Accounting

ACC 100—Personal Income Tax (3,3)

Federal and State tax laws as they apply to the individual are studied. Form #1040 and related schedules are completed.

ACC 120—Financial Accounting (IAI: BUS 903) (4,4)

A college transfer course; consult the C&CSC for more details.
Prerequisite: BUS 105 with a grade of "C" or better

Presents accounting as an information system that produces summary financial statements primarily for users external to a business or other enterprise. Emphasis is on the accounting cycle, analysis and recording of transactions and on the meaning, preparation, and interpretation of financial statements, the voucher system, payroll procedures, stock and bond transactions, and corporate cash flow statements.

ACC 121—Managerial Accounting (IAI: BUS 904)(3,3)

A college transfer course; consult the C&CSC for more details.
Prerequisite: ACC 120

Presents accounting as a system of producing information for use in internally managing a business. The course emphasizes the identification, accumulation, and interpretation of information for planning, controlling, and evaluating the performance of the separate components of a business. Included is the identification and measurement of the costs of producing goods or services and how to analyze and control these costs.

ACC 130—Computerized Accounting [Quickbooks] (3,4)

Use of computers will be applied in the accounting process including general ledger accounting, accounts receivable/payable, payroll, financial statements and spreadsheet applications. QuickBooks software is used. Lab fee.

ACC 200—Cost Accounting (3,3)

A college transfer course; consult the C&CSC for more details.
Prerequisite: ACC 121

This course emphasizes job and process cost accounting systems and decisions from the managerial point of view. Topics include: budgets, stores control, payroll, processing overhead distribution, cost of production reports, standards, variance analysis, break-even analysis, contribution margin and direct costing.

ACC 230—Information Management (3,3)

Prerequisite: MIS 205

Ways in which data and information are used and processed by computer systems in an organization are studied. The course uses a problem-solving orientation to develop management decision-making skills in a systems environment.

ACC 250—Accounting Internship (3, arranged)

Prerequisite: Concurrent enrollment or completion of ACC 200 and ACC 261, and written consent of program coordinator

This course provides students an opportunity to receive college credit by being employed at a business establishment and receiving on-the-job accounting training, working a minimum of 15 hours weekly. The student is responsible for finding and maintaining coordinator approved accounting work-site. One hour specialized seminars are held once a week to provide students with needed information to help them prepare for a successful accounting career. On demand.

ACC 260—Intermediate Accounting I (3,3)

A college transfer course; consult the C&CSC for more details.
Prerequisite: ACC 121 with grade of "C" or better.

Emphasis of the course is on accounting theory, concepts, current financial accounting functions and decision making using accounting data. It includes a thorough review of basic accounting concepts and alternative procedures. Major topics include: (1) Review, (2) Introduction to Accounting Theory, Balance Sheet and Retained Earnings Statement, (3) Present and Future Values, (4) Current Assets and Current Liabilities and (5) Plant Assets and Intangible Assets.

ACC 261—Intermediate Accounting II (3,3)

A college transfer course; consult the C&CSC for more details.
Prerequisite: ACC 260

As a continuation of ACC 260, the focus is on the use of accounting information as a basis for decision making by management, accountants, stockholders, creditors and investors. Achievement by students in handling professional-level problems is a major objective. Major topics include: (1) Long Term Liabilities, (2) Stockholder Equity, Dilutive Securities and Short- and Long-Term Investments, (3) Analysis of Financial Statements, (4) Pensions, (5) Leases, (6) Accounting Changes and Error Analysis, (7) Cash Flow Analysis, (8) Accounting for Income Taxes, and (9) Revenue Recognition.

ACC 290—Federal Taxes (3,3)

Prerequisites: ACC 120

Surveys the Internal Revenue Code and practical application of tax rules in preparation of returns, applying accounting principles of tax matters. Relationship of accounting and law is considered.

ACC 291—Advanced Federal and Illinois Taxes (3,3)

Prerequisite: ACC 290

To introduce the student to the more advanced study of taxation, including corporate, partnership, estate, trust and state taxation. This is to be done through reading of the class materials and solving the problems in the materials.

Anthropology

ANT 101—Introduction to Cultural Anthropology (IAI: S1901N) (3,3)
A college transfer course; consult the C&CSC for more details.

Introduction to cultural and social anthropology (with a brief introduction to physical anthropology). Man's cultural organization and behavior studied in terms of institution of kinship, politics, religion and economics. Emphasis is placed on comparative sociology of primitive tribal people living today. F, Sp.

Applied Engineering Technology

AET 101—Audio/Video & Smart Home (4,6)

The course introduces basic concepts of audio and video signals and discusses the devices and components that constitute home entertainment systems. Students learn how to plan, design, install, and troubleshoot entertainment systems. Fee.

AET 102—Networking Technology (4,6)
Prerequisites: AET 101

The course provides students the knowledge and skills required for designing, implementing, and maintaining a home network. They learn about networking protocols, network operating systems, network addressing, and security issues to be managed when setting up a home network. Fee.

AET 105—Communications Security & Technology (4,6)

Prerequisites: AET 101

The course introduces students to the fundamentals of telecommunication systems. Students are instructed on the design, installation, and configuration of home telecommunication systems, including advanced wired and wireless systems. They learn to install in-house services, such as voice mail, intercom, and call conferencing. Fee.

AET 190—Systems Integration & Future Technology (4,6)

Prerequisites: AET 101

This course covers tools, products, and services and presents the major commercial participants, common practices, and prevalent consumer perception of Home Technology Integration (HTI) benefits. Students design and build Integrated Home Network (IHN) and the tools, equipment, and expertise required to build it. Fee.

Art

Students in studio ART are required to schedule one hour per week in the studio (in addition to class time) for each one hour of credit.

ART 101—Drawing I (IAI: ART 904) (3,6)
A college transfer course; consult the C&CSC for more details.

An introduction to drawing with emphasis on representation, perceptual growth and individual expression. Control in line, value and spatial illusion is developed through the use of a variety of art media and tools. Fee. F, Sp.

ART 102—Drawing II (IAI: ART 905) (3,6)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ART 101 or consent of instructor

A continuation of Drawing I with compositional elements and color investigated for their expressive possibilities within the general framework of "realistic space." Conceptual skills stressed to realize drawing as a visual statement and initiate the development of visual ideas on a continuing basis throughout the semester. Emphasis on developing drawing skills in various media and mixed media. Fee. Sp.

ART 105—Art History Survey, Ancient World (IAI: F2 901) (3,3)
A college transfer course; consult the C&CSC for more details.

A chronological survey of Prehistoric, Ancient European, and Near Eastern art through the Gothic Period in Europe. F,Sp.

ART 106—Art History Survey,Renaissance Through Modern (IAI: F2 902) (3,3)
A college transfer course; consult the C&CSC for more details.

A chronological survey of Western European art, beginning with the Renaissance and continuing through World War II. Sp.

ART 107—Art Appreciation (IAI: F2 900) (3,3)
A college transfer course; consult the C&CSC for more details.

A general introductory course investigating the visual arts with an emphasis placed on developing an aesthetic and cross cultural awareness of and appreciation for various visual forms of expression: i.e., painting, sculpture, architecture, cinematography and video. F, Sp, S.

ART 109—Ceramics I (3,6)
A college transfer course; consult the C&CSC for more details.

Introduction to ceramic clay-forming techniques with emphasis placed on wheel throwing and hand building combined with procedures on glazing, surface decorations and clay and glaze theory. Fee. F, Sp, S.

ART 110—Metals and Jewelry I (3,6)
A college transfer course; consult the C&CSC for more details.

An introduction to jewelry with emphasis placed on the techniques, tools, materials, and fabrication methods of metals used in designing and creating small-scale forms. Silver fee extra per market value. Fee F, Sp.

ART 111—Two-Dimensional Design (IAI: ART 907) (3,6)
A college transfer course; consult the C&CSC for more details.

An exploration of the elements, principles and concepts of design applied to the two-dimensional surface; students will manually and digitally practice the elements uses in various media and become visually aware of two-dimensional design's aesthetic possibilities for communication and expression. Fee. F, Sp.

ART 112—Three-Dimensional Design (IAI: ART 908) (3,6)
A college transfer course; consult the C&CSC for more details.

An introduction to spatial three-dimensional principles, elements, concepts and materials used in sculptural form. Various processes will be used including carving, modeling, assembling and fabricating. Appropriate materials and tools are used to realize solutions to assigned projects. Fee. F, Sp, S.

ART 113—Color Theory and Practice (3,6)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ART 111 or consent of instructor.

The study of color systems, color properties and the development of personal color sensitivity will be explored by the student through a variety of projects. The effects of color in art and design will be emphasized. Fee. F, Sp.

ART 130—Computer Art I [Adobe Photoshop, Illustrator] (3,6)
A college transfer course; consult the C&CSC for more details.
Prerequisites: No previous computer experience is required.

Introduction to a computer-based approach to visual image generation and manipulation. A variety of image software and hardware will be used to create images. Raster based illustration (Adobe Illustrator) and vector base photo-editing (Adobe Photoshop) software programs are used in this course along with peripheral devices: printers, scanners, cameras & tablets for input and output and manipulation of images. Fee. F, Sp.

ART 139—History of Photography (IAI: F2904) (3,3)
A college transfer course; consult the C&CSC for more details.

This course traces the historical development of photography as an art form from 1839 to the present, including the critical analysis of types of photographs and aesthetic movements in photography. Examines photographs for their aesthetic and humanistic values, emphasizing photographs as expressions of the ideas and beliefs of photographers within their cultural and social contexts. Sp.

ART 140—Photography I Digital (3,6)
A college transfer course; consult the C&CSC for more details.

A basic introductory photography course that covers the principles and fine art aesthetics of black and white photography in a digital format including composition, equipment selection and use; image processing, manipulation, correction, and output in the digital darkroom; lenses, aperture shutter speed, focal plane; an overview of the history of photography and its content as both a commercial medium and form of artistic expression. Required: Student will supply a digital camera with manual controls for Aperture, Shutter & ISO. Computer experience preferred. Fee. F. Sp.

ART 141—Photography II Digital (3,6)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ART 140

Photo II is a continuation of Photography I covering the principles and fine art aesthetics of color photography. This course includes advanced black and white skills and effects using PhotoShop in the digital format, digital manipulation, special effects, use of color, color correction, and the finished print. A continued overview of the history of photography and its content as both a commercial medium and form of artistic expression will also be addressed. Fee. Student will supply a digital camera with manual controls for Aperture, Shutter & ISO.

ART 201—Painting (3,6)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ART 101 or consent of instructor.

An introduction to the technical and aesthetic problems of oil painting through the solution of various projects dealing with media, the visual elements, composition and design, subject matter and expressive content with an emphasis placed on encouraging creative and imaginative thinking. Fee. F, Sp.

ART 202—Painting II (3,6)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ART 201 or consent of instructor.

A further in depth introduction to the technical and aesthetic problems of oil painting through the solution of various projects dealing with a practical application of selected historical stylistic prototypes with the intent of encouraging more personal creative and imaginative thinking. Fee. F, Sp.

ART 203—Life Drawing I (3,6)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ART 101 or consent of instructor.

The aesthetics of the human figure is studied through direct observational drawing exercises in gesture, contour and volume drawings for an accurate anatomical representation. Developing drawings are from live models, an articulated skeleton and studying large muscle groups including the introduction of human anatomy. Various media used throughout the semester. Fee. Sp.

ART 204—Life Drawing II (3,6)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ART 203 or consent of instructor.

The human figure and anatomy is studied further in a greater variety of art media, with additional emphasis on composition, abstraction, expression and individual aesthetic interpretation. Fee. Sp.

ART 205—Sculpture I (3,6)
A college transfer course; consult the C&CSC for more details.

This course introduces basic sculpture-making methods, procedures and their relationship to the artist concepts, materials and tools. Processes used: modeling, moldmaking, carving, resin lamination, fabrication in wood and metal, welding and foundry practices. Lecture, demonstrations, slide presentations and discussions included. Fee. F, Sp, S.

ART 206—Printmaking I (3,6)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ART 101

The student explores planograph or relief printing techniques. Emphasis is placed either on color and reduction woodcuts and wood engravings or silk-screen process including: stencils, crayons, touche, glue, photo and other stop-out techniques. Fee. Sp.

ART 209—Ceramics II (3,6)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ART 109

Emphasizing in-depth exploration of the techniques and conceptual theories of pottery. Wheel-throwing and hand-building processes combined with procedures on glazing, surface decorations, clay and glaze theory. Fee. F, Sp, S.

ART 210—Metals and Jewelry II (3,6)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ART 110

Continuation of Metals and Jewelry 110 emphasizing three-dimensionality with the introduction to construction, casting and electroforming. Silver fee extra per market value. Fee. F, Sp.

ART 211—Painting with New Media (3,6)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ART 202

Acrylic paints and mixed media are explored as a painting medium. Through experimentation in individually selected problems, the student will investigate the potential of acrylics. Fee. F, Sp.

ART 212—Painting Studio (3,6)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ART 202

This course offers opportunity for individual concentration in a thematic approach to developing a personal aesthetic for the advanced student. Projects will be developed as necessary for furthering the personal aesthetic. Fee. F, Sp.

ART 213—Watercolor I (3,6)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ART 101 or consent of instructor.

