutions that formulate foreign policy. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

POLITICAL SCIENCE (POLS) 2250 (IAI S5 905)
Politics of Latin American & Caribbean
3 Credit Hours
Examination of general themes in the politics of Latin America and the Caribbean with a particular focus on multiple countries throughout Latin America and the Caribbean. Focus on the comparative historical experiences of the region spanning the past five centuries. Also examines development of each country with a focus on social, economic and political institutions and issues of recent significance. (3 lecture hours)

POLITICAL SCIENCE (POLS) 2800
Special Project
1 to 3 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline, while building on academic knowledge and skills acquired in introductory-level classes. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of more complex discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) Prerequisite: At least one course in the discipline or consent of instructor.

POLITICAL SCIENCE (POLS) 2820
Advanced Selected Topics I
3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. May be taken three times for credit as long as different topics are selected. Prerequisite: At least one course in the discipline or consent of instructor. (3 lecture hours)

POLITICAL SCIENCE (POLS) 2821
Advanced Selected Topics II
3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: At least one course in the discipline or consent of instructor. (2 lecture hours, 2 lab hours)

POLITICAL SCIENCE (POLS) 2822
Advanced Selected Topics III
3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: At least one course in the discipline or consent of instructor. (1 lecture hour, 4 lab hours)

POLITICAL SCIENCE (POLS) 2823
Advanced Selected Topics IV
3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college Class Schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: At least one course in the discipline or consent of instructor. (6 lab hours)

POLITICAL SCIENCE (POLS) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

POLITICAL SCIENCE (POLS) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

POLITICAL SCIENCE (POLS) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

POLITICAL SCIENCE (POLS) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning

objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

POLYSOMNOGRAPHY

POLYSOMNOGRAPHY (POLY) 2300
Introduction to Polysomnography
3 Credit Hours
Introduction to the role of the polysomnographic technician. Covers basic patient care, patient assessment, infection control practices, emergency preparedness in the laboratory setting, ethics and professionalism in healthcare, and basic polysomnography testing. Prerequisite: Admission to the Polysomnography program is required. (3 lecture hours)

POLYSOMNOGRAPHY (POLY) 2301
Polysomnography Anatomy & Physiology
3 Credit Hours
Applied anatomy and physiology as related to polysomnography procedures and clinical practice. Major emphasis on neurologic, circulatory and pulmonary systems associated with normal and abnormal sleep, risk factors for sleep disorders, assessment for signs and symptoms of sleep disorders, and the morbidity and mortality associated with sleep disorders. Prerequisite: Admission to the Polysomnography program is required. (3 lecture hours)

POLYSOMNOGRAPHY (POLY) 2303
Clinical Practice I
3 Credit Hours
Clinical Practice in the performance of polysomnography testing. Includes patient assessment for at-risk individuals, pre-testing preparations, sleep disorder testing, procedural protocols, test documentation and results analysis. Prerequisite: Admission to the Polysomnography program is required.

POLYSOMNOGRAPHY (POLY) 2304
Advanced Polysomnography
3 Credit Hours
Advanced study in polysomnography testing. Theory and practice to include monitoring of test signals, recognition of sleep disorders, implementation and modification of therapeutic interventions, development, implementation and modification of treatment plans, data archiving, equipment maintenance and quality control. Prerequisite: Admission to the Polysomnography program is required. Polysomnography 2300, Polysomnography 2301 and Polysomnography 2303 with a grade of C or better, or equivalent. (3 lecture hours)

POLYSOMNOGRAPHY (POLY) 2305
Sleep Study Analysis
3 Credit Hours
This course provides instruction in the analysis and reporting of sleep study results. Major emphasis on the staging of sleep, identification of sleep disordered breathing events, descriptive and technical issues in sleep studies, and documentation of sleep study results in standardized reports. Prerequisite: Admission to the Polysomnography program is required. Polysomnography 2300, Polysomnography 2301 and Polysomnography 2303 with a grade of C or better, or equivalent. (3 lecture hours)

POLYSOMNOGRAPHY (POLY) 2306
Clinical Practice II
3 Credit Hours
Advanced clinical practice in the performance of polysomnography testing. Includes identification and treatment of special needs patients, sleep staging, sleep event identification and reporting in adult and pediatric patients, signal maintenance and correction, Multiple Sleep Latency Testing (MSLT) and Maintenance of Wakefulness Testing (MWT) and documentation and implementation, monitoring and optimization of therapy. Prerequisite: Polysomnography 2303 with a grade of C or better, or equivalent.

POLYSOMNOGRAPHY (POLY) 2307
Polysomnography Board Review
1 Credit Hour
Students will complete a comprehensive review and update of theory for Polysomnography Technologist procedures. Upon successful completion of this course students will be prepared for the Board of Registered Polysomnographic Technologist (BRPT) exam. (1 lecture hour)

PRACTICAL NURSING

PRACTICAL NURSING (NURSP) 1107
Medical Corpsman to Practical Nurse
6 Credit Hours
Addresses differences in competencies between the Medical Education and Training Campus (METC) Basic Medical Technician Corpsman Program and those of a practical nursing program as delineated in the Illinois Nurse Practice Act. Upon successful course completion, students will be awarded a practical nurse certificate and be eligible to sit for the practical nurse licensing exam (NCLEX-PN). Prerequisite: Successful completion of the METC Basic Medical Technician Corpsman Program within the last five years. If more than five years, at least one year of experience using corpsman skills within the last five years. Admission to the program is required. (2 lecture hours, 8 lab hours)

PRACTICAL NURSING (NURSP) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Associate Dean from the academic discipline where the student is planning to earn credit.

PRACTICAL NURSING (NURSP) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of

employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the Associate Dean from the academic discipline where the student is planning to earn credit.

PSYCHOLOGY

PSYCHOLOGY (PSYCH) 0485
Personal Biofeedback & Stress Management
1 Credit Hour
An introduction to behavioral, cognitive and physiological correlates of stress and stress management including an individualized practicum in thermal and surface electromyography biofeedback. This course fulfills BCIA certification requirements for 10 hours of personal biofeedback training, as well as providing for internships in direct clinical biofeedback with clients/patients. (0.5 lecture hour, 1 lab hour)

PSYCHOLOGY (PSYCH) 1100 (IAI S6 900)
General Psychology
3 Credit Hours
A survey of the study of behavior and mental processes with emphasis on the scientific nature of contemporary psychological investigation. Topics discussed included research methods, the biology of behavior, sensation and perception, stress and adjustment, learning, memory, cognition, motivation, emotion, life-span development of behavior, personality, abnormal behavior and its therapies, social behavior and individual differences. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

PSYCHOLOGY (PSYCH) 1140
Human Sexuality
3 Credit Hours
An examination of human sexuality from a variety of psychosocial perspectives, with an emphasis on biological, psychological and cultural aspects. Prerequisite: Psychology 1100. (3 lecture hours)

PSYCHOLOGY (PSYCH) 1150
Adjustment
3 Credit Hours
A survey of the theories of personality as they relate to dealing effectively with the adjustive demands of everyday life. The course includes coverage of the dynamics of stress and coping, interpersonal relationships including ethnic, racial and gender issues, and approaches to personal growth. Not IAI approved for psychology major credit. (3 lecture hours)

PSYCHOLOGY (PSYCH) 1180
Introduction to Behavioral Research
4 Credit Hours
An introduction to descriptive and experimental designs used in the study of behavior. Course content emphasizes methodology, procedures, ethics in research, psychological measurement, basic data analysis and research report writing. Prerequisite: Psychology 1100. (3 lecture hours, 2 lab hours)

PSYCHOLOGY (PSYCH) 1800
Special Project
1 to 3 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.)

PSYCHOLOGY (PSYCH) 1820
Selected Topics I
1 to 3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (1 to 3 lecture hours)

PSYCHOLOGY (PSYCH) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

PSYCHOLOGY (PSYCH) 2205
Physiological Psychology
3 Credit Hours
Examines physiology as it relates to behavior, including the influence of the nervous system, the endocrine system, genetics, and the body's chemistry on sensation, motivation, learning and other behavioral processes. Prerequisite: Psychology 1100. (3 lecture hours)

PSYCHOLOGY (PSYCH) 2210
Industrial and Organizational Psychology
3 Credit Hours
Introduces the student to the wide variety of psychological applications in business and industry. Topics covered include research methods, personnel psychology, performance evaluation, motivation and job satisfaction, organizational behavior, leadership and management, human factors, and consumer psychology. Prerequisite: Psychology 1100. (3 lecture hours)

PSYCHOLOGY (PSYCH) 2215
Cognitive Psychology
3 Credit Hours
Students will be introduced to research, application, and theory in cognitive psychology. Topics will include perception, attention, learning, memory, language, judgment and decision making and cognitive neuroscience. Prerequisite: Psychology 1100 with a grade of 'C' or better or equivalent or consent of instructor. (3 lecture hours)

PSYCHOLOGY (PSYCH) 2220
Educational Psychology
3 Credit Hours
Coverage of the application of learning principles and psychological theories to the process of education. Topics include physical growth and development, learning theories, cognitive theories, concept formation, intelligence, creativity, multicultural education, motivation, assessment, evaluation, and the impact of culture on learning styles. May include observational experiences. Prerequisite: Psychology 1100. (3 lecture hours)

PSYCHOLOGY (PSYCH) 2230 (IAI S6 903)
Developmental Psychology: Childhood
3 Credit Hours
Developmental study of the child from conception through adolescence with emphasis on the influence of genetic, physical, cognitive, emotional and social factors. Prerequisite: Psychology 1100. (3 lecture hours)

PSYCHOLOGY (PSYCH) 2233 (IAI S6 904)
Developmental Psychology: Adolescence
3 Credit Hours
The integration of theory and research as they apply to the basic concepts and themes in adolescent development. Includes discussion of the physical, emotional, social, familial, moral, educational and cultural aspects of adolescent development and behavior. Prerequisite: Psychology 1100 or equivalent. (3 lecture hours)

PSYCHOLOGY (PSYCH) 2235 (IAI S6 905)
Developmental Psychology: Adulthood
3 Credit Hours
Study of development of the normal adult from young through late adulthood concluding with the topics of death and dying. Includes the discussion of major theories of life span and adult development, as well as the development of self; cognitive, social and career development; physical health and aging; and coping, adaptation and mental health. Prerequisite: Psychology 1100. (3 lecture hours)

PSYCHOLOGY (PSYCH) 2237 (IAI S6 902)
Developmental Psychology: The Life Span
3 Credit Hours
Study of development of humans from conception to death with emphasis on the scientific analysis of developmental patterns. Reviews research and major theoretical viewpoints on physical, cognitive, social, emotional, personality, career and moral development. Prerequisite: Psychology 1100. (3 lecture hours)

PSYCHOLOGY (PSYCH) 2240 (IAI S8 900)
Social Psychology
3 Credit Hours
A systematic introduction to theory and research on the ways social factors influence individual and group behavior. Examines research methods, attitudes, social perception, conformity, leadership, group dynamics and the establishment of norms, emphasizing their effects on the individual. Prerequisite: Psychology 1100. (3 lecture hours)

PSYCHOLOGY (PSYCH) 2255
Personality
3 Credit Hours
The scientific study of the origins of individual differences in thought, emotion and behavior. Topics covered include basic theoretical perspectives, assessment techniques, research methodologies, and current topics in personality research. Prerequisite: Psychology 1100. (3 lecture hours)

PSYCHOLOGY (PSYCH) 2260 (IAI PSY 905)
Abnormal Psychology
3 Credit Hours
An introduction to the theoretical approaches and empirical research in psychology used to define, assess, categorize, prevent and treat psychological disorders. Prerequisite: Psychology 1100. (3 lecture hours)

PSYCHOLOGY (PSYCH) 2270
Health Psychology
3 Credit Hours
Examines theory and research on the reciprocal relationship between physical health, behavior and cognitive processes. Biopsychosocial factors related to the maintenance of health and the prevention and treatment of illness are explored. Attention is devoted to the impact of personal lifestyle on physical health, the interpersonal processes involved in the provision of medical care, and the emerging role of behavioral medicine in modern care. Prerequisite: Prerequisite: Psychology 1100. (3 lecture hours)

PSYCHOLOGY (PSYCH) 2280 (IAI M1 902)
Statistics/Social & Behavioral Sciences
3 Credit Hours
Focus on mathematical reasoning and problem solving through the application of statistical methods in the analysis of quantitative data in the social and behavioral sciences. Students will explore frequently used statistical methods and learn the use of computer applications in the analysis of quantitative data. Credit cannot be given for both for Psychology 2280 and Sociology 2205. Prerequisite: Demonstrated geometry competency (level 2), and Mathematics 0465 or Mathematics 0482 (or college equivalent) with a grade of C or better or qualifying score on the mathematics placement test or qualifying A.C.T. math score and at least one course in the social/behavioral sciences or consent of instructor. (2 lecture hours, 2 lab hours)

PSYCHOLOGY (PSYCH) 2800
Special Project
1 to 3 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.). Prerequisite: At least one course in the discipline or consent of instructor.