An introduction to the technical and aesthetic problems of water-soluble media through the solution of various projects dealing with media, the visual elements, composition and design, subject matter and expressive content with an emphasis placed on encouraging creative and imaginative thinking. Fee.

ART 215—Sculpture II (3,6)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ART 205 or consent of instructor.

A continuation of sculpture with emphasis directed toward developing the student's ideas, images and techniques. An open studio course specific problems are generated for individual concentration for developing a personal aesthetic for the advanced student. Discussions, lectures and critiques included. Fee. F, Sp, S.

ART 216—Printmaking II (3,6)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ART 206

The student explores Intaglio or Lithographic techniques. Emphasis is placed either on etching, aquatint and engraving on copper plates or lithographic techniques including crayon and touche as well as opportunity for exploration in color and experimentation. Fee.

ART 219—Non-Western Art (IAI: F2 903N) (3,3)
A college transfer course; consult the C&CSC for more details.

A survey of non-Western art forms that reflect alternative aesthetic views differing from the conventional European traditions. Sp.

ART 221—The History of Art in Architecture (3,3)
A college transfer course; consult the C&CSC for more details.

A cross cultural chronological survey of western and non-western architectural styles from ancient to modern times with an emphasis on western civilization and including post-modernism. Fee.

ART 223—Watercolor II (3,6)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ART 213

Personal skills developed in water-soluble media. Fee.

ART 230—Web Design (3,6)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ART 252

This course provides an integrated approach to website design and development, focusing on establishing an effective online presence through visual aesthetics, design, development, and management of websites using web design software such as: HTML, Dreamweaver, Adobe Suite. Fee. Sp.

ART 241—Art Internship (2, arranged)
Prerequisite: Art 140, Art 230, Art 252, Art 265, Art 260 Art 270 & consent Graphic Design Coordinator.

Work experience/college credit for those students who are presently employed part-time or full-time in an advertising house/studio, advertising agency and/or public relations office. On demand. Students will complete a total of 64 hours at the Internship site and as stated in the South Suburban College catalog: "Students in studio are required to schedule one hour per week in the studio (in addition to class time) for each one hour of credit." The length of the Internship is one semester in accordance with the South Suburban College Semester Schedule. Fee. F, Sp, S.

ART 251—Graphic Design I (3,6)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ART 111, ART 130; concurrently or consent of instructor.

This studio course focuses on the aesthetics, fundamental concepts, and visual communication skills necessary for graphic design and an introduction to the design and production of printed materials using raster & vector image manipulation software, and manual illustration. Projects stress conceptual development, graphic form, aesthetic structure, typography and visual organizational methods to develop solutions for visual communication problems. Requires the creation of tabloid, single and multiple page documents in black & white and color. Will include integration of the Adobe Creative Suite of Software: Photoshop, InDesign, and Illustrator or other software as needed. Fee. F, Sp.

ART 252—Graphic Design II (3,6)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ART 251

Graphic Design II explores problems dealing with text and image as they relate to graphic communication. Projects stress conceptual development, analysis, planning, client presentation and production of designs for advertising and other published materials. The course will include integration of the Adobe Creative Suite of software: Photoshop, InDesign and other software as needed. Fee. F, Sp.

ART 260—Computer Assisted Illustration (3,6)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ART 130; concurrently or consent of instructor.

The theory and practice of computer assisted illustration using Adobe Creative Suite. Students will create original illustrations for graphic design related topics. Fee. Sp.

ART 265—Computer Art II [Photoshop] (3,6)
A college transfer course; consult the C&CSC for more details.
Prerequisites: ART 140, 251.

Digital imaging focusing on the creative and aesthetic use of the computer in art and design. This course covers advanced methods and using Adobe Photoshop for a variety of digitizing methods for image production, color correction, digitized image manipulation, photographic image correction and image enhancement. Images are prepared for output to print, web and video. Fee. Sp.

ART 270—Computer Animation (Flash) (3,6)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ART 252

This course is a software-based course designed for students to transfer art and design work into animation. Students will prepare images in both vector ad bitmap programs. The course covers the animation of images, time sequencing, and the addition of sound. Animations will be prepared for a placement on a website and/or digital portfolio. Fee. F.

Astronomy

AST 101—Introduction to Astronomy (IAI: P1906L) (4,5)
A college transfer course; consult the C&CSC for more details.
Prerequisite: MTH 095 or equivalent.

An overall view of modern astronomy with emphasis on an understanding of the structure and properties of the universe, from the earth to the most distant galaxies discernible. Includes a two-hour lab. Fee. F, Sp, S.

Barbering Department

BAR 101—Introduction to Barbering (2,4)
Prerequisite: Acceptance into the Barber Program

This introductory course will cover the history and the rise of the barbering industry. The historical references to barbering, Life Skills with a focus on ethics, attitude, and goal setting. Professionalism in the barbering industry will be introduced, safety and sanitation, and principles of personal hygiene. This introductory course will prepare students for state certification for the Illinois Barber License from the Department of Professional and Financial Regulations. Fee. F.

BAR 102—Art of Barbering I (2,4)

Prerequisite: Admission into Barber Program is required, and concurrent enrollment in BAR 101 & BAR 103

This course will introduce basic barbering concepts. Topics include: Infection control, proper cleaning of tools and equipment, harmful bacteria, and disinfectants. How to properly use combs, brushes, shears, clippers and razors. General anatomy and physiology, types of tissues, cell reproduction, muscular system, and nerve system. Basics of chemistry that will include organic and inorganic chemistry, physical and chemical changes, and various chemical reactions. Fee. F.

BAR 103—Salon Operations I (4,12)

Prerequisite: Admission into Barber Program is required, and concurrent enrollment in BAR 101 & BAR 102

An introductory course that focuses on basic salon operations. Topics include: sanitation procedures, introduction to salon chemicals, and products. Determination and care of various hair textures, hair cutting techniques, and hair processing. Prepares student for state certification for the Illinois Barber License from the Department of Professional and Financial Regulations. Fee. F.

BAR 112—Art of Barbering II (2,4)

Prerequisite: BAR 102 with a grade of "C" or better, and concurrent enrollment in BAR 113 & BAR 114

This course introduces massage manipulations, different skin type and facial treatments, understand fundamentals of shaving. Topics include study of men's facial massage and treatments including light therapy, and shaving and facial hair design. Prepares student for state certification for the Illinois Barber License from the Department of Professional and Financial Regulations. Fee. F.

BAR 113—Salon Operations II (4,12)

Prerequisite: BAR 103 with a grade of "C" or better, and concurrent enrollment in BAR 112 & BAR 114

This course provides experience in a simulated shop setting allowing a more visual grasp on potential awareness of barber industry. Topic include salon sanitation, draping, shampooing, hair cutting, and hair drying. Instruction on chemical processing for all textures of hair. Prepares student for state certification for the Illinois Barber License from the Department of Professional and Financial Regulations. Fee. F.

BAR 114—Barber Styling (2,4)

Prerequisite: BAR 102 with a grade of "C" or better, and concurrent enrollment in BAR 112 & BAR 113

This course covers more in-depth barbering concepts. Emphasis is placed on men's shaving, cutting, styling, and facial hair design, hair replacement with temporary unit installation. Women's hair cutting and styling, chemical texture services, and hair coloring and lightening. Prepares student for state certification for the Illinois Barber License from the Department of Professional and Financial Regulations. Fee. F.

BAR 202—Art of Barbering III (2,4)

Prerequisite: BAR 112 with a grade of "C" or better, and concurrent enrollment in BAR 203 & BAR 210

This course covers general science pertaining to barbering concepts. Topics include importance of anatomy, physiology, and histology to the barbering profession. Identify cells, their structure, and their reproduction, basic chemistry, and oxidation-reduction reactions as it is related to barbering. Prepares student for state certification for the Illinois Barber License from the Department of Professional and Financial Regulations. Fee. Sp.

BAR 203—Salon Operations III (4,12)

Prerequisite: BAR 113 with a grade of "C" or better, and concurrent enrollment in BAR 202 & BAR 210

This course provides experience in a simulated shop setting with hands on experience. Working behind the chair with an emphasis on efficient and competent delivery of all shop services. Hands on experience from the first contact and final ending of clientele. Prepares student for state certification for the Illinois Barber License from the Department of Professional and Financial Regulations. Fee. Sp.

BAR 210—Chemical Services I (2,4)

Prerequisite: BAR 114 with a grade of "C" or better, and concurrent enrollment in BAR 202 & BAR 203

This course focus on barbering concepts of chemical treatment of the hair and scalp services, and other related topics dealing with skin structure disorders and diseases. Prepares student for state certification for the Illinois Barber License from the Department of Professional and Financial Regulations. Fee. Sp.

BAR 212—Advanced Barbering I (2,4)

Prerequisite: BAR 202 with a grade of "C" or better, and concurrent enrollment in BAR 213 & BAR 220

This is an advanced course that covers the role of energy and light therapy, electricity in the barber profession. Topics include: electricity, electrical equipment safety, hair loss, hair and scalp analysis. Prepares student for state certification for the Illinois Barber License from the Department of Professional and Financial Regulations. Fee. Sp.

BAR 213—Advanced Salon Operations I (4,12)
Prerequisite: BAR 203 with a grade of "C" or better, and concurrent enrollment in BAR 212 & BAR 220

This course provides advanced training a simulated shop setting with hands on experience. Working behind the chair with an emphasis on efficient and competent delivery of all shop services. Hands on experience from the first contact and final ending of clientele. Prepares student for state certification for the Illinois Barber License from the Department of Professional and Financial Regulations. Fee. Sp.

BAR 220—Chemical Services II (2,4)
Prerequisite: BAR 210 with a grade of "C" or better, and concurrent enrollment in BAR 212 & BAR 213

This course will integrate topics of double draping for chemical service, scalp treatments, Intermediate-level of skin care and other related topics chemical texture services, and hair coloring and lightening. In depth study of Perming and coloring process. Prepares student for state certification for the Illinois Barber License from the Department of Professional and Financial Regulations. Fee. Sp.

BAR 223—Advanced Salon Operation II (4,12)
Prerequisite: BAR 212 with a grade of "C" or better, and concurrent enrollment in BAR 225 & BAR 250

Client based oriented course in a salon setting. Procedures include management of salon, routines and operations, and owner and employee variations. Prepares student for state certification for the Barber License from the Department of Professional and Financial Regulation. Fee. S.

BAR 225—Barber Management (2,4)
Prerequisite: BAR 212 with a grade of "C" or better, and concurrent enrollment in BAR 223 & BAR 250

This course focuses on the business aspects of the Barber industry. Students are prepared for state licensure and employment. The concepts of working behind the chair, barber retailing, ownership and staff and client retention are explored. Prepares student for state certification for the Illinois Barber License from the Department of Professional and Financial Regulations. Fee. S.

BAR 250—License Review (3,3)
Prerequisite: BAR 220 with a grade of "C" or better, and concurrent enrollment in BAR 223 & BAR 225

This course provides a comprehensive review of the Barber curriculum and skills in preparation for the state exam for the Barber License from the Illinois Department of Professional and Financial Regulations. Fee. S.

Biology

Note: Biology 111, 121 and 122 are now Biology 115, 185 and 186.

BIO 101—Concepts of Biology (IAI: L1900) (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: RDG 082 with a grade of "C" or better or qualifying score on Placement test.

An introduction to the concepts of biology, including cells, energetics, genetics, evolution and ecology, with an emphasis on human applications. Non-laboratory course. F, Sp, S.

BIO 102—Introductory Biology (IAI: L1900L) (4,5)
A college transfer course; consult the C&CSC for more details.
Prerequisite: MTH 095 and RDG 082 with a grade of "C" or better or qualifying score on Placement test.

This one-semester lab course introduces the concepts of biology; including cells, energetics, genetics, evolution, and ecology, with an emphasis on human applications. A lab science course recommended for students pursuing programs in Allied Health or Nursing, as well as preparation for Anatomy & Physiology. This course is also designed to complete the Group V (Life & Physical Sciences) general education requirement. Laboratory included. Fee. F, Sp, S.

BIO 103—Environmental Biology (IAI: L1905L) (4,5)
A college transfer course; consult the C&CSC for more details.
Prerequisite: RDG 082 with a grade of "C" or better or qualifying score on Placement test.

A study of ecological principles- populations, ecosystems, biomes, diversity of living organisms. Emphasis on how humans interact with their environment- natural resources, pollution, conservation. A lab science course for non-science majors or students with no previous experience in science. BIO 102 is not a prerequisite for this class. Laboratory included. Fee. F, Sp.

BIO 105—General Biology I (IAI: L1910L) (IAI: BIO 910) (4,6)
A college transfer course; consult the C&CSC for more details.
Prerequisite: MTH 095 and RDG 082 with a grade of "C" or better or qualifying score on Placement test. High school Biology or Concurrent enrollment in chemistry recommended.

An introduction to the basic principles of biology with an emphasis on biochemistry, molecular biology, cell biology, genetics, reproduction and development. Intended for science majors. The BIO 105-106 sequence is recommended for students transferring to university programs requiring a full year of general biology. Laboratory included. Fee. F, Sp, S.

BIO 106—General Biology II (IAI: BIO 910) (IAI: L1910L) (4,6)
A college transfer course; consult the C&CSC for more details.
Prerequisite: BIO 105 with a grade of "C" or better required; prior or concurrent coursework in chemistry recommended.

A continuation of Biology 105. Introduction to the basic principles of biology with an emphasis on the diversity of living organisms, plant and animal anatomy and physiology, evolution, ecology and behavior. Intended for science majors. Laboratory included. Fee. Sp.

BIO 115—Human Body Structure (4,5)
A college transfer course; consult the C&CSC for more details.
Prerequisite: RDG 082 with a grade of "C" or better or qualifying score on Placement test. BIO 101 or BIO 102 recommended.

Organization, control, and integration of the human body systems. Covers cells, tissues, and the integumentary, skeletal, muscular, endocrine, nervous, respiratory, digestive, cardiovascular, urinary, and reproductive systems, with an emphasis on anatomy. Fee. F, Sp, S.

BIO 152—Man and His Environment (IAI: L1905) (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: RDG 082 with a grade of "C" or better or qualifying score on Placement test.

A study of current environmental problems and issues, possible solutions, and future implications. Covers overpopulation, pollution, energy use, and the biodiversity crisis. Non-laboratory course. S and On demand.

BIO 185—Human Anatomy and Physiology I (4,5)
A college transfer course; consult the C&CSC for more details.
Prerequisite: BIO 102 or BIO 105 with a grade of "C" or better

Organization, control and integration of the human body systems. Covers the cell, tissues, skin, skeletal system, muscular system, nervous system and endocrine system. Laboratory included. Fee. F, Sp, S.

BIO 186—Human Anatomy and Physiology II (4,5)
A college transfer course; consult the C&CSC for more details.
Prerequisite: BIO 185, grade of "C" or better required

A continuation of BIO 185. Covers the cardiovascular system, lymphatic system, immune system, respiratory system, digestion and nutrition, the urinary system and fluids and electrolytes, and the reproductive system. Laboratory included. Fee. F, Sp, S.

BIO 224—Microbiology (4,5)
A college transfer course; consult the C&CSC for more details.
Prerequisites: BIO 102, 105 or BIO 185, grade of "C" or better required

A study of life processes using microorganisms as a model. Covers protozoa, algae, fungi and viruses with an emphasis on bacteria. Provides a background for study in health-related professional fields, as well as a foundation for advanced courses in biology. Laboratory included. Fee. F, Sp, S.

Building Code Enforcement

BCD 101—Introduction to Codes Enforcement (3,3)

This course covers the principles of construction codes enforcement including legal authority, codes format, code fundamentals, plan review, permit processing and inspection procedures. Lab work is also included. Fee.

BCD 103—Residential Concrete & Framing Inspections (3,4)

This course covers the principles of construction code enforcement with an emphasis on single family concrete and framing inspections.

BCD 104—Residential Plumbing Inspections (3,4)

This course covers the principles of construction code enforcement with an emphasis on single family plumbing inspections. Fee.

BCD 105—Residential Electrical Inspections (3,4)
Prerequisite: BLD 206

This course covers the principles of construction code enforcement with an emphasis on single family electrical inspections.

BCD 106—Mechanical Inspections (3,4)

This course covers the principles of construction code enforcement with an emphasis on commercial and residential inspections.

BCD 108—Building Construction Fire Science (3,3)

Analysis of various methods of building design, construction and materials. Fire resistant features of materials and life safety methods of construction and an introduction to building codes. An in-depth study of automatic extinguishing and detection systems with emphasis on automatic sprinkler equipment. Included are water spray foam, carbon dioxide and dry chemical systems, stand pipe system and protection systems for special hazards.

BCD 109—Property Maintenance (3,3)

This course will help the student learn how to perform property maintenance inspection tasks and sub-tasks in order to determine code compliance for the maintenance of a residential single-family home, multi-family home and commercial properties. Covers the principles of construction code enforcement with an emphasis on light commercial and residential inspection.

BCD 190—International Energy Conservation Code (3,3)

This class will cover the International Energy Conservation Code as it applies to residential and light commercial construction.

BCD 201—Decision-Making in Code Enforcement (3,3)

Advanced-level course on the legal and ethical issues faced by professional code enforcers. Case studies will address practical situations inherent in public service and codes enforcement. Processes for evaluating alternate materials and methods under the equivalency concept will also be covered. Fee.

BCD 202—Code Enforcement Plan Review (3,3)

Prerequisite: BLD 105

Course will cover methods and procedures for reviewing construction drawings for codes compliance including plan review notations, calculations and reporting.

BCD 225—Light Commercial Inspection (3,4)

Prerequisite: BLD 105

This course covers the principles of Construction Code Enforcement with an emphasis on light commercial and residential inspection.

BCD 230—Building Code Enforcement Internship(3,3)

Prerequisite: BCD 101, 201, 202 and one of the following: BCD 103, 104, 105 or 106 and approval by coordinator

Supervised clinical experience at a local building inspection department. A minimum of 300 clock hours is required.

BCD 239—Green Building - Residential Inspections (2,2)

Students will be instructed in the requirements for energy efficient green technology for residential homes from indoor air quality to efficient use of land and green technology.

BCD 299—Special Topics in Code Enforcement (Variable,1-10)

A class, seminar, or lab investigating a special topic or issue in code enforcement. Topics may not be offered more than two times in three years. This course may be repeated once for credit.

Building Construction Technology

BLD 100—How to General Contract a Green Home (2,2)

This introductory course provides a broad overview of the field of construction technology as applied to carpentry, masonry, electrical, plumbing, building rehabilitation and new construction. Emphasis is placed on construction techniques, materials, planning and building codes. F, Sp,S.

BLD 101—Construction Materials & Methods I,Wood (4,6)

Prerequisite: MTH 093 or qualifying score on the Placement test.

Course will cover structural footings, wall systems, physical properties of wood, building materials, and measurement grading. Hands-on projects allow students to thoroughly understand the principles and methods of rough residential carpentry by framing of a mock-up, scaled-down home. Actual house framing including floor, wall and roof construction with special emphasis placed on the framing square for stair stringers, gable and hip rafter layout. Fee. F, Sp.

BLD 102—Construction Materials and Methods II, Masonry (4,6)

Brick, concrete principles, theory, and practice; cementing materials; brick, block masonry; plain and reinforced concrete, footing, foundations; combined systems; windows; fire protection; retaining walls; specifications. Form design, control of mixes; water cement ratios, water cement-lime ratios; proper curing of cement mixtures tension, and compression tests. Fee. F, Sp.

BLD 103—Home Energy Dynamics (3.5,4)

Students will design a home that is safe, comfortable and energy efficient. Students will understand and identify various types of insulation materials, heating systems, windows, doors, solar heating systems and heat pumps, and be able to calculate heat gain and loss in a residence. Students will also be able to determine annual heating costs for any home. Fee. F, Sp.

BLD 105—Print Reading for Building Construction (3,3)

A course covering the basic types of drawings, symbols, building materials and construction techniques currently used in the building construction industry. Fee. F, Sp.

BLD 106—OSHA 30 HR Construction Safety (3,3)

Thirty hour OSHA construction safety training class. Topics to include introduction to OSHA, electrical, fall protection, tools ladders, scaffolding, excavation, stairway safety and other safety issues. Fee.

BLD 107—Pre-Apprenticeship Training (3,4)

Class will focus on the basic skills required for acceptance in construction apprenticeship programs. Class will focus on math, physics, basic electricity, spatial and use of the construction master calculator.

BLD 140—HVACR I (4, 6)

This Heating, Ventilation, Air Conditioning, and Refrigeration course prepares the student to work on systems that control the temperature, humidity and air quality of enclosed environments. Students learn to assemble, install, maintain and service climate control equipment. Fee.

BLD 141—HVACR 2 (4,6)

Prerequisite: BLD 140

This is the second half of the HVACR core classes. The student will learn advanced techniques in the installation and repair of HVACR equipment. Fee.

BLD 142—Duct Fabrication and Installation (3,3)

Course covers the basic components, equipment and operation for sheet metal layout and fabrication. Fee.

BLD 150—Intro To "Green" Building Science (2,3)

An introduction to building science, topics to be studied include conductive and infiltration heat transfer, moisture migration, building sustainability and durability, energy efficient and "green" construction techniques. This course is a requirement for the "Home Energy Raters" certificate.

BLD 157—Green Construction Career Planning (2,3)

Entering and advancing in a green construction career will be explored with emphasis on developing an individualized career development plan based on analyzing one's own skills and interests with the opportunities and requirements of the field.

BLD 203—Estimating (3.5,4)

Material, labor quantity surveys from working drawings, specifications. Quantity survey, estimating procedures; approximate detailed methods; office procedures related to estimating. Fee. F, Sp.

BLD 205—Project Supervision and Management (3,3)

A course designed to offer the student some insight to and preparation for the responsibilities of project supervision and management. Fee. F, Sp.

BLD 206—Construction Materials and Methods IV, Electrical (4,5)

Prerequisite: MTH 091 or higher

Course will cover basic design principles of electrical and lighting systems as well as electrical circuit fundamentals, distribution systems, power requirements, wiring layout and electrical building codes for residential and commercial buildings. Fee. F, Sp.

BLD 210—Renovate Energy Efficient Green Home(5,9)

Prerequisites: BLD 101

Study of the aspects of building technology as applied to rehabilitation; knowledge and application of building codes; preparation and reading of plans. Skill development in carpentry, masonry, electrical and plumbing. Students will rehabilitate an existing structure. May be repeated once for credit. Fee.

BLD 215—Pre-Plan Energy Efficient Green Home (3,3)

All steps needed to prepare for the construction of a new home. Topics include permits, site selection, site layout, surveys, blueprints, specification writing and proposal reviews for the following: excavating, concrete, carpentry, plumbing, HVAC, electrical, masonry, insulation, drywall, cabinetry, floor coverings, siding, and overall planning. S.

BLD 220—Build Energy Efficient Green Home I (6,10)

Prerequisite: BLD 101

Advanced aspects of construction technology as applied to new residential construction; knowledge and application of building codes; material estimation and planning. Advanced skill development in the field of carpentry (rough framing). The class will frame the shell of a new home. May be repeated once for credit. F.

BLD 221—Build Energy Efficient Green Home II (6,10)

Prerequisite: BLD 210 or 220

Continuation of BLD 220 or BLD 210 with an emphasis on finish carpentry, electrical, plumbing, and insulation. The class will complete the construction on a new home, if BLD 220 ran the previous semester. The class will complete the rehabilitation of an existing home if BLD 210 ran the previous semester. Fee. Sp.

BLD 299—Topics in Building Construction (Variable,1-10)

A class, seminar, or lab investigating a special topic or issue in building construction. Topics may not be offered more than two times in three years. This course may be repeated once for credit.

Business

BUS 102—Introduction to Hospitality (3,3)
Prerequisites: BUS 108

This course is designed to give the student a background of the scope, organizational structure, impact on the economy and tourism, and employment opportunities to aid the student in understanding the business concepts within the hospitality industry. Student will also learn the basic food service handling principles required to take the ServeSafe Food Handler Exam; to include basic food safety, personal hygiene, cross-contamination and allergens, time and temperature, and cleaning and sanitation. While giving students the fundamental insight; emphasis will be on organizational culture, and human resource management, hospitality law and liability, customer service, room operations, and dining room, food service operations, and food handling skills. Strong attention will be given to planning and time management, cost control, and customer satisfaction.

BUS 105—Business Mathematics (3,3)
Prerequisite: MTH 095 or exempt by Placement test.

Math skills are used in solving a variety of business transactions including such topics as banking and credit card transactions, markups and markdowns, payroll, structure of promissory notes, simple and compound interest, annuities, sinking funds, stocks and bonds, inventory, trade and cash discounts, depreciation, life, fire and auto insurance, sales, excise and property tax, cost of home ownership, etc.

BUS 108—Introduction to Business (3,3)
A college transfer course; consult the C&CSC for more details.

This is a basic course designed to give the student a background of the principles, policies, problems and functions to aid the student in understanding business concepts. Business is viewed as a total system with an orientation to the general relationships which exist among the various subsystems. These subsystems are viewed as economics, types of ownership, organization, management, finance, marketing, personnel, controls, legal and regulatory laws.

BUS 110—Introduction to Event Planning (3,3)

This course is designed to provide students with the fundamentals of the multifaceted events industry. Students will be introduced to the role events play in meeting business, educational, and social goals and objectives; the different types of events for both large and small venues, to include international and green events; and job opportunities in the industry. Emphasis will also be placed on providing students with knowledge on the use of technology, marketing and promotional planning, establishing budgets, securing sponsors, exhibitors, and speakers; as well as additional trends within the industry.

BUS 111—Fashion Merchandising I (3,3)

This course introduces the student to the fundamentals of retail fashion merchandising including fashion history, textiles, manufacturing/distribution, inventory, management, budgeting, and visual display.

BUS 112—Fashion Merchandising II (3,3)
Prerequisite: BUS 111

This course provides an in-depth understanding of the fundamentals of retail fashion and non-fashion merchandising. Course instruction also addresses current career opportunities.

BUS 113—Intro Engine Tear-Down & Build-Up (5,5)

This course is a knowledge based "hands on" introduction to the maintenance and repair of diesel engines and trucks. Competency, skill, and knowledge is taught and measured in the areas of assembly, disassembly, safety practices, precision measurement and engine theory, engine teardown, and engine build-up. This is level 1 of 6.