PSYCHOLOGY (PSYCH) 2820
Advanced Selected Topics I
1 to 3 Credit Hours
Advanced exploration and analysis of selected Psychology topics with a specific theme indicated by course title listed in the college class schedule. This course may be taken four times for credit

as long as different topics are selected. Prerequisite: At least one course in the discipline or consent of instructor. (1 to 3 lecture hours)

PSYCHOLOGY (PSYCH) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

PSYCHOLOGY (PSYCH) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

PSYCHOLOGY (PSYCH) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

PSYCHOLOGY (PSYCH) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

RADIATION THERAPY

RADIATION THERAPY (RATH) 2301
Princ & Practice of Radiation Therapy I
4 Credit Hours
Provides an overview of cancer and the specialty of radiation therapy. The medical, biological and pathological aspects as well as the physical and technical aspects are discussed. Roles and responsibilities of the radiation therapist, the treatment prescription, the documentation of treatment parameters and delivery are also discussed. Prerequisite: Admission to the Radiation Therapy program or consent of instructor. (4 lecture hours)

RADIATION THERAPY (RATH) 2302
Princ & Practice of Radiation Therapy II
4 Credit Hours
Examines the management of neoplastic disease from a multidisciplinary perspective. The epidemiology, etiology, detection, diagnosis, patient condition, treatment and prognosis of neoplastic disease are presented, discussed and evaluated in relationship to histology, anatomical site and patterns of spread. The radiation therapist's responsibility in the management of neoplastic disease is examined and linked to the skills required to analyze complex issues and make informed decisions. Prerequisite: Admission to Radiation Therapy program and Radiation Therapy 2301, 2321, and 2331; all with a grade of C or better, or equivalent or consent of instructor. (4 lecture hours)

RADIATION THERAPY (RATH) 2303
Princ & Practice Radiation Therapy III
4 Credit Hours
Establishes factors that influence and govern clinical planning of patient treatment. Encompassed are isodose descriptions, patient contouring, radiobiologic considerations, dosimetric calculations, compensation and clinical application of treatment beams. Optimal treatment planning is emphasized along with particle beams. Stereotactic and emerging technologies are presented. Prerequisite: Admission to the Radiation Therapy program and Radiation Therapy 2302, 2311, 2322 and 2332 with a grade of C or better or equivalent or consent of instructor. (4 lecture hours)

RADIATION THERAPY (RATH) 2310
Radiation Therapy Physics
3 Credit Hours
Establishes a basic knowledge of physics necessary to develop an understanding of radiation used in the clinical setting, and to develop a knowledge base in factors that govern and influence the production and recording of radiographic images for patient simulation, treatment planning and treatment verification in radiation oncology. Fundamental physical units, measurements, types of radiation, fundamentals of X-ray generating equipment, X-ray production, radiation oncology imaging equipment and related devices are emphasized. Prerequisite: Admission to Radiation Therapy program or consent of instructor. (3 lecture hours)

RADIATION THERAPY (RATH) 2311
Radiation Biology and Protection
4 Credit Hours
Presents basic concepts and principles of radiation biology and radiation safety as they relate to radiation therapy. The interactions of radiation with cells, tissues and the body as a whole and resultant biophysical events are presented. Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies and health care organizations are

also incorporated. Prerequisite: Admission to Radiation Therapy program and Radiation Therapy 2301, 2310, 2321 and 2331 all with a grade of C or better or equivalent or consent of instructor. (4 lecture hours)

RADIATION THERAPY (RATH) 2312
Quality Management in Radiation Therapy
3 Credit Hours
Focuses on the evolution of quality management (QM) programs and continuing quality improvements in radiation oncology. Topics include the need for quality assurance (QA) checks; QA of the clinical aspects and chart checks; film checks; the various types of evaluations and tests performed on simulators, megavoltage therapy equipment and therapy planning units; the role of radiation therapists in QM programs; legal and regulatory implications for maintaining appropriate QM guidelines as well as the role of computers and information systems within the radiation oncology department. Prerequisite: Admission to Radiation Therapy program and ARRT certification; Radiation Therapy 2302, 2311, 2322 and 2332; all with a grade of C or better, or equivalent. (3 lecture hours)

RADIATION THERAPY (RATH) 2321
Cross-Sectional Anatomy
2 Credit Hours
Basics of cross-sectional anatomy related to lesion localization in Radiation Therapy, normal sectional anatomy as shown in diagrams and radiographic, sonographic, computerized tomography (CT), nuclear medicine, and magnetic resonance (MR) images. Prerequisite: Admission to Radiation Therapy program or consent of instructor. (2 lecture hours)

RADIATION THERAPY (RATH) 2322
Pathophysiology for Radiation Therapy
3 Credit Hours
Introduces basic disease concepts, theories of disease causation, and system-by-system pathophysiologic disorders most frequently encountered in clinical practice. The processes involved in the development and classification of both benign and malignant tumors and site-specific information on malignant tumors are addressed. Prerequisite: Admission to Radiation Therapy program and Radiation Therapy 2301 and 2310 with a grade of C or better, or equivalent or Radiation Therapy 2321 and 2331 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

RADIATION THERAPY (RATH) 2323
Operational Issues in Radiation Therapy
3 Credit Hours
Focuses on various radiation therapy operational issues. Addresses concepts of team practice, patient-entered clinical practice and professional development. The interrelatedness of standards of care, law, ethical standards and competence will also be examined. Prerequisite: Admission to Radiation Therapy program and ARRT certification; Radiation Therapy 2302, 2311, 2322 and 2332; all with a grade of C or better, or equivalent. (3 lecture hours)

RADIATION THERAPY (RATH) 2331
Clinical Practice I
3 Credit Hours
Provides sequential development, application, analysis, integration, synthesis, and evaluation of concepts and theories in radiation therapy. Through structured sequential assignments in clinical facilities, concepts of team practice, patient-centered clinical practice and professional development are discussed, examined and evaluated. Prerequisite: Admission to Radiation Therapy program or consent of instructor.

RADIATION THERAPY (RATH) 2332
Clinical Practice II
3 Credit Hours
Expands the skills learned in RATH-2331. Through structured sequential assignments in clinical facilities, concepts of team practice, patient-centered clinical practice, and professional development shall be discussed, examined, and evaluated. Prerequisite: Admission to Radiation Therapy program and Radiation Therapy 2301 and 2331 with a grade of C or better, or equivalent or consent of instructor.

RADIATION THERAPY (RATH) 2333
Clinical Practice III
3 Credit Hours
Advanced integration of skills learned in Radiation Therapy 2331 and 2332. Through structured sequential assignments in clinical facilities, concepts of team practice, patient-centered clinical practice and professional development shall be discussed, examined and evaluated. Prerequisite: Admission to the Radiation Therapy program and Radiation Therapy 2302 and 2332 with a grade of C or better, or equivalent or consent of instructor.

RADIATION THERAPY (RATH) 2351
Principles of Proton Therapy
8 Credit Hours
Establishes factors that influence and govern clinical planning of patient treatment using proton beams. Encompassed are radiobiology of charged particles, particle accelerators, treatment delivery systems, quality assurance for proton therapy and clinical issues in proton radiotherapy. Optimal treatment planning with particle beams is emphasized. Prerequisite: Graduation from approved Radiation Therapy Program and consent of instructor. (8 lecture hours)

RADIATION THERAPY (RATH) 2352
Proton Therapy Lab Practicum
5 Credit Hours
Establishes factors that influence and govern clinical planning of patient treatment using proton beams and a two week lab practicum at the ProCure Treatment Centers, Inc. training site in Bloomington, Indiana. Prerequisite: Consent of instructor is required. (4 lecture hours, 2 lab hours)

RADIATION THERAPY (RATH) 2353
Clinical Experience in Proton Therapy
3 Credit Hours
Provides sequential development, application, analysis, integration, synthesis, and evaluation of concepts and theories in proton radiation therapy. Prerequisite: Consent of instructor is required.

READING

READING (READ) 0430
Assessment of Language Development
1 Credit Hour
Evaluates the language development of native speakers of English in order to ensure a knowledge/skill/strategy base for appropriate placement for reading and writing instruction. This course can only

be taken on a pass/fail basis. Prerequisite: Appropriate score on the Reading Pre-Course placement test. (1 lecture hour)

READING (READ) 0451
Reading for College
1 Credit Hour
Allows students and instructor to identify one or more areas of reading development that will prepare them for college-level reading assignments. Students and instructor will agree on the reading goals and then create and execute a plan that will result in improvement in the targeted areas. This course may be taken four times for credit. Prerequisite: Appropriate score on the Reading Pre-Course placement test. (1 lecture hour)

READING (READ) 0471
Study Skills I
1 Credit Hour
Basic course in which students learn and practice study skills: textbook reading, concentration and memorization, listening and notetaking, test-taking and time management. Students' strengths and areas of need are assessed through diagnostic inventories. Emphasis is on improving student performance by completing exercises and reading assignments that are discipline-related. This course may be taken four times for credit. (1 lecture hour)

REAL ESTATE

REAL ESTATE (REALE) 1130
Real Estate Broker Pre-License Topics
5 Credit Hours
Introduction to real estate topics including license law, real property, agency, seller and buyer relationships, state and federal laws, marketing and advertising, market analysis and appraisal, financing, contracts, employment agreements, and career paths. A required course to take the Illinois Real Estate Broker License Examination. (5 lecture hours)

REAL ESTATE (REALE) 1131
Broker Pre-License Applied Principles
1 Credit Hour
Application of real estate broker pre-license topics to the practice of real estate brokerage. Includes situational and case studies, role playing, and demonstration of real estate activities. A required course to take the Illinois Real Estate Broker License Examination. Prerequisite: Real Estate 1130 with a grade of C or better, or equivalent or concurrent enrollment in Real Estate 1130. (1 lecture hour)

REAL ESTATE (REALE) 1134
Real Estate Broker Post-License Topics
1 Credit Hour
Study of real estate topics including license law, state and federal laws, agency and real estate transactions. A required course to maintain an Illinois Real Estate Broker License. Prerequisite: An Illinois Real Estate Broker License. (1 lecture hour)

REAL ESTATE (REALE) 1135
Broker Post-License Applied Practices
1 Credit Hour
Application of real estate broker post-license topics to the practice of real estate brokerage. Includes situational and case studies, role playing, and demonstration of real estate activities. A required course to maintain an Illinois Real Estate Broker License. Prerequisite: Real Estate 1134 with a grade of C or better, or equivalent or concurrent enrollment in Real Estate 1134. Have an Illinois Real Estate Broker License. (1 lecture hour)