BUS 114 — Inspect and Check Engine & Vehicle (5,5)
Prerequisite: BUS 113

This course is also knowledge based "hands on" continuations of "how to" perform maintenance and repair of diesel engines and trucks. Competency, skill, and knowledge is taught and measured in the areas of safety practices, inspection, assembly, disassembly, precision measurement and engine theory, engine teardown, and engine build-up. This is Level 2 of 6.

BUS 115—Precision Measurement & Tools (5,5)
Prerequisite: BUS 114

This course is a knowledge based "hands on" introduction to the maintenance and repair of diesel engines and trucks. Competency, skill, and knowledge is taught and measured in the areas of assembly, disassembly, safety practices, precision measurement and engine theory, engine teardown, and engine build-up. This is Level 3 of 6.

BUS 116—Preventive Maintenance (5,5)

This course is also knowledge based, and "hands on". This course continues with the "how to" perform preventative maintenance, inspect, and replace as needed. Competencies, skills, and knowledge continue to be taught and measured. This is a Level 4 of 6.

BUS 117—Performance Diagnostic Test (3,3)

This course is at Level 5 of 6. The course is also knowledge based and "hands on". This course continues with the "how to" and is predominately engine and vehicle diagnostics. Competencies, skills, and knowledge continue to be taught and measured.

BUS 118—Internship (3,3)

This course is an internship or Co-Op for the Navistar diesel students who are entering the final semester and are ready for coursework at Level 6 of 6. Students will gain on-the-job training in a business for a minimum of 15 hours a week. This internship is designed to provide entry level experience and also match their career objectives. Additionally, weekly all students will meet for an instructor led seminar where relevant topics will be reinforced and job experience sharing will occur.

BUS 130—Starting Your Own Small Business (4,4)

This course is designed to provide the fundamentals of organization and operation of a small business with special attention given to goal setting, market identification and financial planning. This course will introduce students to managerial and marketing principles, organizational planning, marketing and accounting principles, and business plan development.

BUS 136—Building Your Business Plan (3,3)

This course is designed to put together the Business Plan into three distinct sections to consist of the introduction of the Business Plan, the body of the Business Plan, and the supporting documents of the Business Plan. This will entail writing the narrative which will include the title page, table of contents, vision and mission, business overview, product or service strategy, marketing analysis, marketing plan, completing the financial plan and assembling the plan with supporting documents.

BUS 137—International Business Practice Firm (4,6)

Using an international business model, the students work as team members in a simulated business firm in a state-of-the-art facility. The students have the opportunity to perform various business functions (i.e. purchasing, accounting, marketing, human resources) as the firm transacts business with students in other simulated companies in the U.S. and in other countries. Students are involved in decision-making, critical thinking, and team activities.

BUS 160—Front Office Operations (3,3)

This course is designed to provide students with a basic understanding of the font office operations and customer service skills needed in the hospitality industry. Students will learn the procedures involved in handling guest reservations to include the monitoring, verification, and/or changing of reservations at the guest's request; and concierge services. While providing the students with the fundamental insights; emphasis will also be placed on quality customer service and effective communication skills, guest relations, front office organizational structure, understanding required documents, standard operation procedures, planning & organizing of workflow.

BUS 203—Principles of Marketing (3,3)

A college transfer course; consult the C&CSC for more details.

Surveys the field of marketing and is designed to give a basic understanding of the principles of marketing and the operation of our marketing system. Included is a study of the buying motives, habits and demands of consumers, marketing research, product development, channels of distribution, franchising, marketing functions and policies, product costing and pricing and promotional techniques.

BUS 204—Principles of Retailing (3,3)

Prerequisite: BUS 108, or 203, or consent of instructor.

An introduction to the field of retailing is presented. The underlying principles of retail institutions, store location, organization, retail advertising and sales promotion, buying and merchandising techniques and the career opportunities available in retailing and retail management are emphasized.

BUS 206—Direct Marketing Methods (3,3)

Prerequisite: BUS 203 or BUS 211 Recommended

This course is designed to teach practical, how-to procedures for directing ad messages through newspapers, magazines, direct mail, television, radio, and telephone, in a manner which secures direct response from present or prospective customers. This course also provides practical techniques for creating and producing direct marketing packages, including copy strategies, format and layout. It offers guidance on the set-up and management of direct marketing operations and serves as a framework for using marketing on the Internet. Sample topics include E-commerce, online marketing planning, pricing, quality improvement, generating traffic, and customer support as they relate to technology.

BUS 210—Principles of Sales (3,3)

Advantages and disadvantages of being a salesperson are discussed with various opportunities available to those students interested in selling as a career possibility. Man's physical and psychological needs used in influencing the attitudes and considerations of the consumer are projected into the selling process. The presentation of elements important to selling culminate with the preparation of a complete sales manual used as the basis for the student's demonstration of sales techniques.

BUS 211—Principles of Advertising (3,3)

A one-semester course designed to develop a basic understanding of advertising-its functions and uses. Consumer behavior, media, copy, layout, production, campaigns, the economic effects and social and ethical problems of advertising are studied.

BUS 220—Principles of Management (3,3)
Prerequisite: BUS 108 or consent of instructor.

As an introductory course to the general field of management, emphasis is given to the process of management (planning, organizing, staffing, actuating and control). The behavioral approach, utilizing case studies, current problems and discussions is used to develop understandings of management problems, principles and resources.

BUS 221—Human Relations in Organizations (3,3)
Prerequisite: PSY 101

This course is designed to provide students with a wide range of interpersonal skills needed in today's workplace. The foundation for contemporary human relations will include seven themes: Communication, Self-Awareness, Self-Acceptance, Motivation, Trust, Self-Disclosure, and Conflict Management.

BUS 224—Supervisory Management (3,3)

The problems of the supervisor are discussed within the framework of a hypothetical, but lifelike organization. Management and behavioral concepts are combined to provide pragmatic approaches to the solutions of management problems.

BUS 227—Human Resources Administration (3,3)
Prerequisite: BUS 220 or consent of instructor or advisor.

The objectives, history and foundation of personnel management as well as motivation and supervision are studied; also includes study of personnel selection, training and placement; union-management relations; personnel research; wage and salary administration. A behavioral approach to personnel is emphasized.

BUS 245—Real Estate Principles (6,6)

This course is designed to meet the 75-hour Broker Pre-Licensing State of Illinois requirement. The course covers topics specific to real estate principles, Illinois license, agency, state, and federal law; real property; structure of agency; seller relationships and counseling; buyer relationship and counseling; marketing & advertising; marketing analysis & appraisal; technology, financing; real estate calculations; contract knowledge; title transfer; leasing and property management; independent contractor/employee agreement; and occupational disciplines. The course mixes presentation of facts, concepts, and key terms. Real-world scenarios, role-playing, and case analysis are used to enhance understanding of the topics. Opportunities for assessments are provided to help students apply their new knowledge and understanding. Minimum of 72% required for passing.

BUS 246—Advanced Real Estate Principles (3,3)
Prerequisites: BUS 245 or consent of instructor

This course meets the state requirement of 45 hours broker post-license education. The course consists of three modules covering applied broker principles, risk management/discipline and transactional issues. Each module includes an independent exam.

BUS 247—Brokerage Administration (3,3)
Prerequisites: BUS 246 or consent of instructor

This course fulfills the 45-hour Managing Broker Pre-License requirement. The course covers topics specific to the Illinois Real Estate Brokers and Salesmen License Act; license law; real property; risk-management issues, agency issues, seller counseling; buyer counseling; fiduciary relationship of broker with client/broker-salesperson and broker to broker relationship; marketing analysis; financing, contracts and conveyances/completion of contract form; closing the transaction; and performance to earn a commission.

BUS 253—Marketing Management Internship I (3, arranged)
Prerequisite: Consent of instructor, BUS 108

For students in marketing, business management and other business-related curricula. Students work a minimum of 15 hours weekly in an approved business establishment earning credits for satisfactory achievement of chosen job objectives. The college will assist the student in finding and maintaining a coordinator approved Marketing work-site. Class meets with instructor coordinator each week for a one-hour seminar session designed to aid the executive-bound student in defining and clarifying out-of-class work experiences. Topics are intended to personally aid student in planning and handling career advancement effectively. Fee.

BUS 254—Marketing Management Internship II (3, arranged)
Prerequisite: Consent of instructor, BUS 108

Student receives Internship Certificate upon completion of both semesters. Fee.

BUS 255—Real Estate Investment (3, 3)
Prerequisites: BUS 245 or consent of the Instructor.

This course is designed to introduce students to fundamental concepts of real estate investment and finance and how these concepts can be applied to the careers in the real estate industry. Such concepts include investing, development financing, appraising, consulting, managing real estate portfolios, leasing, managing property, analyzing site locations, managing corporate real estate, personal investment and financing decisions.

BUS 260—Total Quality Management (3,3)

This course is designed to provide students with the essentials of Total Quality Management, including the history, theory, and the applications. Examples from well-known companies and their experiences with TQM are included. Also included will be an examination of the traditional roles of management versus the management practices of TQM, i.e., paradigm shift. F, Sp, S.

BUS 271—Principles of Finance (3,3)

A college transfer course; consult the C&CSC for more details.

A study of the major areas of the science of finance to include corporate finance, monetary and fiscal policy and money and capital markers. This course provides students with an understanding of the financial mechanisms in the economy and the roles played by private corporations, the Federal Reserve System and the public sector in shaping those structures and functions.

BUS 285—Operations Management (3,3)

Prerequisites: BUS 108

This course will provide students with a broad understanding and knowledge of several operations management concepts. Such concepts include (but are not limited to) operations strategy, process design, forecasting, inventory management, scheduling, and quality management. Emphasis will be placed on the application of these concepts to actual business situations.

BUS 296—Topics in Business (Variable,1-3)

This course addresses the rapid changes in the Business field (BUS) by presenting leading edge subjects. The subject matter or topics will vary depending on changes in the industry.

Business Accounting: see Accounting
Business Data Processing: see Management Information Systems
Business Medical Records: see Medical Records
Business Shorthand, Business Typewriting, Secretarial and Technology: see Office Administration & Technology

Business Law

BLW 201—Introduction to Business Law (3,3)

A college transfer course; consult the C&CSC for more details.

Introduction to the legal system as it affects business activity. Areas of concentration include formation and nature of contacts, the agency relationships and the Uniform Commercial Code Law of Sales and Commercial Paper. F,Sp. F, Sp, S online

BLW 202—Intermediate Business Law (3,3)

A college transfer course; consult the C&CSC for more details.

Forms of business organization with emphasis on the formation, operations and dissolution of partnerships and corporations. Secured transactions as governed by the Uniform Commercial Code. Basic laws of real and personal property, estates and trusts, bailments and insurance. F, Sp online.

BLW 203—Legal Environment of Business (3,3)

A college transfer course; consult the C&CSC for more details.

A study of the legal and social environment of business, with emphasis on business ethics and corporate social responsibilities. Areas of concentration include governmental regulation of business, securities law, consumer protection law, labor law, and employment law. Sp, S online.

BLW 204—Cyberlaw, Legal Issues in Cyberspace (3,3)

This is an introduction to the field of Cyberlaw. Areas of concentration include Introduction to Cyberlaw (including cyberlaw technology and jurisdiction). Intellectual Property Issues in Cyberspace (including trademarks and copyrights), and Social Issues in Cyberspace (including privacy, obscenity, defamation, and information security). F online.

Cannabis

CNB 101—Introduction to Cannabis (2,2)

This course will discuss the basic life cycle of the plant/plant properties and the natural origins and evolution of cannabis. Course will also include topics related to the influence of cannabis on commercial, medical, and cultural practices.

CNB 102—Dispensary Operations (2,2)

This course will cover industry related logistics including transportation, inventory, packaging, warehousing, materials handling, ordering, safety protocols, facility operations and point-of-sale system.

CNB 103—Cannabis Law (2,2)

This course will discuss in detail the current policy, legal responsibilities and ethical issues related to the medicinal and recreational cannabis industries.

CNB 110—Science of Cannabis (3,4)

Prerequisites: CNB 103 with a C or better

The course will cover the history of cannabis, plant structure, growth, development, sex determination, and ecological interactions. In addition to plant biology, the course will discuss the chemical constituents of cannabis, its biochemical effects as well as production, processing and sustainability. Students will review the various types of cannabis, variety of uses, industrial and medicinal products derived from the plant. The course will also discuss active constituents of the cannabis plant and their effects on an individual's health. This course contains a lab component utilizing hemp plants to study methods of growth and cultivation.

Chemistry

CHM 099—Math Survival Skills for Science (1,1)

Prerequisite: MTH 095 or qualifying score on the Placement test.

Arithmetical and algebraic operations as used in general chemistry, physics and health-related fields. Problem solving techniques will be emphasized for a variety of applications in the science and health related fields; such as dimensional analysis, measurement conversions and stoichiometric calculations. Basic atomic structure and nomenclature will be introduced. May be taken concurrent with CHM 111. If a student is repeating CHM 111 or 113, it is strongly recommended to co-enroll in this course.

CHM 101—Chemistry and Society (IAI: P 1903) (3,3)

Prerequisite: MTH 095 or qualifying score on the Placement test.

An introductory chemistry course designed for non-science majors. This course introduces the concepts of chemistry as they relate to everyday life. Topics will include but not be limited to air and water quality, energy resources and nutrition. The course will also emphasize an individual's ability to assess risk.

CHM 111—Introductory Chemistry I (IAI: CHM 911) (IAI: P 1902L) (4,6)

A college transfer course; consult the C&CSC for more details.

Prerequisite: MTH 095 or qualifying score on Placement test.

Covers fundamentals of general chemistry less quantitatively than CHM 113. Emphasis on elements, compounds, chemical reactions, stoichiometry, atomic structure, the periodic table, chemical bonding, states of matter, acids and bases, nuclear reactions and elementary organic chemistry. For non-science majors. Laboratory included. Fee. F, Sp, S.

CHM 113—General Chemistry I (IAI: CHM 911) (IAI: P1902L) (5,7)

A college transfer course; consult the C&CSC for more details.

Prerequisite: MTH 100 or qualifying score on Placement test and CHM 111 or high school chemistry

Introduction to basic principles of general chemistry with emphasis on stoichiometry, thermochemistry, atomic structure, chemical bonding, molecular structure, properties of gases, states of matter, and solutions. For science and engineering majors. Laboratory included. Fee. F, Sp, S.

CHM 114—General Chemistry II (IAI: CHM 912) (5,7)
A college transfer course; consult the C&CSC for more details.
Prerequisite: CHM 113 with grade of "C" or above.

Continuation of CHM 113. Studies rates of chemical reactions, chemical equilibria, acid-base reactions, solubility equilibria, elementary qualitative analysis, free energy and entropy, electrochemistry, nuclear chemistry and introductory descriptive chemistry. Laboratory included. Fee. Sp, S.

CHM 203—Organic Chemistry I (IAI: CHM 913) (5,7)
A college transfer course; consult the C&CSC for more details.
Prerequisite: CHM 114 with grade of "C" or above.

Preparation and study of representative compounds of aliphatic and aromatic series including organic synthesis, reaction mechanisms, and structural theory. Laboratory included. Fee. F.

CHM 204—Organic Chemistry II (IAI: CHM 914)(5,7)
A college transfer course; consult the C&CSC for more details.
Prerequisite: CHM 203 with grade of "C" or above.

Continuation of CHM 203. The course will focus on interpretation of NMR, IR and mass spectra, heterocyclic compounds, polymers, carbohydrates and proteins. Laboratory included. Fee. Sp.

CHM 205—Intro to Organic and Biochemistry (5,6)
A college transfer course; consult the C&CSC for more details.
Prerequisite: CHM 111 or 113 with grade of "C" or better.

An overview of the properties, reactions and nomenclature of organic compounds. The role of these molecules will be studied in relationship to biochemistry and the various metabolic pathways. Primarily for Health Professions Majors. Laboratory included. Fee. Sp, S.

Child Development

CHD 100—Child, Family & Community (3,3)

This course focuses in the diverse needs of the child within the context of family, school and community. The course will examine the interplay of diverse cultures, lifestyles, abilities, language and communication with the role of early childhood environment and other community institutions. Students will gain an understanding of their professional role in supporting evidence-based practices that strengthen respectful, collaborative family/child partnerships through effective use of community and family resources.

CHD 104—Child Growth and Development (3,3)
A college transfer course; consult the C&CSC for more details.

A study of the physical, psychological, social and intellectual growth of the child with emphasis on prenatal, infancy, early childhood, latency and adolescence periods. Theory and practice will be combined to provide a varied experience.

CHD 105—Introduction to Early Childhood Education (3,3)

An overview of the methods and procedures used in early childhood programs, dealing with curriculum, program planning, role of the teacher and teacher aide, use of materials and equipment, techniques of classroom management, and meeting the needs of individual children.

CHD 106—Creative Activities for Young Child (3,3)

An analysis of methods for integrating art, recreation and creative dramatics into the early childhood education curriculum. Methods for teaching skills and developing appreciation of the fine arts.

CHD 108—Child Health, Safety and Nutrition (3,3)

This course examines principles and practices of health, safety and nutrition for the young child, and explores their effect upon observable behaviors and areas of child development. Methods and materials for proper nutrition, feeding habits, clothing habits, sound health and hygiene habits, identification of childhood diseases and preventive techniques, exploration of positive mental health strategies, and identification of a safe and challenging learning and play environment are included. This course also leads to First Aid and CPR certification.

CHD 202—Language Arts for Young Children (3,3)

Overview of language skills and activities to encourage language development for young children in areas of listening, speaking, prewriting and prereading. Children's literature is introduced. Recent trends and practice are presented. Practical application for using language skills with children is provided.

CHD 203—The Exceptional Child (3,3)
A college transfer course; consult the C&CSC for more details.

This course provides an overview of children with exceptional cognitive, physical, social and emotional characteristics; analyzes the developmental and educational needs imposed by exceptionality; identifies intervention strategies, methods and programs designed to meet their needs. Current issues, including educational implications related to special needs children, birth through age 21, and their families are explored. Study of applicable Federal and State laws and requirements.

CHD 205—Multicultural Education (3,3)
A college transfer course; consult C&CSC for more details.

Explores the social, economic, legal and psychological factors impacting individuals who are culturally different from mainstream society, as these influence the educational process and system.

CHD 207—Infant and Toddler Care (3,3)

Studies patterns of growth and development of children from birth to age three; examines needs of infants and toddlers in various child care settings; develops skills in managing a safe environment and planning stimulating age-appropriate activities.

CHD 208—Early Childhood Curriculum (3,3)

An analysis of methods, materials and program planning in a child care setting. Exploring and creating curricular projects, appropriate to a child care setting. Classroom management and techniques for controlling, instructing and socializing with the small child.

CHD 209—Guidance of the Young Child (3,3)

A study of classroom management techniques and principles. Addresses behavior problems, discipline, individual differences, communicating and listening skills, and the building of a positive self-concept.

CHD 210—Observation and Assessment of Young Children (3,3)

This course is designed to demonstrate to the student how to complete authentic, alternative, classroom-based assessment on young children and how to appropriately use standardized test information. The course will further provide the student with the knowledge and skills to interpret and use the information gained to plan curriculum that is responsive to and supportive of children's learning and development. Students learn about and explore a variety of age, individually, linguistically and culturally appropriate formal and informal assessments to gather and share information on each child's skills, abilities, interests and needs, birth through age 8.

CHD 211—Internship I (3,11)
Prerequisite: 9 credit hours in child development courses.

One hundred forty-four hours of supervised teacher aide work experience in a local school; plus 16 hours of seminar pre-equivalent work coordinated with students in other internship settings. The problems, skills, etc., of teacher aides are explored. One class hour and nine work experience hours per week. Proof of a negative TB test and negative fingerprinting test must be submitted on the first day of class.

CHD 212—Internship II (3,11)
Prerequisite: 9 credit hours in child development courses.

One hundred forty-four hours of supervised teacher aide work experience in a local school, plus 16 hours of seminar work coordinated with students in other internship settings. The problems, skills, etc., of teacher aides are explored. One class hour and nine work experience hours per week. Proof of a negative TB test and negative fingerprinting test must be submitted on the first day of class.

CHD 213—Math For The Young Child (3,3)
Prerequisite: MTH 093

This course is an exploration of early math content, research and pedagogy for individuals planning to teach children from birth to second grade. Students will learn what mathematics looks like during the early years through observation and assessment. This course will introduce developmentally appropriate strategies to recognize and promote a child's emerging mathematical understanding through hands on discovery and play. Students will review basic mathematical concepts and terminology including the following concepts: numbers, measurement, shapes, patterns, spatial relations and analysis of data. Field observations within early childhood settings are required in this course.

CHD 215—Administration and Supervision of Child Care Centers (3,3)

This course is designed for students in child care as well as experienced teachers in this area who wish to improve their skills in administering a child care facility. Program planning, principles of supervision, use of staff, facilities management and program evaluation are stressed. Community resources and in-service training of personnel are also included.

Communication

COM 105—Mass Communication (IAI: MC 911) (3,3)
A college transfer course; consult the C&CSC for more details.
Provides a survey of the role and function, historical perspective, and responsibilities of mass communication industries and professions in a global environment. Emphasis on the role of media in American society and the social importance of mass communication on contemporary culture. Stresses critical skills in listening, reading, thinking, and writing. F.

COM 106—Interpersonal Communication (3,3)
A college transfer course; consult the C&CSC for more details.
Focuses on face to face interaction through experience, theory, and skills application. Communication in family, work and social contexts will be examined. Includes verbal, non-verbal, listening, feedback and conflict management. Sp.

COM 107—Intercultural Communication (3,3)
A college transfer course; consult the C&CSC for more details.
Examination of values, beliefs, customs and attitudes that affect intercultural communication. Identifies factors that impede effective intercultural understanding and practical approaches to communicating more effectively. Includes both verbal and nonverbal communication. F.

COM 200—Introduction to Digital Audio Production: (IAI: MC915) (3,4)
Introduction to the terminology, techniques, and equipment of digital audio production. Students will learn the principles of scriptwriting, studio and field audio production, and sound design. Fee. F.

COM 201—Introduction to Digital Video Production (3,4)
A college transfer course; consult the C&CSC for more details.
Introduction to the creative and technical skills necessary to becoming an effective visual storyteller. Students will learn to communicate and creatively express themselves through new and emerging technologies while also becoming more critical digital media consumers and producers. Emphasizes pre-production and conceptualizing skills in addition to practical production techniques. Fee. F.

COM 202—Advanced Digital Video Production (3,4)
A college transfer course; consult the C&CSC for more details.
Prerequisite: or consent of instructor.
Provides advanced understanding and more in-depth practical application of digital video production techniques as introduced in COM 201. Emphasis will be on media production techniques and digital editing, as students work on producing projects across varied platforms. Fee. Sp.

COM 206— Practicum in Media (3, 4)
Prerequisites: COM 201, No online enrollment; signature of instructor is required to enroll.
In order to increase proficiency in the practical application of digital storytelling techniques, this course enables students involved in college media to gain credit for practical work in video, audio, photography, social networks, and mobile computing projects. Fee. Sp.

COM 209—Writing Across the Media (IAI: MC917) (3,3)
Development of the basic principles of news gathering, interviewing, writing and publishing for various types of media productions. Emphasizes writing fundamentals while encouraging students to express themselves in different forms of media writing from scripts to blogs. Fee. Sp.

COM 220—Digital and Social Media Marketing (3,4)
Explores the role of social media in contemporary marketing campaigns. Provides an understanding of target audience analysis and the practical application of social media technologies including podcasts, blogs, social networks and mobile computing. Fee. Sp.

Community Health Worker

CHW 100–Health and the Public (3,3)
In this course, students will examine both historic and contemporary public health stories to begin to understand the contexts, systems, professions, tools, and skills associated with the public health enterprise. Students will learn basic public health principles and will recognize an array of factors that shape both the health of individuals and populations.

CHW 101–Introduction to Community Health (3,3)
This course provides an overview of the health care system and community health work. Students will gain an understanding of the role of community health workers, the scope of their function and services, and how they interact with other health personnel and resources. It includes principles of effective verbal and non-verbal communication to assist students in encouraging positive interaction.

CHW 105–Assessing Community Resources (3,3)
This course will provide students with a brief overview of public health, its services and core functions in the protection and promotion of health and prevention of disease and injury. It will include selected international, national and local health organizations that influence the public health.

CHW 109–Mental Health and Substance Abuse (3,3)

This course will provide an overview of mental health stressors inherent to daily life and concerns of clients, families, communities and society at large. The course covers the most frequently identified disorders, such as depression, anxiety, phobias, and others. Include basic concepts of substance abuse, and classification. Description of the most used drugs, appearance, routes of administration, short and long terms effects signs of abuse. Use and abuse of prescription medications.

CHW 110–Community Health Development (3,3)

This course is designed to help students develop self, client and community capacities to protect and improve health. Emphasis is on building individual and community participation in health through information sharing, informal counseling social support, health skills instruction, community-wide assessments and promoting changes in negative behaviors.

CHW 115–Nutrition and Disease (3,3)

This course will provide students with the information necessary to promote healthy eating styles and proper food preparation for all age groups. This course gives the students information about identifying the relationship of diet to disease. Attention is given to the treatment of disease by diet modification.

CHW 118–Com, Environ, Occup. Disease (3,3)

This course will provide students with an overview of communicable, environmental, and occupational disease. It will provide the student with information on prevention, referral sources and treatment.

CHW 120–Disease and Epidemics (3,3)

This course introduces basic principles surrounding the distribution of disease and epidemics in human populations. Through lectures and field exercises, students will learn fundamentals of epidemiology, the basic science of public health.

CHW 125–Public Health and Global Societies (3,3)

This course introduces students to global public health through an exploration of global health challenges from the local population to global society perspectives.

CHW 200–Case Management (3,3)

This course is designed to provide the student with the basic case management skills. The focus of this course is on the main components of case management, outreach screening intake, referrals and follow-up. Students will learn about home visits and, universal precautions.

CHW 205–Parenting Skills (3,3)

This course will focus on providing students with the most-up-to-date information and skills on parenting, including the concept and application of anticipatory guidance. The student will be able to help clients identify the importance of their role as parents in the health of their children and their family.

CHW 215–Intro. To Community Health Research(3,3)

The goal of this course is to develop basic "research literacy" and/or scientific literacy and to empower people as research team members. This course will use a workshop model where students work in teams, conceptualizing, designing questionnaires, conducting, analyzing data, and disseminating a small-scale research study.