REAL ESTATE (REALE) 1138
Managing Broker Pre-License Topics
2 Credit Hours
Study of real estate topics including licensing, operations, escrow, and management. A required course to take the Illinois Real Estate Managing Broker License Examination. Prerequisite: An Illinois Real Estate Broker License (2 lecture hours)

REAL ESTATE (REALE) 1139
Brkr Prelicense Management & Supervision
1 Credit Hour
Application of real estate managing broker pre-license topics to the practice of real estate brokerage. Includes situational and case studies, dispute resolution simulations, supervision situations, escrow, and discipline case studies. A required course to take the Illinois Real Estate Managing Broker License Examination. Prerequisite: Real Estate 1138 with a grade of C or better, or equivalent or concurrent enrollment in Real Estate 1138. Have an Illinois Real Estate Broker License. (1 lecture hour)

RELIGIOUS STUDIES

RELIGIOUS STUDIES (RELIG) 1100 (IAI H5 900)
Introduction to Religion
3 Credit Hours
This course provides a study of religion by examining representative cultural religious phenomena in a global world. In analyzing commonalities and differences among religious traditions and contexts, students develop an understanding of personal, communal and universal dimensions of religion as characterized through various religious phenomena including philosophical formulations, sacred writings, religious experiences, ethics, rituals and art. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

RELIGIOUS STUDIES (RELIG) 1110 (IAI H5 901)
Intro to the Bible (Old Testament)
3 Credit Hours
This course offers an overview of the Hebrew Bible (in the Christian tradition known as the Old Testament) and selected writings from the Apocrypha as well as the Dead Sea Scrolls, introducing students to various academic methods of critical and creative ways of studying, analyzing and interpreting these ancient texts. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

RELIGIOUS STUDIES (RELIG) 1120 (IAI H5 901)
Intro to the Bible (New Testament)
3 Credit Hours
This course offers an overview of the Christian Bible (in the Christian tradition known as the New Testament) and selected Early Christian Writings, introducing students to various academic methods of critical study, analysis and interpretation of these ancient texts. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

RELIGIOUS STUDIES (RELIG) 1150 (IAI H5 904N)
World Religions
3 Credit Hours

An introductory investigation of the main ideas from the world's major living religions: including Christianity, Islam, Hinduism, Buddhism, Taoism, Confucianism, Shintoism and primal religions. Credit cannot be given for both Religious Studies 1150 and Philosophy 1150. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

RELIGIOUS STUDIES (RELIG) 1155 (IAI H4 903N)
Asian Thought
3 Credit Hours
Introductory overview of selected philosophical and religious systems of Asia. Emphasizes the conceptual and intellectual foundations of a variety of Asian traditions, and includes consideration of the historical and cultural contexts that shape them. Philosophy 1100 and/or Religious Studies 1100 is strongly recommended. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

RELIGIOUS STUDIES (RELIG) 1820
Selected Topics I
1 to 3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Course requires Reading Placement Test Score - Category One. (1 to 3 lecture hours)

RELIGIOUS STUDIES (RELIG) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. Course requires Reading Placement Test Score-Category One. (1 to 4 lecture hours)

RELIGIOUS STUDIES (RELIG) 2160 (IAI H5 901)
Judaism, Christianity and Islam
3 Credit Hours
This course presents an overview of the historical development of Judaism, Christianity and Islam, as well as roles of scripture, ritual, theology, and ethics. These religions' social relevance and their current inter-relations are also considered. Religious Studies 1100 or comparable course is recommended. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

RELIGIOUS STUDIES (RELIG) 2170
Women and Religion
3 Credit Hours
An introduction to the complex, changing position of women in major world religions including Judaism, Christianity, Islam, Hinduism, and Buddhism. The approach will be both historical and contemporary, with significant emphasis on the United States today. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

RELIGIOUS STUDIES (RELIG) 2230
Introduction to Islam
3 Credit Hours
An introduction to both the Islamic religion and Islamic civilization. Explores the life of Muhammad, early Islamic history, the Qur'an, the hadith, Islamic law, Sunnism, Shi'ism, and Sufism. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

RELIGIOUS STUDIES (RELIG) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

RELIGIOUS STUDIES (RELIG) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

RELIGIOUS STUDIES (RELIG) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

RELIGIOUS STUDIES (RELIG) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

RESPIRATORY CARE

RESPIRATORY CARE (RESP) 1101
Basic Respiratory Care
3 Credit Hours
Role of the Respiratory Care practitioner. Basic management and maintenance of common Respiratory Care equipment to include applied therapeutic modalities. Major emphasis on oxygen and aerosol administration, arterial blood gas procedures, and pharmacologic administration. Prerequisite: Admission to the Respiratory Care Program or consent of instructor. (2 lecture hours, 3 lab hours)

RESPIRATORY CARE (RESP) 1102
Intermediate Respiratory Care
3 Credit Hours
Intermediate procedures for the Respiratory Care practitioner. Theory and practice for cardiac and pulmonary pathology, positive pressure breathing, chest physical therapy, airway care and introductory mechanical ventilation. Prerequisite: Admission to The Respiratory Care Program and Respiratory Care 1101 or consent of instructor. (2 lecture hours, 3 lab hours)

RESPIRATORY CARE (RESP) 1103
Advanced Respiratory Care
3 Credit Hours
Advanced study in respiratory intensive care principles. Theory and practice to include management of life-support systems as applied in the emergency and intensive care units. Adult volume and pressure ventilation, monitoring and non-invasive positive pressure procedures. Prerequisite: Admission to the Respiratory Care Program and Respiratory Care 1102 or consent of instructor. (2 lecture hours, 3 lab hours)

RESPIRATORY CARE (RESP) 1105
Respiratory Assessment and Procedures
4 Credit Hours
Respiratory Care assessment to include vital sign and breath sound monitoring, oxygen monitoring and administration, universal/ standard precautions and isolation procedures, patient and equipment safety standards, patient charting and communication, cardiopulmonary resuscitation (CPR), and concepts in transcultural patient care. Prerequisite: Admission to the Respiratory Care Program or consent of instructor. (3 lecture hours, 3 lab hours)

RESPIRATORY CARE (RESP) 1111
Clinical Practice I
4 Credit Hours
Students will be introduced to the clinical practice of oxygen administration, aerosol and humidity therapy, incentive spirometry, chest physiotherapy, pharmacological agents, and arterial puncture. In addition, students will be introduced to clinical practice in the application of non-invasive positive pressure ventilation including continuous and bi-level airway pressure therapy, airway care procedures, and cardiopulmonary life support. Prerequisite: Admission to the Respiratory Care Program and Respiratory Care 1101, Respiratory Care 1105, Respiratory Care 1120 and Respiratory Care 1121; all with a grade of C or better, or equivalent or consent of instructor. Concurrent enrollment in Respiratory Care 1102.

RESPIRATORY CARE (RESP) 1112
Clinical Practice II
4 Credit Hours
Clinical practice in the application of non-invasive positive pressure ventilation including continuous and bi-level airway pressure therapy, airway care procedures, and the application of cardiopulmonary life-support. Previous clinical skill procedures included. Prerequisite: Admission to the Respiratory Care Program and Respiratory Care 1111 or equivalent or consent of instructor.

RESPIRATORY CARE (RESP) 1113
Respiratory Care Clinical Practice
3 Credit Hours
Clinical practice of intensive care procedures within hospital emergency rooms, surgical intensive, cardiac care, and respiratory intensive care units. Life support systems, ventilator initiation, weaning, diagnostic monitoring and spirometry included. Prerequisite: Admission to the Respiratory Care Program and Respiratory Care 1112 or equivalent or consent of instructor.

RESPIRATORY CARE (RESP) 1120
Appld Cardiopulmonary Anat & Physiology
4 Credit Hours
Applied cardiopulmonary anatomy and physiology as related to Respiratory Care procedures and clinical practice. Major emphasis on the pulmonary and circulatory systems, ventilation and perfusion, diffusion and transport, pulmonary function and hemodynamic measurements, central nervous system control, and fetal respiratory development. Prerequisite: Admission to the Respiratory Care Program or consent of instructor (3 lecture hours, 2 lab hours)

RESPIRATORY CARE (RESP) 1121
Science for Respiratory Care
5 Credit Hours
Students will be introduced to science concepts related to respiratory care procedures. Scientific concepts will include metabolic and respiratory acid-base balance, respiratory and cardiac formulas, blood gas data as applied to patient care, and case study interpretation and assessment. Prerequisite: Admission to Respiratory Care Program and consent of instructor is required. (3 lecture hours, 2 lab hours)

RESPIRATORY CARE (RESP) 1840
Independent Study - Individualized
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Admission to the Respiratory Care Program and consent of instructor. (2 to 8 lab hours)

RESPIRATORY CARE (RESP) 2201
Adv. Life Support, Monitoring & Trends
4 Credit Hours
Students will be introduced to advanced concepts in life support and patient monitoring including ventilator modes and graphics, patient management, hemodynamic monitoring, and polysomnography. Prerequisite: Admission to the Respiratory Care Program and Respiratory Care 2205, Respiratory 2206, and Respiratory Care 2280; all with a grade of C or better, or equivalent or consent of instructor. Concurrent enrollment in Respiratory Care 2202, Respiratory Care 2207, and Respiratory Care 2250. (4 lecture hours)

RESPIRATORY CARE (RESP) 2202
Pulmonary Function Testing
3 Credit Hours
Simple and advanced spirometry to include forced vital capacity measurements, maximum voluntary ventilation, flow-volume loop procedures, before and after bronchodilator studies, carbon monoxide diffusion, nitrogen washout, exercise testing, and other pulmonary diagnostic tests. Prerequisite: Admission to the Respiratory Care Program and Respiratory Care 1103 or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

RESPIRATORY CARE (RESP) 2205
Neonatal/Pediatric Intensive Resp Care
3 Credit Hours
Advanced study in neonatal and pediatric respiratory intensive care principles. Theory and practice to Include airway care, ventilator system management, and physiologic monitoring as applied to infants and children in the emergency and specialty intensive care units. Neonatal and pediatric advanced life-support included. Prerequisite: Admission to the Respiratory Care Program and Respiratory Care 1103 or consent of instructor. (2 lecture hours, 2 lab hours)

RESPIRATORY CARE (RESP) 2206
Advanced Intensive Respiratory Care - Ad
4 Credit Hours
Advanced clinical practice in emergency and adult intensive care units. Procedures to include clinical data evaluation, mechanical ventilation, hemodynamic monitoring, airway and chest X-ray interpretation, pharmacologic administration, and advanced cardiac life-support. Pulmonary function diagnostics included. Prerequisite: Admission to the Respiratory Care Program and Respiratory Care 1113 or consent of instructor.

RESPIRATORY CARE (RESP) 2207
Adv Intensive Respiratory Care-Neonatal
3 Credit Hours
Advanced clinical practice in emergency, neonatal and pediatric intensive care units. Procedures to include data evaluation, ventilatory support, high-risk transport, hemodynamic monitoring, airway and chest X-ray interpretation, and pharmacologic administration. Neonatal and pediatric advanced life-support included. Prerequisite: Admission to the Respiratory Care Program and Respiratory Care 2205 or consent of instructor.

RESPIRATORY CARE (RESP) 2250
Respiratory Care Board Review
3 Credit Hours
Comprehensive review and update of Respiratory Care, to include theory and procedures, as well as preparation for the Certified and Registered Respiratory Therapist exams through the National Board for Respiratory Care. (3 lecture hours)

RESPIRATORY CARE (RESP) 2280
Adv Clinical Assessment & Protocol
4 Credit Hours
Advanced clinical assessment of respiratory care patients to include airway and chest X-ray interpretation, the effects of pharmacologic agents in critical care, and the initiation of protocols and clinical practice guidelines. Prerequisite: Admission to the Respiratory Care Program and Respiratory Care 1113 or consent of instructor. (3 lecture hours, 2 lab hours)

RESPIRATORY CARE (RESP) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

RESPIRATORY CARE (RESP) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

RUSSIAN

RUSSIAN (RUSSI) 1101
Elementary Russian I
4 Credit Hours
Develops the ability to speak, understand, read and write Russian in a cultural context. For the beginning student. (4 lecture hours)

RUSSIAN (RUSSI) 1102
Elementary Russian II
4 Credit Hours
Continues to develop the ability to speak, understand, read and write Russian in a cultural context. For students who have successfully completed Russian 1101 or equivalent or one year of high school Russian. (4 lecture hours)

RUSSIAN (RUSSI) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

RUSSIAN (RUSSI) 2201
Intermediate Russian I
4 Credit Hours
Develops the ability to read and discuss modern texts: conversation, composition, grammar, and a brief introduction to Russian literary history. For students who have successfully

completed Russian 1102 or equivalent or two years of high school Russian. (4 lecture hours)

RUSSIAN (RUSSI) 2202 (IAI H1 900)
Intermediate Russian II
4 Credit Hours
Further develops the ability to read and discuss modern texts: conversation, composition, grammar, and an introduction to Russian literary history. For students who have successfully completed Russian 2201 or equivalent or three years of high school Russian. (4 lecture hours)

RUSSIAN (RUSSI) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

RUSSIAN (RUSSI) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

RUSSIAN (RUSSI) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

RUSSIAN (RUSSI) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

SIGN LANGUAGE

SIGN LANGUAGE (SIGN) 1101
American Sign Language I
3 Credit Hours
Students are provided an introduction to American Sign Language. Sign comprehension, production, grammar, non-verbal communication techniques, and applicable vocabulary will be emphasized throughout the course. Deaf Culture and fingerspelling will also be introduced. American Sign Language I is designed for students with no experience with American Sign Language. (3 lecture hours)

SIGN LANGUAGE (SIGN) 1102
American Sign Language II
3 Credit Hours
ASL II builds on vocabulary and further develops language comprehension and grammatical structure, acquired from ASL I, continuing with language comprehension and production skills at a complex level. Deaf Culture will be incorporated into language use. Prerequisite: Sign 1101 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

SIGN LANGUAGE (SIGN) 1103
Fingerspelling and Numbers
3 Credit Hours
An introduction to a manual depiction of the alphabet and numbering system in American Sign Language. Emphasis is on development of hand shape, basic word patterns, rhythm and fluidity. Additional focus is placed on fingerspelled loan signs and the ASL numbering system. (3 lecture hours)

SIGN LANGUAGE (SIGN) 1104
Culture of the Deaf Community
3 Credit Hours
Introduction to the Deaf community from a cultural perspective. Discussions include advancement of the Deaf community in terms of culture, arts, language, self-image, and literature. Prerequisite: Sign 1101 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

SIGN LANGUAGE (SIGN) 2101
American Sign Language III
3 Credit Hours
Students will develop proficiency in the structure of ASL grammar, fingerspelling, numbering systems, and visual-gestural communication. Discussions will include expressive and receptive skills that are necessary for complex dialogue and storytelling. Students are required to attend Deaf events and develop contacts within the Deaf community. Prerequisite: Sign 1102 with a grade of C or better, or equivalent and Sign 1104 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

SIGN LANGUAGE (SIGN) 2102
Linguistics of ASL
3 Credit Hours

Students will explore syntax, morphology, phonology, and semantics of American Sign Language (ASL). This class is beneficial for students who want to become an Interpreter or work within the Deaf community. Prerequisite: Sign 2101 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

SIGN LANGUAGE (SIGN) 2103
American Sign Language IV
3 Credit Hours
In this continuation of ASL III, students will examine the structure of American Sign Language (ASL) grammar and complex conversational dynamics. Fingerspelling, numbers, and visual-gestural aspects will be further explored. Prerequisite: Sign 2101 with a grade of C or better, or equivalent and Sign 2102 with a grade of C or better, or equivalent or consent of instructor. (3 lecture hours)

SOCIAL SCIENCE

SOCIAL SCIENCE (SOCIA) 1100
Introduction to Social Science
3 Credit Hours
This is an interdisciplinary course combining the perspectives of two or more of the social and behavioral sciences (anthropology, economics, geography, history, political science, psychology and sociology) on the central issues in social science studies. This course explores the relationship between the social and behavioral sciences being studied. It reviews the application of the scientific method, compares theory and concepts, and reviews the different perspectives of the discipline being studied. This course is broad in nature and scope. It provides the basis for further study in the various social and behavioral sciences. (3 lecture hours)

SOCIAL SCIENCE (SOCIA) 1110
Introduction to Globalization
3 Credit Hours
Introduction to the cultural, economic, political and social dimensions of globalization through major social-scientific theories. Addresses historical context in which globalization emerged, the rise of global institutions, the impact on labor and financial markets, the new social movements, the rise of global terrorism, and the aggravation of global poverty. The course also addresses alternative forms of social organizations and the question of development. (3 lecture hours)

SOCIAL SCIENCE (SOCIA) 1800
Special Project
1 to 3 Credit Hours
Social science course integrates two or more disciplines in the social and behavioral sciences. Special project social science course covers topics not otherwise covered by general education and social behavioral sciences individual courses and other courses in the Catalog for the disciplines. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.)

SOCIAL SCIENCE (SOCIA) 1820
Selected Topics I
3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (3 lecture hours)

SOCIAL SCIENCE (SOCIA) 1821
Selected Topics II
3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (2 lecture hours, 2 lab hours)

SOCIAL SCIENCE (SOCIA) 1822
Selected Topics III
3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (1 lecture hour, 4 lab hours)

SOCIAL SCIENCE (SOCIA) 1823
Selected Topics IV
3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. (6 lab hours)

SOCIAL SCIENCE (SOCIA) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline, and methods of evaluation in coordination with, and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

SOCIAL SCIENCE (SOCIA) 2800
Special Project
1 to 3 Credit Hours
Social science courses integrate two or more disciplines in the social and behavioral sciences. Advanced special project social science course covers topics not otherwise covered by general education courses and social behavioral sciences individual courses while building on academic knowledge and skills required in introductory-based courses. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the physical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation to deliver academic

and experiential information (syllabus, academic requirements, field preparation, logistics, etc.). Prerequisite: At least one course in the social and behavioral sciences or consent of instructor.

SOCIAL SCIENCE (SOCIA) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

SOCIAL SCIENCE (SOCIA) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

SOCIAL SCIENCE (SOCIA) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

SOCIAL SCIENCE (SOCIA) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

SOCIOLOGY

SOCIOLOGY (SOCIO) 1100 (IAI S7 900)
Introduction to Sociology
3 Credit Hours
Students explore the concepts and theories necessary to systematic understanding of our social worlds. Topics may include considering sociology as science, the nature of large- and small-scale groups, social stratification, historical eras and social change, and race, ethnic and gender relations. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

SOCIOLOGY (SOCIO) 1120 (IAI S7 904D)
Sociology of Sex, Gender and Power
3 Credit Hours
Examines the difference between behavior based on biology and behavior based on what society says is appropriate in order to be masculine or feminine. Examines the question of what forces in society are most influential in determining the "place" of men and women with special emphasis on power. Examines how this influence works through the process of socialization and core social institutions, including marriage and family, education, religion, the economy and politics. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

SOCIOLOGY (SOCIO) 1205
Introduction to Data Science
3 Credit Hours
Students are introduced to a beginner level of the concepts related to data science including data gathering, data description, exploratory data analysis (EDA), data visualization, and data mining. Introduces the techniques of EDA, visualization, and mining through the use of specialized software. Examines the copyrights and ethical issues related to the use of public datasets. (2 lecture hours, 2 lab hours)

SOCIOLOGY (SOCIO) 1800
Special Project
1 to 4 Credit Hours
Social science courses integrate two or more disciplines in the social and behavioral sciences. Special project social science courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.)

SOCIOLOGY (SOCIO) 1820
Selected Topics I
1 to 3 Credit Hours
Introductory exploration and analysis of selected sociology topics with a specific theme indicated by course title listed in college class

schedule. This course may be taken four times for credit as long as different topics are selected. (1 to 3 lecture hours)

SOCIOLOGY (SOCIO) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor. (1 to 4 lecture hours)

SOCIOLOGY (SOCIO) 2200
Introduction to Research Methods
3 Credit Hours
Examination of social science research methods from theoretical, applied and ethical points of view. Acquaints students with qualitative and quantitative techniques and procedures used to measure human behavior, gather and analyze data, and evaluate and report on the findings. Prerequisite: At least one course in the social and behavioral sciences. Course requires Reading Placement Test Score-Category One. (3 lecture hours)

SOCIOLOGY (SOCIO) 2205 (IAI M1 902)
Statistics/Social & Behavioral Sciences
3 Credit Hours
Focus on mathematical reasoning and problem solving through the application of statistical methods in the analysis of quantitative data in the social and behavioral sciences. Students will explore frequently used statistical methods and learn the use of computer applications in the analysis of quantitative data. Credit cannot be given for both for Sociology 2205 and Psychology 2280. Prerequisite: Demonstrated geometry competency (level 2), and Mathematics 0465 or Mathematics 0482 (or college equivalent) with a grade of C or better or qualifying score on the mathematics placement test or qualifying A.C.T. math score and at least one course in the social/behavioral sciences or consent of instructor. Course requires Reading Placement Test Score-Category One. (2 lecture hours, 2 lab hours)

SOCIOLOGY (SOCIO) 2210 (IAI S7 901)
Social Problems
3 Credit Hours
Comparatively examines the linkages among social structures, culture and human experience in the context of the globalization process. Students examine a variety of topics, which may include the unequal distribution of power and wealth; issues of sex, gender and social class; hunger; the role of multinational corporations; war and international conflict; oppression of various kinds; crime; poverty; the media; other social institutions; resource/ environmental use and depletion, and population. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

SOCIOLOGY (SOCIO) 2215 (IAI S7 903D)
Racial and Ethnic Relations
3 Credit Hours
Provides a unique perspective to help understand how groups of people from different races, ethnic groups or other cultures interact. Examines differential power between groups and analyzes the social structures that are used to maintain these power differences. Focuses on cultural diversity and various dimensions of discrimination and prejudice, including an analysis of inequality and its origins, conditions under which inequality occurs and persists, changing inequality, and ways to deal with minority group problems. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

SOCIOLOGY (SOCIO) 2220 (IAI S7 902)
Sexual Relationships, Marriage & Family
3 Credit Hours
A cross-societal focus on sex-roles, dating, mate selection and sexuality. Traditional and emerging marriage, family and child-rearing patterns are explored from multi-national and global perspectives. Marital dynamics, including expressiveness, marital power, conflict, family violence, divorce and the later years of marriage are featured. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

SOCIOLOGY (SOCIO) 2225
Sociology of Violence
3 Credit Hours
Examines the nature and causes of violence in the context of contemporary society and how the structure of society itself, as well as various social factors, contribute to violence. Explores types of violent behavior, including interpersonal, collective and organizational. (3 lecture hours)

SOCIOLOGY (SOCIO) 2251
Health & Illness in Contemporary Society
3 Credit Hours
This course examines illness as a phenomenon, which both influences and is influenced by society. As such, it can be viewed as a form of social deviance, which patients, healers and the larger society attempt to reduce. Perspectives provided by theory and research in the sociology of deviance, occupations and complex organizations are employed to gain an understanding of health and illness behavior, health practitioners and health institutions. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

SOCIOLOGY (SOCIO) 2252
Social Gerontology: Aging and Society
3 Credit Hours
This course focuses on aging with emphasis on demographic trends, individual aspects of aging, such as family and social support networks, retirement and adaption to aging. Particular emphasis is given to issues surrounding aging and society including the economy, politics, health and social services, and public policy - both nationally and at the local level. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

SOCIOLOGY (SOCIO) 2253
Dying, Death and Bereavement
3 Credit Hours
Examines the social meanings of dying and death, as well as grief and bereavement processes. Topics include the funeral, ethical issues, children and dying, hospice, suicide and bereavement history in America. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

SOCIOLOGY (SOCIO) 2290
Sociology of Communication & Media
3 Credit Hours
Analyzes the effects of a variety of media on society, social interaction and communications. Examines the structure and organization of traditional (such as printed media, television or radio) and new (such as electronic and digital) media and social

networking technologies (such as MySpace, Facebook or Second Life) as well as their cultural, political, economic and social impacts. Specific topics include the role of the media in shaping or creating social issues and influencing the public, the ways in which organizations, interest groups and social movements gain access and use diverse media to shape public discourse on a global scale. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

SOCIOLOGY (SOCIO) 2800
Special Project
1 to 4 Credit Hours
Social science courses integrate two or more disciplines in the social and behavioral sciences. Advanced special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.). This course may be taken four times for credit as long as different topics are selected.