CHW 220–Fieldwork I (2,3)

This course is an introduction designed for entry-level workers in the health care field. This course will include field experience and basic skills for working effectively in working effectively with co-worker and agencies, and awareness of basic research and interviewing skills. It will provide basic skills in performing CPR and First Aid.

CHW 230–CHW Leadership (3,3)

This course builds on the leadership skills taught in CHW 110 by blending leadership theory and practice. It empowers CHWs to identify their own leadership styles by exploring models such as service leadership, visionary leadership, transactional leadership and transformative leadership etc. Provided will be opportunities to enact the various leadership styles discussed in class through role plays and other interactive exercises. Students will be able to recognize their own leadership capacity and learn how to use it to improve themselves, their communities and the CHW movement.

CHW 235–Intro to Maternal/Child Health (3,3)

This overview of maternal and child health allows students to gain an understanding of the various stages of human development and the difference and recognizing their role in working with the different age groups. This course will provide students with information on the course of pregnancy and newborn care.

CHW 250–Contact Tracing (2,3)

This course provides an overview of contact tracing investigations to meet the demand of the growing public health workforce for Contact Tracing Investigators. The course will provide training on the basics of disease transmission, the principles behind case isolation and quarantine of contacts as a public health measure, the ethics around public health data collection and use, risk communication, cultural sensitivity, health equity and the basics of data collection for COVID-19 and other communicable diseases where contact tracers are needed.

Computer-Aided Design

CAD 100—Introduction to CADD (1.5,2)

Students will analyze the field of Computer Aided Design and Drafting (CADD). Discussions to include uses and advantages/disadvantages of CADD. Midterm project includes a pro/con debate, or CADD reporting teams. Students are introduced to the AutoCAD 2013 package on PCS during lab portion of course and are also introduced to the World Wide Web. Students will complete a series of structured exercises, followed by a student project. Fee. F, Sp.

CAD 101—Basic Drawing and Design (2,3)

Prerequisites: CAD 100

Students will learn basic drawing and design techniques using Computer-Aided Design and Drafting software (AutoCAD 2013). Discussions will include graphics as a language, applied geometry, views, and basic dimensioning. Students will become familiar with the new user interface and gain proficiency in the use of CAD as a problem-solving tool. A student project will complete the course. Fee.

CAD 105—Special Applications (4,7)

Prerequisite: CAD 101 with a grade of "C" or better

Students will study and learn unique techniques, using Computer-Aided Design and Drafting software (AutoCAD 2013), which are used in special fields of drafting and design. These special areas include electricity and electronics, jigs and fixtures, structural drafting, pipe drawings and surface developments/intersections. Discussions will include new techniques, applications and problem solving ideas. Students will gain proficiency with the tool, and develop additional skills in its usage. Fee.

CAD 109—Architectural Design and Drafting I (4,7)

Prerequisite: CAD 101 and DRF 101 or instructor's approval.

This course is one of two in a series designed to help students learn and communicate basic principles of architectural design and construction systems. Besides the basics of residential design and drafting (on AutoCAD 2013), topics include today's design issues (such as environmental design factors), access for people with disabilities, and disaster prevention design. In addition to structural systems, students also learn about the many support services required in the field of architectural design and construction. Fee.

CAD 111—Mechanical Design I (4,7)

Prerequisite: CAD 105

This is the first of a series of three courses centered around the discipline of mechanical engineering technology. In addition to strengthening drawing and design skills, emphasis is placed upon threaded and other types of fasteners, manufacturing materials, and forming processes. Students will gain additional proficiency in the use of symbol libraries, and advanced dimensioning. AutoCAD Revit is used extensively, and discussions will include advanced editing techniques and applications. Fee.

CAD 209—Architectural Applications II (4,7)

Prerequisites: CAD 109

This course is a continuation of CAD 109. The students will focus on advanced techniques to reproduce 3-D drawings for residential and commercial buildings. There will be an introduction to perspective views, roof design and shading. Fee.

CAD 212—Mechanical Design II (4,7)

Prerequisite: CAD 111

This is the second of a series of three courses centered around the discipline of mechanical engineering technology. In additional to strengthening drawing and design skills, emphasis is placed upon detail and assembly drawings, pictorial drawings, geometric dimensioning and tolerancing, drawings for numerical control, welding drawings, and the process of conceptual design. Students will gain additional proficiency in the use of AutoCAD Revit as a design and drafting tool. Fee.

CAD 214—Mechanical Design III (4,7)

Prerequisite: CAD 212

This is the third of a series of three courses centered around the discipline of mechanical engineering technology. In additional to further strengthening drawing and design skills, emphasis is placed upon power transmission systems, including belts, gears and chains, couplings, bearings and seals, and cams, linkages, and actuators. Students will learn to maximize efficiency in the use of AutoCAD Inventor as a design and drafting tool. Fee.

CAD 260—Solid Modeling (4,7)

Prerequisite: CAD 214

Students will study and learn advanced conceptual and design techniques, using the integrated tool known as Mechanical Desktop. In addition to AutoCAD 2013, this package includes Autosurf (for surface modeling), and AutoCAD Designer, for 3-D solid and assembly modeling. Students learn how to use constraints and parametrics, and become familiar with mass properties such as mass, moments of inertia, and radii of gyration. Group projects allow student to gain a feel for the team concept, and to become familiar with "real world" design techniques. Fee.

CAD 269—Technical Publications (3.5,6)
Prerequisite: CAD 101 and OAT 172

Students will be introduced to and will gain experience in the proper use of integrating technical publishing software with CADD software to generate various "technical" documents including product specification sheets and technical guides. Fee.

CAD 299—Topics in Computer Aided Design (Variable,1-10)

A class, seminar, or lab investigating a special topic or issue in computer aided design. Topics may not be offered more than two times in three years. This course may be repeated once for credit.

Computer Information Sciences

CIS 112—Computer Math (3,3)
Prerequisites: MTH 095 or exempt by Placement test.

This course is designed to teach students problem solving skills needed for information technology professionals as well as mathematical topics. The course will cover the problem-solving, computer logic, algorithm creation and design, modular design, exponents, numbering systems, unit analysis, beginning algebra graphing.

CIS 120—Cisco CCNA 1 (4,5)
Prerequisite: Previous or concurrent enrollment in CIS 180 or the equivalent with a grade of "C" or better.

This course is the first of a three course series in which students are provided with a comprehensive introduction to the networking field an in-depth exposure to fundamentals networking, LAN switching, wireless LANs, basic routing, Cybersecurity, WAN concepts, VPNs, QoS, virtualization and network automation. The course includes security concepts and skills including threat mitigation through LAN security, ACLs and IPsec. Through hands-on lab activities, students will learn how to implement network technologies and troubleshoot common issues. This sequence of courses prepares students to take the Cisco CCNA certification exam.

CIS 125—Cisco CCNA 2 (4,5)
Prerequisite: CIS 120

The Cisco CCNA curriculum helps students prepare for entry-level career opportunities, continuing education and the globally recognized CCNA certification. CCNA teaches networking. This is the second course in a 4 module series. The follow-up classes are: CIS 220 and CIS 225. At the completion of CIS 125 students have the option of taking the Cisco CCENT Certification exam. Lab Fee.

CIS 130—Voice, Data, Video, Fiber Cabling (3,4)

The Cisco Voice, Data, Fiber Optics and Entertainment Cabling class is designed to give students hands-on experience for the physical aspects of voice and data network cabling. The course will focus on industry standards for types of media and cabling, physical and logical networks and signal transmission. Students will develop skills in pulling cable, mounting and wire management, identifying wiring closets, patch panel installation and termination, installation of jacks and testing cables. Fee.

CIS 132—Cisco IT Essentials v5 A+ Certification (4,6)
Prerequisite: MIS 101 or equivalent.

This course covers the fundamentals of computer hardware and software as well as advanced concepts. Students who complete this course will be able to describe the internal components of a computer, assemble a computer system, install an operating system, and troubleshoot using system tools and diagnostic software. Students will also be able to connect to the Internet and share resources in a network environment. New topics included in this version include the Microsoft Windows operating system and mobile devices, while the networking and troubleshooting topics have been expanded. Hands-on lab activities will continue to be an essential element of the course. In support of this, virtual learning tools are integrated into this course. The Virtual Laptop and Virtual Desktop are stand-alone tools designed to supplement classroom learning and provide an interactive hands-on experience in learning environments with limited physical equipment.

Packet Tracer activities will be designed for use with Packet Tracer 5.3.x. The inclusion of Packet Tracer will allow alignment to new CompTIA networking certification objectives without requiring academies to purchase extra networking equipment. Test vouchers available.

CIS 180—Net+ Certification (3,4)
Prerequisite: CIS 132 or equivalent

The Network+ certification ensures that the successful candidate has the important knowledge and skills necessary to manage, maintain, troubleshoot, install, operate and configure basic network infrastructure, describe networking technologies, basic design principles, and adhere to wiring standards and use testing tools. Although not a prerequisite, it is recommended that CompTIA Network+ candidates have experience in network support or administration or adequate academic training, along with a CompTIA A+ certification.

The Network+ certification is an internationally recognized validation of the technical knowledge required of foundation-level IT network practitioners. The CompTIA Network+ and A+ exams can be applied together toward both the Microsoft Certified Systems Administrator (MCSA) and Cisco CCNA Certified programs. Test vouchers available. Fee.

CIS 220—Cisco CCNA 3 (4,5)
Prerequisite: CIS 125

The course is designed to provide a hands-on experience in implementing and configuring complex Cisco multi-protocol routers and switches. The class will include an introduction to multi-area Ethernet networks. Virtual LAN technology, LAN aggregation, wireless LANs, iOS images and licensing, spanning-tree protocols and configuration of Cisco switching devices, along with multi-area protocols. Fee.

CIS 225—Cisco CCNA Test Prep (2,4)
Prerequisite: CIS 120, 125 and 220 with a grade of "C" or better

This course is designed to provide a complete review of all topics covered in Cisco CCNA 1, 2 and 3 in preparation for the CCNA certification exam. Fee.

CIS 228 – Virtualized Computers (3, 4)
Prerequisites: CIS 132, MIS 185, and MIS 190

Introduction to the concepts and implementation of virtual computer. Topics include intro to hypervisors, creating virtual machines, installing Windows and Linux virtual machines, and managing virtual resources.

CIS 296—Topics in Computer Technology (Variable,1-12)

This course addresses the rapid changes in Computer Technology field by presenting leading edge subjects. The subject matter or topics will vary depending on changes in the industry. Fee.

Computer Science

CS 121—Computer Programming (4,5)
A college transfer course; consult the C&CSC for more details.
Prerequisite: MTH 190 with a grade of "C" or above, or qualifying score on the Placement test.

Fundamental principles, concepts, and methods of computing, with emphasis on applications in the physical sciences, engineering and mathematics. Basic problem solving and programming techniques, fundamental algorithms, and data structures. Use of computers in solving engineering and scientific problems. Programming language is C#. Fee. On demand.

CS 221—Computer Science II (4,5)
A college transfer course; consult the C&CSC for more details.
Prerequisite: CS 121 or prior experience in a structured programming language, and MTH 190

This course will cover data types and operations, expressions, control structures, data structures and their representation, recursion, string processing, searching and sorting techniques. Emphasis on structured programming and design. Programming language is C#. Fee. On Demand.

Court Reporting / Verbatim Technology

COR 100—Introduction to Machine Theory (6,5)
Prerequisite: Placement into English 101 on Placement test and typing speed of forty-five words per minute.

Introduction of basic theory compatible with computerized transcription and speedbuilding with live dictation practice and recorded audio available to develop theory competency to a minimum average of 86 percent on theory tests. Course also builds writing speed to a minimum goal of 70 words per minute for five minutes on new material with 95 percent accuracy. Machines may be rented or purchased from College Bookstore. Course may be repeated one time to meet minimum requirements. Fee.

COR 103—Two-Voice 80 (1.5,5)
Prerequisite: COR 100 and admission into the Court Reporting Program

Course will develop speed from 60 to 100 wpm on testimony material. Course strives to build speed to 80 wpm for five minutes on new testimony material with 95 percent accuracy. Course may be repeated up to three times to meet minimum requirements. Fee.

COR 104—Transcription and Punctuation (2,2)
Prerequisite: COR 100 and admission into the Court Reporting Program.

Advanced court reporting transcription course with emphasis on transcribing multi-voice dictation and producing properly formatted and punctuated deposition and trial transcripts; also focuses on increasing transcription speed. Fee.

COR 106—Theory Reinforcement & Speed (1.5,5)
Prerequisite: COR 100 or placement by proficiency test before registration and Admission into the Court Reporting Program

Continuation of basic computer-compatible theory, with audio practice available to develop theory competency to a minimum of 86 percent on theory tests. Speedbuilding on writing principles will be reinforced. Course may be repeated one time to meet minimum requirements. Fee. S online.

COR 108—Computer-Aided Transcription (2,2)
Prerequisite: COR 103

This course provides the theory and applications used in producing computer-aided transcription of stenographic notes using CaseCatalyst software. This course includes litigation support, advanced editing functions, and real-time applications. Fee.

COR 109—Introduction to Jury Charge Dictation 90 (1.5,5)

Prerequisite: COR 100 or placement by proficiency test prior to registration and admission into the Court Reporting Program.