SOCIOLOGY (SOCIO) 2820
Advanced Selected Topics I
3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college Class Schedule. Prerequisite: At least one course in the discipline or consent of instructor. (3 lecture hours)

SOCIOLOGY (SOCIO) 2821
Advanced Selected Topics II
3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college Class Schedule. Prerequisite: At least one course in the discipline or consent of instructor. (2 lecture hours, 2 lab hours)

SOCIOLOGY (SOCIO) 2822
Advanced Selected Topics III
3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. Prerequisite: At least one course in the discipline or consent of instructor (1 lecture hour, 4 lab hours)

SOCIOLOGY (SOCIO) 2823
Advanced Selected Topics IV
3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. Prerequisite: At least one course in the discipline or consent of instructor. (6 lab hours)

SOCIOLOGY (SOCIO) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

SOCIOLOGY (SOCIO) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

SOCIOLOGY (SOCIO) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

SOCIOLOGY (SOCIO) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

SPANISH

SPANISH (SPANI) 1100
Civilization and Culture of Spain
3 Credit Hours
Introduction in English to the culture, geography, history, economics, political institutions, psychology, literature, music, art and architecture of Spain. Prerequisite: Course requires Reading Placement Test Score-Category One (3 lecture hours)

SPANISH (SPANI) 1101
Elementary Spanish I
4 Credit Hours
Develops the ability to speak, understand, read and write Spanish in a cultural context. For the beginning student. (4 lecture hours)

SPANISH (SPANI) 1102
Elementary Spanish II
4 Credit Hours
Continues the development of the ability to speak, understand, read, and write Spanish in a cultural context. For students who have successfully completed Spanish 1101 or equivalent or one year of high school Spanish. (4 lecture hours)

SPANISH (SPANI) 1105
Spanish Conversation I
1 Credit Hour
Develops the student's ability to communicate in Spanish at the beginning level with a primary focus on speaking. Listening and reading comprehension will also be improved. With a special emphasis on conversational and presentation skills, students will discuss a variety of historical and contemporary cultural topics and current affairs in a global context. For students who have completed one semester of college-level Spanish. (1 lecture hour)

SPANISH (SPANI) 1110
Latin American Culture & Civilization
3 Credit Hours
Introduction to the culture, geography, history, economics, political institutions, sociology, literature, music, and arts of present-day Latin America. Conducted in English. (3 lecture hours)

SPANISH (SPANI) 1112
Spanish for Educators I
3 Credit Hours
Develops basic conversational skills in Spanish to communicate effectively in educational settings. Emphasizes the ability to speak, understand, read, and write Spanish in cultural contexts. Role-plays and simulations will be used to prepare students to successfully engage with Spanish speakers in their schools and communities. For the beginning student. (3 lecture hours)

SPANISH (SPANI) 1113
Spanish for Educators II
3 Credit Hours
Continues the development of basic conversational skills in Spanish to communicate effectively in educational settings. Continues to emphasize the ability to speak, understand, read, and write Spanish in cultural contexts. Role-plays and simulations will be used to prepare students to successfully engage with Spanish speakers in their schools and communities. For students who have successfully completed Spanish 1112 or equivalent, or one year of high school Spanish, or consent of instructor. (3 lecture hours)

SPANISH (SPANI) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

SPANISH (SPANI) 2201
Intermediate Spanish I
4 Credit Hours
Continues to develop the ability to speak, understand, read, and write Spanish in a cultural context. Includes reading and discussion of modern texts, conversation, composition, grammar review, and cultural activities. For students who have successfully completed Spanish 1102 or equivalent or two years of high school Spanish. (4 lecture hours)

SPANISH (SPANI) 2202 (IAI H1 900)
Intermediate Spanish II
4 Credit Hours
Continues to develop the ability to speak, understand, read, and write Spanish in a cultural context. Includes reading and discussion of modern texts, conversation, composition, grammar review, and cultural activities. For students who have successfully completed Spanish 2201 or equivalent or three years of high school Spanish. (4 lecture hours)

SPANISH (SPANI) 2205
Spanish Conversation II
1 Credit Hour
Develops the student's ability to communicate in Spanish at the intermediate level with a primary focus on speaking. Listening and reading comprehension will also be improved. With a special emphasis on conversational and presentation skills, students will discuss a variety of historical and contemporary cultural topics and current affairs in a global context. For students who have successfully completed Spanish 1102 or Spanish 1105 or equivalent. (1 lecture hour)

SPANISH (SPANI) 2206 (IAI H1 900)
Spanish for Heritage Speakers I
4 Credit Hours
Develops understanding, speaking, reading, and writing skills in Spanish for students who comprehend spoken Spanish and may have some degree of skill in speaking, reading, and writing ability. Focuses on reading development, orthography, lexical expansion, formal grammar, and facility in writing and composition. Fosters appreciation of Hispanic cultural-linguistic heritage. (4 lecture hours)

SPANISH (SPANI) 2208 (IAI H1 900)
Spanish for Heritage Speakers II
4 Credit Hours
Continues to develop understanding, speaking, reading, and writing skills in Spanish for students who comprehend spoken Spanish and may have same degree of speaking, reading, and writing ability or have successfully completed SPANI-2206 or equivalent. Focuses on reading development, orthography, lexical expansion, formal grammar, facility in writing and composition. Fosters appreciation of Hispanic cultural-linguistic heritage. (4 lecture hours)

SPANISH (SPANI) 2251 (IAI H1 900)
Conversation and Composition I
3 Credit Hours
Develops students' listening and comprehension, speaking, reading, and writing skills and expands knowledge of the culture and civilization of Spanish-speaking countries. For students who have successfully completed Spanish 2202 or equivalent, or four years of high school Spanish. (3 lecture hours)

SPANISH (SPANI) 2252 (IAI H1 900)
Conversation and Composition II
3 Credit Hours
Develops students' listening comprehension, speaking, reading, and writing skills and expands knowledge of the culture and civilization of Spanish-speaking countries. For students who have successfully completed Spanish 2251 or equivalent or five years of high school Spanish. (3 lecture hours)

SPANISH (SPANI) 2255
Spanish Conversation III
1 Credit Hour
Develop the student's ability to communicate in Spanish at the intermediate to advanced level with a primary focus on speaking. Listening and reading comprehension will also be improved. With a special emphasis on conversational and presentation skills, students will discuss a variety of historical and contemporary cultural topics and current affairs in a global context. For students who have successfully completed Spanish 2202 or Spanish 2205 or equivalent. (1 lecture hour)

SPANISH (SPANI) 2800
Special Project
1 to 4 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline, while building on academic knowledge and skills acquired in introductory-level classes. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of more complex discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.)Prerequisite: At least one course in the discipline or consent of instructor.

SPANISH (SPANI) 2820
Advanced Selected Topics
1 to 4 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: At least one course in the discipline or consent of instructor. This course requires Reading Placement Test Score-Category One. (1 to 4 lecture hours)

SPANISH (SPANI) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

SPANISH (SPANI) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

SPANISH (SPANI) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

SPANISH (SPANI) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

SPEECH COMMUNICATION

SPEECH COMMUNICATION (SPEEC) 0495
Prep College Speech-Non-Native Speakers
3 Credit Hours
This course is designed primarily to prepare students, whose first language is not English, for college-level speech courses.

Introductory speaking exercises and speeches are included in the course work. This course is intended for students who are high school graduates and whose spoken English is most likely comprehensible to native speakers. May be repeated up to nine total credit hours. Prerequisite: English as a Second Language 0958 or equivalent, or consent of instructor recommended. (3 lecture hours)

SPEECH COMMUNICATION (SPEEC) 1100 (IAI C2 900)
Fundamentals of Speech Communication
3 Credit Hours
A variety of experiences that develop basic concepts of the oral communication process. The class includes communication theory as well as speech preparation and delivery. Highly recommended: Prior to enrollment, student should have A) a satisfactory score, as determined by the English faculty, on an English Composition entrance test, and B) evidence of having met the Reading Competency Requirement. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

SPEECH COMMUNICATION (SPEEC) 1110
Oral Interpretation
3 Credit Hours
Basic techniques of the oral performance of literature with emphasis on content analysis and performance. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

SPEECH COMMUNICATION (SPEEC) 1120
Small-Group Communication
3 Credit Hours
Study of leadership, group process, and relationships in small-group communication. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

SPEECH COMMUNICATION (SPEEC) 1130
Persuasion
3 Credit Hours
Application of motivational principles to the preparation and presentation of persuasive messages. Includes analysis of and adaptation to audiences and occasions, analysis of persuasive messages, analysis of obstacles to persuasion and the means of overcoming them. (3 lecture hours)

SPEECH COMMUNICATION (SPEEC) 1140 (IAI MC 913)
Public Relations
3 Credit Hours
This course is designed to introduce students to the public relations field. Covers topics from the nature of the work done by public relations practitioners to the description and use of the tools involved. Also, the various functions of public relations are examined including the overall process of research, planning and decision making, action and communication, and evaluation. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

SPEECH COMMUNICATION (SPEEC) 1150
Introduction to Business Communication
3 Credit Hours
This course is designed to help students understand communication behaviors and concepts in order to develop effective communication skills in the business environment. It cover topics related to communication between employees and their supervisors, communication within work groups, and public communication. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

SPEECH COMMUNICATION (SPEEC) 1160
Interpersonal Communication
3 Credit Hours
Study of basic principles and theories of interpersonal communication and their application in attraction, conflict, romantic relationships, friendship, and familial communication. (3 lecture hours)

SPEECH COMMUNICATION (SPEEC) 1190
Applied Forensics
1 Credit Hour
Participation in forensics program. Application of public speaking, oral interpretation and debate skills to competitive situations. This course may be taken four three times for credit. Prerequisite: Course requires Reading Placement Test Score-Category One. (2 lab hours)

SPEECH COMMUNICATION (SPEEC) 1800
Special Project
3 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) Prerequisite: Course requires Reading Placement Test Score-Category One.

SPEECH COMMUNICATION (SPEEC) 1820
Selected Topics
1 to 4 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college course schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Course requires Reading Placement Test Score-Category One. (1 to 4 lecture hours)

SPEECH COMMUNICATION (SPEEC) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within Speech Communication to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. Course requires Reading Placement Test Score-Category One. (1 to 4 lecture hours)

SPEECH COMMUNICATION (SPEEC) 2130
Advanced Public Speaking
3 Credit Hours

An interactive course exploring persuasive and informative speech preparation and delivery. Students learn to use visual aids effectively, handle questions and answers, analyze communication events, and understand the media. Prerequisite: Speech Communication 1100 or consent of instructor. Course requires Reading Placement Test Score-Category One. (3 lecture hours)

SPEECH COMMUNICATION (SPEEC) 2160
Argumentation and Debate
3 Credit Hours
Develops and improves argumentative and critical-thinking skills in communication settings. Topics include analysis of discourse, development of sound oral reasoning, proper methods of refutation, and the facilitation of argumentation in group situations. Through participation in various types of in-class debates and forums on current topics, students research topics, discover issues and formulate propositions as they apply to social and personal decision-making. Prerequisite: Speech Communication 1100 or consent of instructor. Course requires Reading Placement Test Score-Category One (3 lecture hours)

SPEECH COMMUNICATION (SPEEC) 2190
Forensics Theory and Practice
3 Credit Hours
Explores the pedagogy of competitive forensics (speech, debate and performance of literature). Topics include the history of forensics, event analysis and rule interpretation, topic invention, instruction techniques for each event, rehearsal and performance methodologies, and critical methodologies. Intended for the communications major, potential or current competitor, future judge and/or future coach. Prerequisite: Course requires Reading Placement Test Score-Category One (3 lecture hours)

SPEECH COMMUNICATION (SPEEC) 2200
Intercultural Communication
3 Credit Hours
Examines how culture influences the communication process. Investigates major theories of intercultural communication, the universal human processes that contribute to cultural differences, and the practical approaches to communicating more effectively with persons from other cultures. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

SPEECH COMMUNICATION (SPEEC) 2210
Readers' Theater (Group Performance Lit
3 Credit Hours
This interactive course offers techniques in the oral presentation of literature by groups of two or more. Covers writing, adapting, acting and directing skills, and the use of readers' theater in elementary schools, counseling seminars, religious services and traditional entertainment. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

SPEECH COMMUNICATION (SPEEC) 2800
Special Project
3 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline, while building on academic knowledge and skills acquired in introductory-level classes. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of more complex discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) Prerequisite: At least one other Speech Communication course or consent of instructor. Course requires Reading Placement Test Score-Category One

SPEECH COMMUNICATION (SPEEC) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

SPEECH COMMUNICATION (SPEEC) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

SPEECH COMMUNICATION (SPEEC) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

SPEECH COMMUNICATION (SPEEC) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits.

Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

SPEECH-LANGUAGE PATHOLOGY ASSISTANT

SPEECH-LANGUAGE PATHOLOGY ASSISTANT (SLPA) 1101
Intro to Speech Language Pathology
4 Credit Hours
Overview of normal and disordered communication. Explores speech, language, cognitive development and disorders, and hearing disorders across the age continuum according to etiology, clinical manifestations and intervention. Includes anatomy and physiology of speech, language and hearing. Addresses the psychosocial impact of communicative disorders on clients and their families. Includes observations of speech language therapy in local therapy settings. (4 lecture hours)

SPEECH-LANGUAGE PATHOLOGY ASSISTANT (SLPA) 1105
Phonetics
3 Credit Hours
Overview of the science of phonetics. Explores the anatomy and physiology of the speech mechanism and the mechanics of speech sound production. Includes an introduction to International Phonetic Alphabet (IPA) and commonly used diacritics with an emphasis on transcription in clinical settings. Prerequisite: Speech-Language Pathology Assistant 1101 or concurrent enrollment in Speech-Language Pathology Assistant 1101 or consent of instructor. (3 lecture hours)

SPEECH-LANGUAGE PATHOLOGY ASSISTANT (SLPA) 1106
Speech Disorders & Intervention I
4 Credit Hours
Overview of the etiologies and characteristics of a variety of speech disorders across the lifespan with an emphasis on intervention strategies. Includes an exploration of motor speech disorders, tracheostomies, laryngectomies, organic and functional voice disorders, orofacial anomalies and fluency disorders. Includes a review of neuroanatomy and physiology as it pertains to motor speech disorders and anatomy and physiology of the speech mechanism. Prerequisite: Admission to program and Speech-Language Pathology Assistant 1101 and Speech-Language Pathology Assistant 1105 or consent of instructor. (4 lecture hours)

SPEECH-LANGUAGE PATHOLOGY ASSISTANT (SLPA) 1107
Speech Disorders & Intervention II
2 Credit Hours
Examination of the potential etiologies and characteristics of articulation and phonological disorders with an emphasis on intervention strategies. Explores sequence and timing of speech sound acquisition. Addresses differences between articulation and phonological disorders in terms of nature and treatment. Includes an introduction to oral motor exercises. Prerequisite: Admission to program and Speech-Language Pathology Assistant 1101 and Speech-Language Pathology Assistant 1105 or consent of instructor. (2 lecture hours)

SPEECH-LANGUAGE PATHOLOGY ASSISTANT (SLPA) 1109
Language Development
3 Credit Hours
Exploration of the components of language and theories of language development. Emphasis placed on the typical sequence and timing of acquisition of language skills from infancy to adolescence. Includes typical changes in language during various stages of adulthood. Addresses issues of dialects and bilingualism. Explores the impact of environment and play on language development and the use of developmentally appropriate toys to encourage language development. Prerequisite: Admission to program and Speech-Language Pathology Assistant 1101 or consent of instructor. (3 lecture hours)

SPEECH-LANGUAGE PATHOLOGY ASSISTANT (SLPA) 1110
Language Disorders & Intervention
4 Credit Hours
Examination of the potential etiologies and characteristics of language disorders across the lifespan with an emphasis on intervention strategies. Addresses delayed/disordered language development in the pediatric population (infancy through adolescence) as well as aphasia, right hemisphere syndrome, traumatic brain injury, and dementia in the adult population. Includes exploration of language-based learning disabilities and language enrichment and literacy programs. Includes a review of neuroanatomy and physiology as it pertains to neurogenic language disorders. Prerequisite: Admission to program and Speech-Language Pathology Assistant 1109 or consent of instructor. (4 lecture hours)

SPEECH-LANGUAGE PATHOLOGY ASSISTANT (SLPA) 1112
Introduction to Audiology
2 Credit Hours
Overview of the study of audiology. Includes anatomy and physiology of the auditory system, review of audiological screening and assessment, aural pathologies and intervention strategies. Emphasis placed on impact of aural pathologies on communicative development and education as well as identification with hearing impaired/deaf culture. Prerequisite: Admission to program and Speech-Language Pathology Assistant 1101 or consent of instructor. (2 lecture hours)

SPEECH-LANGUAGE PATHOLOGY ASSISTANT (SLPA) 1301
Sign Language I
3 Credit Hours
Overview of the manual alphabet, numbers and basic sign vocabulary used in American Sign Language (ASL). Emphasis on development of both expressive and receptive signing skills. Explores Deaf history and culture and provides an understanding of the Deaf community. (3 lecture hours)

SPEECH-LANGUAGE PATHOLOGY ASSISTANT (SLPA) 1821
Selected Topics II
1 Credit Hour
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Acceptance into program or coordinator approval is required. (1 lecture hour)

SPEECH-LANGUAGE PATHOLOGY ASSISTANT (SLPA) 1822
Selected Topics III
2 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college Class Schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Acceptance into program or coordinator approval is required. (2 lecture hours)

SPEECH-LANGUAGE PATHOLOGY ASSISTANT (SLPA) 1840
Independent Study - Individualized
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Admission to program and consent of instructor is required. (1 to 4 lecture hours)

SPEECH-LANGUAGE PATHOLOGY ASSISTANT (SLPA) 2101
Clinical Methods and Documentation
4 Credit Hours
Exploration of the components of treatment goals, behavior modification, data collection and documentation. Includes instruction in planning a therapy session based upon a written therapy plan, with an emphasis on identifying appropriate and effective activities and materials to elicit target behaviors. Explores commonly utilized screening and assessment tools as appropriate in the SLPA scope of service. Prerequisite: Admission to program and Speech-Language Pathology Assistant 1106, Speech-Language Pathology Assistant 1107 and Speech-Language Pathology Assistant 1110 or consent of instructor (4 lecture hours)

SPEECH-LANGUAGE PATHOLOGY ASSISTANT (SLPA) 2102
Professional Issues and the SLPA
4 Credit Hours
Addresses a wide variety of issues pertinent to the professional life of the SLPA. Explores SLPA scope of service, licensure and registration, workplace skills, ethics, employment settings, team membership and conflict resolution, universal precautions, culturally sensitive practice, and the psychosocial impact of communication disorders. Includes resume writing and interviewing skills. Prerequisite: Admission to program and Speech-Language Pathology Assistant 1106, Speech-Language Pathology Assistant 1107 and Speech-Language Pathology Assistant 1110 or consent of instructor. (4 lecture hours)

SPEECH-LANGUAGE PATHOLOGY ASSISTANT (SLPA) 2104
Augmentative & Alternative Communication
3 Credit Hours
Overview of augmentative and alternative communication (AAC) terminology, symbols, application of low versus high tech devices, and intervention. Includes overview of populations using AAC and issues of motor and sensory impairments. Prerequisite: Admission to program and Speech-Language Pathology Assistant 1106, Speech-Language Pathology Assistant 1107 and Speech-Language Pathology Assistant 1110 or consent of instructor. (3 lecture hours)

SPEECH-LANGUAGE PATHOLOGY ASSISTANT (SLPA) 2112
Clinical Practicum
6 Credit Hours
Supervised clinical experience in two clinical placements, such as health care, clinic or school settings. Addresses development of clinical skills, including professionalism, implementation of prescribed therapy plans, data recording and documentation. Emphasis on developing competencies for ethical and effective Speech-Language Pathology Assistant practice. Requires attendance at assigned clinical sites three days per week. Prerequisite: Admission to program and Speech-Language Pathology Assistant 2101 and Speech-Language Pathology Assistant 2102 or consent of instructor.

SPEECH-LANGUAGE PATHOLOGY ASSISTANT (SLPA) 2301
Sign Language II
3 Credit Hours
Expansion of American Sign Language (ASL) skills learned in SLPA-1301. Emphasis on development of both expressive and receptive conversational skills. Development of syntax skills and enhancement of vocabulary. Addresses Deaf history, culture and community in greater depth. Prerequisite: Speech-Language Pathology Assistant 1301. (3 lecture hours)

SPEECH-LANGUAGE PATHOLOGY ASSISTANT (SLPA) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

SPEECH-LANGUAGE PATHOLOGY ASSISTANT (SLPA) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

SURGICAL TECHNOLOGY

SURGICAL TECHNOLOGY (SURGT) 1000
Ethical Considerations in Health Care
3 Credit Hours
The various ethical issues and challenges experienced in the health care industry such as medical ethics, access and delivery of medical services, patient rights, knowledge information and record keeping practices, information sharing and communication will be reviewed. Professional practices and employable skills will also be addressed. (3 lecture hours)

SURGICAL TECHNOLOGY (SURGT) 1101
Surgical Technology Concepts I
13 Credit Hours
Students will be introduced to perioperative fundamentals such as surgical sciences, patient care concepts, surgical technology responsibilities, and application of practice. The concepts of surgical terminology and pharmacology/anesthesia will also be included. Prerequisite: Admission to the Surgical Technology program is required (10 lecture hours, 6 lab hours)

SURGICAL TECHNOLOGY (SURGT) 1102
Surgical Technology Concepts II
8 Credit Hours
Continuation of Surgical Technology Concepts I with emphasis on acquiring proficiency in the clinical setting. The student will continue to gain expanded knowledge of areas of the perioperative environment. Prerequisite: Admission to the Surgical Technology program and Surgical Technology 1101 with a grade of C or better, or equivalent. (7 lecture hours, 3 lab hours)

SURGICAL TECHNOLOGY (SURGT) 1103
Surgical Technology Concepts III
14 Credit Hours
Continuation of Surgical Technology Concepts II with emphasis on acquiring continued proficiency in the clinical setting. This course includes advanced theory into surgical technology and surgical practices. Prerequisite: Admission to the Surgical Technology program and Surgical Technology 1102 with a grade of C or better. (13 lecture hours, 1 lab hour)

SURGICAL TECHNOLOGY (SURGT) 1820
Selected Topics I
1 to 3 Credit Hours
Introductory exploration and analysis of selected surgical technology topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required (1 to 3 lecture hours)