Course will develop speeds to 70 to 110 on jury charge materials. The goal of the course is to develop speed to 90 words per minute for five minutes on new jury charge material all with 95 percent accuracy. Course may be repeated up to 3 times to meet minimum requirements. Fee.

COR 113—Two-Voice 100 (1.5,5)

Prerequisite: COR 103 or placement by proficiency test prior to registration and admission into the Court Reporting Program.

Course will develop speed from 80 to 120 on testimony material. Course strives to build speed to 100 words per minute for five minutes on new testimony material with 95 percent accuracy. Course may be repeated up to 3 times to meet minimum requirements. Fee.

COR 115—Jury Charge 110 (1.5,5)

Prerequisite: COR 109 or placement by proficiency test prior to registration and admission into the Court Reporting Program.

Course will develop speeds to 90 to 130 on jury charge materials. The goal of the course is to develop speed to 110 words per minute for five minutes on new jury charge material all with 95 percent accuracy. Course may be repeated up to 3 times to meet minimum requirements. Fee.

COR 117—Two-Voice 115 (1.5,5)

Prerequisite: COR 113 or placement by proficiency test prior to registration and admission into the Court Reporting Program

Live dictation practice on machine by instructor with recorded audio practice to build writing skills. Course will build speed to between 100 and 130 wpm; course strives to build skills to a minimum of 115 wpm for five minutes of testimony material with 95 percent accuracy. Course may be repeated up to three times to meet minimum requirements. Fee.

COR 119—Jury Charge 130 (1.5,5)

Prerequisite: COR 115 or placement by proficiency test prior to registration and admission into the Court Reporting Program.

Course will develop speeds to 110 to 150 on jury charge materials. The goal of the course is to develop speed to 130 words per minute for five minutes on new jury charge material all with 95 percent accuracy. Course may be repeated up to 3 times to meet minimum requirements. Fee.

COR 121—Two-Voice 130 (1.5,5)

Prerequisite: COR 117 or placement by proficiency test prior to registration

Course will develop speed from 110 to 150 on testimony material. Course strives to build speed to 130 words per minute for five minutes on new testimony material with 95 percent accuracy. Course may be repeated up to 3 times to meet minimum requirements. Fee.

COR 123—Jury Charge 145 (1.5,5)

Prerequisite: COR 119 or placement by proficiency test prior to registration

Course will develop speeds to 130 to 170 on jury charge materials. The goal of the course is to develop speed to 145 words per minute for five minutes on new jury charge material all with 95 percent accuracy. Course may be repeated up to 3 times to meet minimum requirements. Fee.

COR 127—Two-Voice 145 (1.5,5)

Prerequisite: COR 121 or placement by proficiency test prior to registration

Course will develop speed from 130 to 160 wpm on testimony material. Course strives to build speed to 145 words per minute for five minutes on new testimony material with 95 percent accuracy. Course may be repeated up to 3 times to meet minimum requirements. Fee.

COR 131—Jury Charge 160 (1.5,5)

Prerequisite: COR 123 or placement by proficiency test prior to registration

Live dictation practice on machine by instructor with recorded audio practice to build writing skills. Course will develop speeds to 140 to 180 on jury charge materials. The goal of the course is to develop speed to 160 words per minute for five minutes on new jury charge material all with 95 percent accuracy. Course may be repeated up to three times to meet minimum requirements. Fee.

COR 133—Literary 120 (1.5,5)

Prerequisite: COR 123 or placement by proficiency test prior to registration

Course will develop speeds to 100 to 140 on literary materials. The goal of the course is to develop speed to 120 words per minute for five minutes on new literary material all with 95 percent accuracy. Course may be repeated up to three times to meet minimum requirements. Fee.

COR 137—Two-Voice 160 (1.5,5)

Prerequisite: COR 127 or placement by proficiency test prior to registration

Course will develop speed from 140 to 180 wpm on testimony material. Course strives to build speed to 160 words per minute for five minutes on new testimony material with 95 percent accuracy. Course may be repeated up to 3 times to meet minimum requirements. Fee.

COR 139—Jury Charge 175 (1.5,5)

Prerequisite: COR 131 or placement by proficiency test prior to registration

Course will develop speeds to 160 to 200 on jury charge materials. The goal of the course is to develop speed to 175 words per minute for five minutes on new jury charge material all with 95 percent accuracy. Course may be repeated up to 3 times to meet minimum requirements. Fee.

COR 141—Literary 135 (1.5, 5)

Prerequisite: COR 133 or placement by proficiency test prior to registration

Course will develop speeds to 120 to 150 on literary materials. The goal of the course is to develop speed to 135 words per minute for five minutes on new literary material all with 95 percent accuracy. Course may be repeated up to three times to meet minimum requirements. Fee.

COR 171—Legal Terminology and Documents (3,3)

This course covers the legal vocabulary necessary for a career as a court reporter or legal secretary. Emphasis is on civil and criminal procedures as well as client and court documents. Latin and other foreign legal terminology and legal research are also covered.

COR 201—Two-Voice 175 (1.5,5)

Prerequisite: COR 137 or placement by proficiency test prior to registration

Course will develop speed from 160 to 190 wpm on testimony material and 120 to 160 words per minute on medical material. Course strives to build speed to 175 words per minute for five minutes on new testimony material and 140 wpm for three minutes on medical testimony material all with 95 percent accuracy. Course may be repeated up to 3 times to meet minimum requirements. Fee.

COR 203—Jury Charge 190 (1.5,5)

Prerequisite: COR 139 or placement by proficiency test prior to registration

Course will develop speeds to 170 to 210 on jury charge materials. The goal of the course is to develop speed to 190 words per minute for five minutes on new jury charge material all with 95 percent accuracy. Course may be repeated up to three times to meet minimum requirements. Fee.

COR 205—Literary 150 (1.5,5)

Prerequisite: COR 141 or placement by proficiency test prior to registration

Course will develop speeds to 130 to 170 on literary materials. The goal of the course is to develop speed to 150 words per minute for five minutes on new literary material all with 95 percent accuracy. Course may be repeated up to three times to meet minimum requirements. Fee.

COR 206—Court Practicum (1,5)

Prerequisite: Passing one 180 wpm Testimony test at 95 percent accuracy.

This required internship provides 40 hours of on-the-job experience in an assigned general reporting office and/or in official reporting locations under the guidance of experienced reporters. One-hour seminars are held once a week to provide students with guidance to help them prepare for the profession of court reporting.

COR 207—Two-Voice 190 (1.5,5)

Prerequisite: COR 201 or placement by proficiency test prior to registration

Course will develop speed from 170 to 210 wpm on testimony material and 140 to 170 words per minute on medical material. Course strives to build speed to 155 wpm for three minutes on new medical material, and 190 wpm for five minutes on new testimony material, all with 95 percent accuracy. Course may be repeated up to three times to meet minimum requirements. Fee.

COR 208—CSR Prep (1,1)

Prerequisite: COR 139 and COR 201

The course is designed to prepare students to sit for the written portion of the Illinois Certified Shorthand Reporter (CSR) Examination and the Registered Professional Reporter (RPR) Examination and to present the duties and responsibilities of the professional court reporter. Preparation for the CSR and RPR written exams focuses on medical and legal terminology, spelling, vocabulary English grammar and usage, and practical aspects of reporting.

COR 209—Jury Charge 200 (1.5,5)

Prerequisite: COR 203 or placement by proficiency test prior to registration

Course will develop speeds to 180 to 220 on jury charge materials. The goal of the course is to develop speed to 200 words per minute for five minutes on new jury charge material all with 95 percent accuracy. Course may be repeated up to three times to meet minimum requirements. Fee.

COR 213—Literary 165 (1.5,5)

Prerequisite: COR 205 or placement by proficiency test prior to registration

Course will develop speeds to 150 to 180 on literary materials. The goal of the course is to develop speed to 165 words per minute for five minutes on new literary material all with 95% accuracy. Course may be repeated up to three times to meet minimum requirements. Fee.

COR 215—Two-Voice 210 (1.5, 5)

Prerequisite: COR 207 or placement by proficiency test prior to registration

Course will develop speed from 190 to 230 wpm on testimony material and 150 to 190 words per minute on medical material. Course strives to build speed to 170 wpm for three minutes on new medical material, and 210 wpm for five minutes on new testimony material, all with 95 percent accuracy. Course may be repeated up to three times to meet minimum requirements. Fee.

COR 217—Literary 180 (1.5,5)

Prerequisite: COR 213 or placement by proficiency test prior to registration

Course will develop speeds to 165 to 200 on literary materials. The goal of the course is to develop speed to 180 words per minute for five minutes on new literary material all with 95 percent accuracy. Course may be repeated up to three times to meet minimum requirements. Fee.

COR 219—Two-Voice 225 (1.5,5)

Prerequisite: COR 215 or placement by proficiency test prior to registration

Course will develop speed from 210 to 250 wpm on testimony material. Course strives to build speed to 225 wpm for five minutes on new testimony material, all with 95 percent accuracy. Course may be repeated up to three times to meet minimum requirements. Fee.

COR 221—Jury Charge Elective (1.5,5)

Prerequisite: COR 209 or placement by proficiency test prior to registration

Course will develop speeds to 200 to 250 on jury charge materials. The goal of the course is to develop speed to 225 words per minute for five minutes on new jury charge material all with 95 percent accuracy. Course may be repeated up to three times to meet minimum requirements. Fee.

Criminal Justice System

CJS 101—Introduction to the Criminal Justice System (IAI: CRJ 901) (3,3)

Administration of justice in the U.S. with a general overview of the total system; functional areas of the criminal justice system; role of police, courts and corrections; nature of law; interrelation of various components that form the system.

CJS 102—Police Administration (3,3)

A college transfer course; consult the C&CSC for more details.

The identification of constitutional and statutory mandates of a police department and their translation into operational objectives. The construction of an organizational apparatus necessary to accomplish criminal justice goals. The development of a pattern of dynamic practices to ensure an administrative state of maximum output in terms of quality and quantity per unit of taxpayers' financial investment.

CJS 103—Police Operations (3,3)

Line activities of law enforcement agencies. Emphasis on patrol function, prevention of crime, traffic, investigative, juvenile, vice, and other specialized operational units.

CJS 104—Criminology (IAI: CRJ 912) (3,3)

A college transfer course; consult the C&CSC for more details.

Deviant behavior, criminology theories, synthesis, police applications, crime prevention and the phenomenon of crime.

CJS 105—Criminal Law (3,3)

A college transfer course; consult the C&CSC for more details.

Designed for both criminal justice personnel and for students aspiring to a career in criminal justice or a greater knowledge of criminal laws. Current interpretation and applications of local, state and federal laws. This is not to be construed as a basic or theory course in criminal law.

CJS 106—Introduction to Corrections (3,3)

This is an introductory course examining correctional history, processes, structures, and ideologies in the United States.

CJS 171—Security Administration (3,3)

Historical, philosophical and legal framework for security operations. Specific security processes and programs currently and historically used. Protection of governmental and proprietary systems and installations. Programs for factories, railroads, retail stores. Security education and training. Environmental, political, financial, and legal ramifications of security.

CJS 201—Security/Loss Prevention (3,3)

Functional operation of all components of the security industry including legal issues, security systems, community relations, and policies and procedures for loss prevention.

CJS 206—Criminal Investigation (3,3)

Fundamentals of criminal investigation including investigative techniques and procedures. Applications of the philosophical principles of deductive and inductive reasoning to criminal investigation. Emphasis placed on the investigation of major crimes.

CJS 207—Evidence and Criminal Procedure (3,3)

Study of the rules of evidence as they apply to judicial proceedings and administrative hearings relative to the criminal process. Development of the underlying rationale of the rules. Emphasis placed on collection and admissibility of evidence.

CJS 208—Forensic Science (3,3)

Introduction to the theories and practices of scientific techniques as applied to crime detection. The course will include crime scene processing, the potential of physical evidence, the examination and evaluation of evidence and laboratory procedures.

CJS 209—Community Policing (3,3)

Examines issues in community policing with emphasis on the concept of public and community relations as well as police involvement in community problems. Emphasis on police achieving and maintaining public support, human relations and public information.

CJS 210—Traffic Law & Investigation (3,3)

Illinois traffic laws, regulations and enforcement. Administration, development, duties of agencies responsible for highway traffic law enforcement and accident investigation.

CJS 211—Criminal Justice Field Work I (3,11)

Prerequisite: Consent of coordinator, see coordinator semester prior to registration

Field work assignment with a law enforcement agency within the College community area. Ten hours per week at the agency plus one hour per week in seminar session at the College.

CJS 212—Constitutional Law (3,3)

A college transfer course; consult the C&CSC for more details.

Constitutional provisions and principles with emphasis upon the First, Fourth, Fifth, Sixth, Eighth, and Fourteenth amendments as they apply to the criminal justice system.

CJS 213—Police Supervision & Leadership (3,3)

Fundamentals of interpersonal relations and supervising techniques, theories of supervision, morale, employee motivation and discipline, modes of communication, authority and control, work distribution and professional ethics. Focus on practical supervisory problems within a police organization.

CJS 214—International Criminal Justice (3,3)

This course provides an international perspective on crime, causation, treatment, tactics, and theory. A cross-cultural approach will be used which recognizes cultural, religious, ethnic and racial differences and their impact on the Criminal Justice System.