SURGICAL TECHNOLOGY (SURGT) 1821
Selected Topics II
2 Credit Hours
Exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. (4 lab hours)

SURGICAL TECHNOLOGY (SURGT) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline, and methods of evaluation in coordination with, and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor is required. (2 to 8 lab hours)

SURGICAL TECHNOLOGY (SURGT) 2000
Introduction to the Perioperative Arena
4 Credit Hours
Exploration of perioperative nursing fundamentals including concepts basic to perioperative nursing, patient safety and risk management, infection prevention and control in the perioperative arena, anesthesia, positioning the surgical patient, wound management, and surgical interventions. Prerequisite: Concurrent Enrollment in Surgical Technology 2001 and consent of instructor is required. (3 lecture hours, 2 lab hours)

SURGICAL TECHNOLOGY (SURGT) 2001
Perioperative Internship I
2 Credit Hours
Practical experience in the perioperative arena. The concepts of perioperative nursing will be applied towards a practical experience in an operating room. Prerequisite: Concurrent Enrollment in Surgical Technology 2000 and consent of instructor is required. (8 lab hours)

SURGICAL TECHNOLOGY (SURGT) 2002
Perioperative Internship II
2 Credit Hours
Advanced practical experience in the perioperative arena. The concepts of preoperative nursing will be explored in-depth in conjunction with an advanced practical experience in an operating room. Prerequisite: Surgical Technology 2000 and Surgical Technology 2001 with a grade of C or better or equivalent or consent of instructor. (8 lab hours)

SURGICAL TECHNOLOGY (SURGT) 2501
Surgical Assisting Principles I
12 Credit Hours
Students will explore surgical assisting fundamentals. Topics include surgical assisting role and responsibilities, perioperative microbiology, pharmacology, electrolytes, fluid, and shock, anesthesia principles, surgical site infections, hematological principles, and all-hazards preparation. Concepts of general and obstetric and gynecologic surgeries will also be included. Prerequisite: Admission to the Surgical Assisting Program is required. (12 lecture hours)

SURGICAL TECHNOLOGY (SURGT) 2502
Surgical Assisting Principles II
12 Credit Hours
Exploration of surgical assisting fundamentals including bioscience, microbiology, wound care, surgical complications, surgical assisting responsibilities, and surgical intervention, application, and practice. Concepts of laparoscopic, general, hernia repair, thoracic, plastic, and gynecological surgeries will also be included. Prerequisite: Admission to the Surgical Assisting Program is required. Surgical Technology 2501 with a grade of C or better, or equivalent and consent of instructor. (10 lecture hours, 4 lab hours)

SURGICAL TECHNOLOGY (SURGT) 2503
Surgical Laboratory Practicum
3 Credit Hours
Students will be introduced to concepts of surgical procedures including incision, step-by-step elements of the surgical procedures, wound closure, dressings, and drains that require a surgical assistant. Topics include principles, techniques, didactics, and laboratory practicum of basic and advanced suturing, knot tying, and wound closure for a variety of injuries, surgeries, and incisions. Prerequisite: Admission to the Surgical Assisting Program is required. (9 lab hours)

SURGICAL TECHNOLOGY (SURGT) 2504
Surgical Assisting Clinical Internship
8 Credit Hours
This clinical internship is a culmination of course work in the Surgical Assisting Program. Emphasis on acquiring proficiency in the clinical setting. Will provide students with the mandatory hours and surgical procedures necessary to take the national certification examination. This course may be taken two times for credit. Prerequisite: Admission to the Surgical Assisting Program is required. Surgical Technology 2503 with a grade of C or better, or equivalent and consent of instructor.

SURGICAL TECHNOLOGY (SURGT) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours

Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

SURGICAL TECHNOLOGY (SURGT) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

THEATER

THEATER (THEAT) 1100 (IAI F1 907)
Theater Appreciation
3 Credit Hours
Enhances appreciation and understanding of the theatrical experience: reading and analysis of scripts, theater attendance followed by exercises in written and oral critiques, discussion of the elements of play production and the business of theater. Intended for the general student to enhance his/her ability to become an appreciative and discerning theater audience member. No previous theater experience is required. Play attendance required. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

THEATER (THEAT) 1105
Improvisational Acting
3 Credit Hours
Emphasizes helping the beginning actor and non-theater student create believable characters using subtext through concentration, imagination and observation in non-scripted scenes. Exercises provide a foundation for using subtext, playing in the moment, and creating truthful relationships in scripted and non-scripted scenes, and the use of the body and voice as communicative agents. Play attendance required. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

THEATER (THEAT) 1108
Voice and Diction
2 Credit Hours
Studies of voice sound production. Designed to teach actors relaxation, breathing, and an understanding of the actor's vocal life and demands. No previous theater experience is required. Play attendance required. Prerequisite: Course requires Reading Placement Test Score-Category One. (2 lecture hours)

THEATER (THEAT) 1109
Stage Movement
2 Credit Hours
Introduces principles and techniques of theatrical stage movement. Designed to help actors make their bodies more flexible and efficient instruments of expression. No previous theater experience is required. Play attendance required. Course requires Reading Placement Test Score-Category One. (2 lecture hours)

THEATER (THEAT) 1110
Stage Combat - Unarmed
3 Credit Hours
Introduces basic unarmed violence for the stage focusing on performance and execution of safe, but real, techniques. Prerequisite: At least one course in the discipline or consent of the instructor. (3 lecture hours)

THEATER (THEAT) 1111 (IAI TA 914)
Acting I
3 Credit Hours
Introduces actors to the principles and techniques of creating believable characters through action, improvisation, analysis, movement, business, physicalization, vocal control, audition workshop, scene study and interpretation. Major contemporary playwrights used for scene study. No previous theater experience is required. Play attendance required. Course requires Reading Placement Test Score-Category One. (3 lecture hours)

THEATER (THEAT) 1112
Acting II
3 Credit Hours
Continues development of skills acquired in Acting I. Helps students develop believable characters while working on acting exercises and duet scenes from contemporary dramatic literature. Actors are also introduced to acting in period plays. Play attendance required. Prerequisite: Theater 1111. Course requires Reading Placement Test Score-Category One. (3 lecture hours)

THEATER (THEAT) 1113
Stage Combat-Armed
3 Credit Hours
Introduces basic armed violence for the stage focusing on performance and execution of safe, but real, techniques. Weapon styles taught for this course will vary each term the class is offered. Prerequisite: At least one course in the discipline or consent of instructor. (3 lecture hours)

THEATER (THEAT) 1114
Audition
3 Credit Hours
Designed to help actors develop material to bring into a variety of auditions. Helps students become familiar and more confident with the auditioning process. Prerequisite: Theater 1111 with a grade of C or better or concurrent enrollment in Theater 1111. (3 lecture hours)

THEATER (THEAT) 1115
Stage Make-Up
3 Credit Hours
Introduction to the fundamentals of stage make-up with a focus on comfort of application, color theory, research, execution of design, and support of a dramatic character through stage make-up. Play attendance required. No previous theater or make-up experience required. (3 lecture hours)

THEATER (THEAT) 1116
Stage Management
3 Credit Hours
Introduction to the world of theatre as a stage manager with a backstage view. Provides tips, techniques, procedures, and survival tools for a beginning or experienced Stage Manager by a professional stage manager. Prerequisite: At least one course in the discipline or consent of the instructor. (3 lecture hours)

THEATER (THEAT) 1120
Rehearsal and Performance
1 to 3 Credit Hours
Participation in play production. After auditions and assignments, the class is composed of the students in the college-produced play. This course may be taken four times for credit. Prerequisite: Consent of instructor. (2 to 6 lab hours)

THEATER (THEAT) 1121
Performance Practicum
1 to 3 Credit Hours
For additional participation in play production. After auditions and casting, the class is composed of the students in the college-produced play. Advanced exploration and analysis of acting, developing a specific character in a specific production. This course may be taken four times for credit. Prerequisite: Theater 1120 with a grade of D or better, or equivalent. Theater 1121 can only be enrolled in upon completion of four Theater 1120 enrollments. (2 to 6 lab hours)

THEATER (THEAT) 1123
Play Production
3 Credit Hours
Offers hands-on training through work on a production(s) in a technical assignment. Each student's assignment will be individual in either build or running crew work. This course may be taken four times for credit on different productions. (6 lab hours)

THEATER (THEAT) 1140
Summer Repertory Theater
6 Credit Hours
A performance course that offers the student an opportunity to perform or be on a crew for two or three productions. The repertory may include musicals, plays for children, contemporary and/or classical dramas and comedies. Non-acting opportunities include costuming, set construction, lights, sound, wardrobe, stage make-up, properties, box office work and assistant directing or management, and stage management. Prerequisite: Audition and/or interview. Course requires Reading Placement Test Score-Category One. (1 lecture hour, 10 lab hours)

THEATER (THEAT) 1151
Dance Theater I
2 Credit Hours
Emphasizes the principles and practical demands of dance within the musical theater. Primarily jazz-dance based movement, with ballet basics included. Integrates an extensive dance warm-up into movement vocabulary and works on various combinations inspired by classic Broadway musicals from the 1920s through the 1980s. Includes techniques for exercise, audition requirements, various performance styles, and choreographic projects. Field trips and master classes utilized whenever possible. Designed for beginning to intermediate levels of dance students. Prerequisite: Course requires Reading Placement Test Score-Category One. (4 lab hours)

THEATER (THEAT) 1152
Dance Theater II
2 Credit Hours
Primarily jazz-dance based course with some ballet combinations included. Integrates an extensive dance warm-up into movement vocabulary and builds on principles learned in Dance Theater I. Includes advanced studies of classic Broadway musical choreography styles from the 1920s through the 1980s, dance techniques, audition requirements, performance styles and choreographic projects. The final includes choreography and/or public performance. Field trips and master classes used whenever possible. Designed for intermediate to advanced level dance students. Some previous training is necessary. Prerequisite: Theater 1151 with a grade of C or better, or equivalent or consent of instructor. Course requires Reading Placement Test Score-Category One. (4 lab hours)

THEATER (THEAT) 1800
Special Project
1 to 3 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) This course may be taken four times for credit. Prerequisite: Course requires Reading Placement Test Score-Category One.

THEATER (THEAT) 1820
Selected Topics I
3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

THEATER (THEAT) 1823
Selected Topics II
3 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. Prerequisite: Course requires Reading Placement Test Score-Category One. (6 lab hours)

THEATER (THEAT) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. This course may be taken four times for credit as long as different topics are selected. Prerequisite: Consent of instructor. Course requires Reading Placement Test Score-Category One. (1 to 4 lecture hours)

THEATER (THEAT) 2205
Voice Acting
3 Credit Hours
Introduction to voice acting techniques for radio, television, multimedia, and other audio and visual presentations. Prerequisite: Theater 1111 or equivalent, or concurrent enrollment in Theater 1111 or consent of instructor. (3 lecture hours)

THEATER (THEAT) 2210
Acting for the Camera
3 Credit Hours
Introduction to the principles and techniques of acting for the camera. Prerequisite: Theater 1112 or equivalent, or concurrent enrollment in Theater 1112 or consent of instructor. (3 lecture hours)

THEATER (THEAT) 2211
Repertory Acting
3 Credit Hours
Helps the actor create roles and work in an ensemble. Selections include children's theater, comedy, drama, musicals, and/or rehearsed improvisational works. Rehearsal and performance are required. Prerequisite: Consent of instructor based on audition. Course requires Reading Placement Test Score-Category One and instructor consent is required based on audition. (3 lecture hours)

THEATER (THEAT) 2221
Stagecraft
3 Credit Hours
Introduction to stage equipment, tools, materials and traditional methods of set construction and scene painting. Prerequisite: Course requires Reading Placement Test Score-Category One. (2 lecture hours, 2 lab hours)

THEATER (THEAT) 2222
Technical Production
3 Credit Hours
Introduction to the new materials and techniques of technical production, including special effects, lighting, and sound. Prerequisite: Course requires Reading Placement Test Score-Category One. (2 lecture hours, 2 lab hours)

THEATER (THEAT) 2230
Play Directing
3 Credit Hours
Helps the inexperienced director make choices about scripts, script analysis, casting, focus of scenes, and the mood, rhythm, pace and main idea of productions. A participatory course that includes readings and attendance at plays, exercise work, and scene direction. Prerequisite: Course requires Reading Placement Test Score-Category One. (3 lecture hours)

THEATER (THEAT) 2800
Special Project
1 to 3 Credit Hours
Special project courses cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline. These courses require direct experience and focused reflection in an in-depth study of a specific discipline topic and/or the critical analysis of contemporary issues in the discipline. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent (to be determined by the disciplines). This experiential component may include field studies, interdisciplinary learning, and/or the practical application of discipline-related concepts, theories, principles, and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.). Prerequisite: At least one course in the discipline or consent of instructor. Course requires Reading Placement Test Score-Category One.

THEATER (THEAT) 2820
Advanced Selected Topics I
3 Credit Hours
Advanced exploration and analysis of selected topics with a specific theme indicated by course title listed in college class schedule. Prerequisite: At least one course in the discipline or consent of instructor. Course requires Reading Placement Test Score-Category One. (3 lecture hours)

THEATER (THEAT) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

THEATER (THEAT) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

THEATER (THEAT) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

THEATER (THEAT) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

WELDING TECHNOLOGY

WELDING TECHNOLOGY (WELD) 1100
Welding I
3 Credit Hours
Basic electric arc, oxy-fuel, gas metal arc and gas tungsten arc welding processes. Safety procedures required to set up and shut down welding equipment for the various processes. Hands-on experience includes practice with the four welding systems using various thickness materials. Industrial standards and American Welding Society (AWS) standards for quality are discussed. (2 lecture hours, 2 lab hours)

WELDING TECHNOLOGY (WELD) 1112
Oxy-Fuel, Welding, Plasma Cutting and Br
3 Credit Hours
Operation of oxyacetylene welding and cutting equipment and plasma cutting. Students learn to produce quality welds and braze joints in the flat, horizontal, overhead and vertical positions. Also introduces cutting methods of profile, pipe, square and bevel. Prerequisite: Welding Technology 1100 or equivalent. (1 lecture hour, 4 lab hours)

WELDING TECHNOLOGY (WELD) 1122
Shielded Arc Welding (SMAW)
3 Credit Hours
Theory and practice in the preparation and welding of steel joints in various positions. Safety, electrode selection, inspection and testing. Skill is developed in producing different position butt and fillet welds. American Welding Society testing is stressed. Prerequisite: Welding Technology 1100 or equivalent. (1 lecture hour, 4 lab hours)

WELDING TECHNOLOGY (WELD) 1132
Gas Metal Arc (MIG)
3 Credit Hours
Solid steel and cored wire welding on common industrial joints. Travel direction, weave motion, bead sequence and gun angles for out-of-position welding on steel are emphasized. Setup and operation of MIG welder for flux-core, stainless steel and aluminum welding under varying conditions. Prerequisite: Welding Technology 1100 or equivalent. (1 lecture hour, 4 lab hours)

WELDING TECHNOLOGY (WELD) 1142
Gas Tungsten Arc (TIG)
3 Credit Hours
Theory and practice of welding in all positions and on various joint configurations using the Gas Tungsten Arc Welding (GTAW or TIG) welding process on carbon steel, stainless steel and aluminum. This course may be taken four times for credit. Prerequisite: Welding Technology 1100 or equivalent. (1 lecture hour, 4 lab hours)

WELDING TECHNOLOGY (WELD) 1151
Pipe Welding and Fabrication
3 Credit Hours
Covers safety inspections, minor repairs, operating parameters, and operation of shielded metal arc welding (SMAW), gas metal arc welding (GMAW), and flux core arc welding (FCAW) equipment in a variety of positions on various materials used in pipe joints. Evaluating and solving complex welding and fabrication problems. This course may be taken four times for credit. Prerequisite: Welding Technology 1100, Welding Technology 1112, Welding Technology 1122, Welding Technology 1132 and Welding Technology 1142 or equivalent or consent of instructor. (1 lecture hour, 4 lab hours)

WELDING TECHNOLOGY (WELD) 1160
Skill Assessment
3 Credit Hours
Theory and practice of test qualification procedures for certification in accordance with AWS, API or other welding codes. Simple non-qualifying bend tests and/or non-destructive tests are performed at no extra cost. Additional testing may be performed by a private laboratory at the student's expense. Prerequisites: Welding Technology 1100 Welding Technology 1112, Welding Technology 1122, Welding Technology 1132 and Welding Technology 1142 or equivalent or consent of instructor. (1 lecture hour, 4 lab hours)

WELDING TECHNOLOGY (WELD) 1820
Selected Topics
1 to 6 Credit Hours
Introductory exploration and analysis of selected topics with a specific theme indicated by course title listed in college cLASS schedule. (1 to 6 lecture hours, 2 to 12 lab hours)

WELDING TECHNOLOGY (WELD) 1840
Independent Study - Individualized
1 to 4 Credit Hours
Exploration and analysis of topics within the discipline to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. Prerequisite: Consent of instructor is required. (2 to 8 lab hours)

WELDING TECHNOLOGY (WELD) 2000
Introduction to AWS Level 1
2 Credit Hours
Covers occupational orientation, safety and health of welders, drawing and welding symbol interpretation, thermal cutting processes and welding inspection and training utilizing American Welding Society (AWS) Sense 1 standards. This course make be taken three times for credit for skills development. Prerequisite: Welding 1100 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours)

WELDING TECHNOLOGY (WELD) 2001
AWS Level 1-Shielded Metal Arc Welding
3 Credit Hours
Theory and practice in the preparation and welding of steel joints in various positions. Safety, electrode selection, inspection, and testing. Skill is developed in producing different position butt and fillet welds. American Welding Society (AWS) testing is

emphasized. This course make be taken three times for credit for skills development. Prerequisite: Welding 1100 with a grade of C or better, or equivalent and Welding 2000 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

WELDING TECHNOLOGY (WELD) 2002
AWS Level 1 Gas Tungsten Arc Welding
3 Credit Hours
Theory and practice in the preparation and welding of steel joints in various positions. Safety, equipment selection, inspection, and testing. Skill is developed in producing different position butt and fillet welds. American Welding Society testing is emphasized. This course make be taken three times for credit for skills development. Prerequisite: Welding 1100 with a grade of C or better, and Welding 2000 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

WELDING TECHNOLOGY (WELD) 2003
AWS Level 1 Flux Core Arc Welding
3 Credit Hours
Theory and practice in the preparation and welding of steel joints in various positions. Safety, electrode selection, inspection, and testing. Skill is developed in producing different position butt and fillet welds. American Welding Society (AWS) testing is emphasized. This course make be taken three times for credit for skills development. Prerequisite: Welding 1100 with a grade of C or better, and Welding 2000 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

WELDING TECHNOLOGY (WELD) 2004
AWS Level 1 Gas Metal Arc Welding
3 Credit Hours
Theory and practice in the preparation and welding of steel joints in various positions. Safety, electrode selection, inspection, and testing. Skill is developed in producing different position butt and fillet welds. American Welding Society (AWS) testing is emphasized. This course make be taken three times for credit for skills development. Prerequisite: Welding 1100 with a grade of C or better, and Welding 2000 with a grade of C or better, or equivalent or consent of instructor. (2 lecture hours, 2 lab hours)

WELDING TECHNOLOGY (WELD) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

WELDING TECHNOLOGY (WELD) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

WRITING

WRITING (WRIT) 0461
Writing for College
1 Credit Hour
Allows students and instructor to identify one or more areas of writing development that will prepare them for college-level writing assignments. Students and instructor will agree on the writing goals and then create and execute a plan, based on a student writing sample that will result in improvement in the targeted area. This course may be taken four times for credit. Prerequisite: Appropriate score on the Writing Pre-Course placement test. (1 lecture hour)

ZOOLOGY

ZOOLOGY (ZOOLO) 1220
Insects and Humans
3 Credit Hours
Study of insect life to include identification and ecology. Recognition and control of major pests as well as other arthropods such as arachnids, millipedes and centipedes. Relationships of insects to humans in the areas of agriculture, culture, forestry and medicine are explored. (2 lecture hours, 2 lab hours)

ZOOLOGY (ZOOLO) 1800
Special Project
1 to 3 Credit Hours
Special project courses in Zoology cover topics not otherwise covered by general education courses and other courses in the Catalog for the Zoology discipline. These courses require direct experience and focused reflection in an in-depth study of a specific topic and/or the critical analysis of contemporary issues. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of Zoology concepts, theories, principles, and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.)

ZOOLOGY (ZOOLO) 1840
Independent Study
1 to 4 Credit Hours
Exploration and analysis of topics within Zoology to meet individual student-defined course description, goals, objectives, topical outline and methods of evaluation in coordination with and approved by the instructor. Prerequisite: Consent of instructor is required. (1 to 4 lecture hours)

ZOOLOGY (ZOOLO) 2250
Comparative Vertebrate Zoology
4 Credit Hours
The classification, anatomy and physiology of vertebrates is presented in a comparative manner. Topics include vertebrate

evolution, vertebrate development, and various body systems and their organs. Student dissection of various examples of vertebrates is required. Prerequisite: Biology 1151 and Biology 1152. (3 lecture hours, 3 lab hours)

ZOOLOGY (ZOOLO) 2260
Invertebrate Zoology
4 Credit Hours
Study of invertebrate phyla. Topics include invertebrate taxonomy, anatomy, physiology, reproduction, evolution, and the relationships of invertebrate with their environment. Prerequisite: Biology 1151 and Biology 1152 or equivalent. (2 lecture hours, 4 lab hours)

ZOOLOGY (ZOOLO) 2800
Special Project
1 to 3 Credit Hours
Special project courses in Zoology cover topics not otherwise covered by general education courses and other courses in the Catalog for the discipline, while building on academic knowledge and skills acquired in introductory-level classes. These courses require direct experience and focused reflection in an in-depth study of a specific topic and/or the critical analysis of contemporary issues. They are targeted to self-selected students with an interest in the subject matter and involve active participation. The course delivery incorporates an experiential component of no less than 30 percent but not to exceed 70 percent. This experiential component may include field studies, interdisciplinary learning, and/or the practical application of more complex zoology concepts, theories, principles and methods with a specific focus. All courses require an orientation session to deliver academic and experiential information (syllabus, academic requirements, field preparation, logistics, etc.) Prerequisite: At least one course in Zoology or consent of instructor.

ZOOLOGY (ZOOLO) 2860
Internship (Career & Technical Ed)
1 to 4 Credit Hours
Course requires participation in Career and Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

ZOOLOGY (ZOOLO) 2865
Internship Advanced (Career & Tech Ed)
1 to 4 Credit Hours
Continuation of Internship (Career and Technical Education). Course requires participation in Career & Technical Education work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

ZOOLOGY (ZOOLO) 2870
Internship (Transfer)
1 to 4 Credit Hours
Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.

ZOOLOGY (ZOOLO) 2871
Internship - Advanced (Transfer)
1 to 4 Credit Hours
Continuation of Internship (Transfer). Course requires participation in work experience with onsite supervision. Internship learning objectives are developed by student and faculty member, with approval of employer, to provide appropriate work-based learning experiences. Credit is earned by working a minimum of 75 clock hours per semester credit hour, up to a maximum of four credits. Prerequisite: Consent of instructor and 2.0 cumulative grade point average; 12 semester credits earned in a related field of study; students work with Career Services staff to obtain approval of the internship by the dean from the academic discipline where the student is planning to earn credit.