CJS 215—Police Report Writing (3,3)

Enhances the writing skills to prepare a legally sound report which includes elements of probable cause, production of negative evidence, use of legal language of the court system and use of proper grammar and punctuation. Emphasis on the use of research to develop crime patterns and court cases dealing with the sufficiency of police reports.

CJS 220—Topics in Criminal Justice (3,3)

Contemporary critical issues and trends related to crime and society. Analysis and evaluation of recent studies and documents. Methods of implementing research findings. The topic may vary each semester and include areas such as drug abuse, the crisis in corrections, human issues in policing, officer survival, terrorism, organized crime, and careers in criminal justice, etc. This course may be repeated up to a maximum of 9 credit hours.

CJS 222—Criminal Justice Field Work II (3,11)

Prerequisite: Consent of coordinator, see coordinator semester prior to registration

Field work assignment in a juvenile setting, court setting, corrections environment or criminal justice-related agency. Ten hours per week in the agency plus one hour per week in seminar at the College.

CJS 227—State Police Physical Agility ED (3,4)

This course will provide police, court services and corrections recruits with the required skills and education necessary to meet the State of Illinois Police Guidelines for Physical Agility. This is a requirement for all recruits to become a police officer or deputy sheriff in the state of Illinois. Fee.

Digital Art: see Art 130, 140, 141, 230, 251, 260, 265, 270

Drafting

DRF 101—Architectural Drafting I (3,6)

Prerequisite: MTH 091

Graphic language of architecture and building construction. Basic drawing techniques, orthographic projection applied to plans, elevation, freehand sketching, auxiliary projection, sections of construction details, pictorial drawing, sketching, dimensioning, interpretation of design standards, construction systems and residence specifications. Fee. F.

DRF 111—Technical Drafting I (3,6)

Fundamentals of drafting. Course includes use of drafting equipment, orthographic projection, multiview drawings, sectional views, pictorial drawings and auxiliary views. Fee.

Drama (Theatre)

DRM 120—Stagecraft (3,4)
A college transfer course; consult the C&CSC for more details.

This basic hands-on course focuses on learning and experiencing the individual crafts of the theatre (set design and building, make-up, lighting, sound, costumes), and understanding how they work together in production. Students will be experimenting with each of the stage crafts. Fee. Sp.

DRM 151—Theatre Appreciation (IAI: F1907) (3,3)
A general education requirement course; consult the C&CSC for more details.

The focus of this course is the theatre experience as seen through its history, plays, major movements, and conventions. Students will survey genres (comedy, tragedy, farce, melodrama, musical theatre), read select plays, identify what makes theatre different than film, and discuss the theatricality of stage elements (script, set, lights, actors, etc.), both individually and together as they form a whole. Attendance at a live theatre production is included. Fee. F,Sp.

DRM 152—Plays and Playwrights (IAI: H3902) (3,3)
A general education requirement course; consult the C&CSC for more details.

This analytical approach to reading and interpreting plays enables students to trace the development of drama as it fits into history and life's bigger questions. Students will read plays from the canon of dramatic literature, starting with radical, present-day drama and stepping back to ancient Greece to explore answers to questions about humankind. F.

DRM 155—Ethnic Traditions in American Theatre (IAI: F1909D) (3,3)
A general education requirement course; consult the C&CSC for more details.

This course examines the various dramatic expressions that reflect the experience and construction of racial or cultural minority identity in the United States. Students will explore ethnic identity from the Civil War era to the present day by focusing on specific stock-character types, performers, and playwrights and their creations as well as circumstances of the day that incited such expression. Sp.

DRM 157—Acting I (IAI: TA914) (3,4)
A college transfer course; consult the C&CSC for more details.

This course will introduce the beginner to some basics of stage acting, improvisation, theatre terminology for the actor (objective, action, obstacle, beat), and speech and movement as they pertain to acting. Focused theatre exercises and games will generate creative ideas as actors prepare scenes and monologues. Tenets of acting structure are taught, including those of theorists Constantin Stanislavski and Sanford Meisner. F.

DRM 160—Directing I (3,4)
A college transfer course; consult the C&CSC for more details.

The beginner will learn why and how directors analyze, interpret, and dissect play scripts for the purpose of putting the pieces back together and bringing them to life. Students will learn elements of stage directing, how to "mark" a script, and how to make a promptbook. Each student will also direct a scene as a final project. F, Sp.

DRM 167—Acting II (3,4)
A college transfer course; consult the C&CSC for more details.

The actor is taken deeper into technique and characterization in order to uncover the magic of the character's role in a play. Advanced exercises and advanced games of skill will hone techniques that will enable the actor to repeat the magic of their performance. This class will teach strategies for preparedness, for auditioning, and for getting the job. Students will build a portfolio of monologues (4) that can be handed out as easily as their headshot and resume. Sp.

DRM 199—Theatre Practicum (1-3, 1-3)
A college transfer course; consult the C&CSC for more details.
Prerequisites: No online enrollment; signature of instructor is REQUIRED to enroll.

In order to increase proficiency in the preparation and presentation of major theatre productions, this course enables students involved in major college performances to gain credit for practical work in acting, directing, and theatre management, and in the design and construction, of scenery, lighting, sound, properties, costumes, and makeup. Thirty-two hours of production activity to be arranged for each credit hour, credit hours to vary from 1 to 3. May be repeated for up to 9 hours of credit. Sp.

See also: HFA 158 Drama Into Film

Echocardiography

ECG 100—Patient Care Skill (4,4)
Prerequisites: ENG 101, BIO 185, FAD 205, PHY 115 & Approval by the Coordinator

Overview of the profession of echocardiography with an emphasis on its history, philosophy, and the nature of the profession. Explore the role of the cardiac technician.

ECG 101—Echocardio Fundamentals (4,5)
Prerequisites: Approval of the Coordinator

A study of clinical medicine pertinent to sonography including obtaining the clinical history and related clinical signs and symptoms form the patient chart or interview. Diagnostic testing pertinent to the ultrasound diagnosis and specialized medical terminology are discussed and defined. Medication terminology, classification, and administration will be introduced. Ultrasound equipment controls, laboratory setup, and the beginning physical principles associated with diagnostic medical sonography are discussed.

ECG 104—Echo Anatomy (4,5)
Prerequisites: Approval of the Coordinator

The course is a study of the cardiac and vascular Anatomy and physiology in the normal and abnormal patient. The hemodynamic, pathology, and pathophysiology of the cardiac system are discussed and analyzed. The pathology, clinical signs and symptoms, diagnostic testing, and treatment of various cardiac diseases are discussed.

ECG 108—Echo Anatomy II (3,3)
Prerequisites: Approval of the Coordinator

This course is the study of the cardiac and vascular anatomy and physiology in the normal and abnormal patient. The hemodynamic and physiology of the cardiac system are discussed and analyzed. 5-lead and 12-lead EKG technique is discussed. Normal and abnormal EKG strips are analyzed.

ECG 126—Echo Clinical 1 (4,7)
Prerequisites: Approval of the Coordinator

This course is a supervised clinical experience, which will cover basic cardiac scanning techniques and protocols with emphasis on observation of two-dimensional and M-Mode scanning of the normal heart. This course is designed for the student to observe applications of the principles and concepts taught in Cardiac Ultrasound imaging and observe a functioning ultrasound department.

ECG 127—Echo Clinical 2 (4,6)
Prerequisites: Approval of the Coordinator

The clinical component of Echo Clinical II, this course is a supervised clinical experience which will cover cardiac scanning techniques and protocols with emphasis on color flow, cardiac Doppler, and two-dimensional and M-mode ultrasound scanning of the normal heart. This course is designed for the students to practice cardiac ultrasound techniques and observe a functioning ultrasound department.

ECG 200—Echo Physics (4,5)
Prerequisites: Approval of the Coordinator

This course will cover ultrasound instrumentation and the physical principles of sound, ultrasound, and Doppler pertinent to sonography. Emphasis will be placed on propagation principles, transducer parameters, interactive properties of ultrasound with human tissues and quality control procedures.

ECG 204—Echo Imaging I (4,6)
Prerequisites: Approval of the Coordinator

This course will cover the basic terminology, anatomy, instrumentation, and physical principles necessary for the student to begin two-dimensional and M-mode ultrasound scanning of the normal heart. In addition, students will practice applications of basic scanning techniques and protocols with emphasis on the normal heart.

ECG 205—Echo Imaging II (4,5)
Prerequisites: Approval of the Coordinator

Ultrasound Imaging Lab II will cover scanning techniques and protocols with emphasis on color flow, cardiac Doppler and two-dimensional and M-Mode ultrasound scanning of the abnormal heart. This course also provides the students the opportunity to practice scanning techniques and protocols.

ECG 208—Echo Pathology (3,3)
Prerequisites: Approval of the Coordinator

This course is a study of the cardiac and vascular pathology in the normal and abnormal patient. The pathology, clinical sign and symptoms, diagnostic testing, and treatment of various cardiac diseases are discussed.

ECG 226—Echo Clinical III (4,6)
Prerequisites: Approval of the Coordinator

This course is a continuation of the clinical component of echo clinical II, and is a supervised clinical experience covering cardiac-scanning techniques and protocols with emphasis on two-dimensional, M-modes, color flow, and cardiac Doppler ultrasound scanning of the normal and abnormal hear. The course is designed for the students to practice cardiac ultrasound techniques and observe a functioning ultrasound department.

ECG 230—Echo Certification Review (3,3)
Prerequisites: Approval of the Coordinator

Advanced study of cardiac ultrasound physics and echocardiography in preparation for the certifying examinations. A review of case studies and "mock" examinations will help students to focus on his/her individual areas.

Economics

ECO 201—Principles of Economics, Macro (IAI: S3901) (3,3)
A college transfer course; consult the C&CSC for more details.
Supply and demand, national income accounting, fiscal policy, modern employment theory, money, banking, institutional material, comparative systems. F, Sp, S.

ECO 202—Principles of Economics, Micro (IAI: S3902) (3,3)
A college transfer course; consult the C&CSC for more details.
Theory of the firm; labor, monopoly, special needs, agriculture; poverty; foreign trade. F, Sp, S.

Education

EDU 110—Foundations of American Education (3,3)
A college transfer course; consult the C&CSC for more details.
Focuses upon the historical and philosophical roots of our educational system and its place in the social, economic, legal, political and cultural milieu of America. Meets Illinois certification requirements.

EDU 111—Language Arts in Elementary Schools (3,3)
A college transfer course; consult the C&CSC for more details.
A course in the teaching of reading and writing in elementary school. Students learn philosophies, principles and approaches for teaching language arts. Course content includes strategies for teaching and assessing reading and writing in both narrative and expository formats.

EDU 150—Educational Technology (3,3)
Prerequisites: EDU 111 and either successful completion of MIS 101 or instructor's permission
This course will provide information on how to use technological tools and the pedagogical rationale for these activities. Fee.

EDU 204—Introduction to Special Education (3,3)
A college transfer course; consult the C&CSC for more details.
Various forms of exceptionalities are explored as they impact the individual, family and society. A life span approach is utilized, with emphasis on educational interventions. Considers developing abilities of those with exceptionalities, as well as dealing with their limitations.

See also Child Development/Teacher Aide

Electronics Engineering Technology

ELC 101—Electrical Circuits I (4,6)
Prerequisite: ELC 101 and MTH 106, 165 or 169 with grades of "C" or better or qualifying score on the Placement Test.
A study of DC electrical circuits, OHM's Law, Kirchoff's Law, series and parallel circuits, power and DC circuit analysis, including theorems such as Thevinin's Theorem and Norton's Theorem. Proper use of test equipment is stressed throughout the lab sessions as students are taught to measure voltage, current resistance, power and other circuit parameters. The transient and steady state response of RC, RL, and RLC circuits is studied. An introduction to alternating voltages, currents and circuit parameters concludes this course. Fee. F, Sp.

ELC 102—Digital Electronics (4,6)
Prerequisite: MTH 093 or Placement test.
An introduction to digital logic circuits and number systems. Beginning with basic gate theory, asynchronous and synchronous digital systems using SSI, MSI, and LSI integrated circuits are studied in counter, register, multiplexer and de-multiplexer, arithmetic circuits and other applications. Binary, decimal, hexadecimal, BCD and Gray Code number systems are also studied. Fee. Sp.

ELC 105—Electrical Circuits II (4,6)
Prerequisites: ELC 101, MTH 106
A study of AC electrical circuits and theorems, phasors, reactances, impedances, phase relationships, power, resonance, J-operator and transformer characteristics. The oscilloscope is used extensively in the laboratory. Pulse circuits, wave forms, and transients are introduced using RC and RL circuits. The course is concluded with a study of passive filters and resonant circuits. Fee. F, Sp.

ELC 110—Electronic Circuits (4,6)
Prerequisite: ELC 101 and pre- or co-requisite with ELC 105
Semiconductor devices and circuitry including diode, transistor, and op amps used in power supplies, filters, amplifiers, and oscillator circuits. Also covers amplifier frequency response, antennas, transmitters, receivers and construction of circuitry from schematic diagrams. Fee.

ELC 190—Industrial Electronics I (4,6)
Prerequisite: ELC 105 and ELC 110
A study of the characteristics and applications of thyristor devices including silicon controlled rectifiers and triacs. Also, an introduction to programmable logic controllers. Fee. F.

ELC 215—Digital Electronics II (4,6)
Prerequisites: ELC 102, ELC 110

An introduction to microprocessor based digital computer systems and programming, the internal architecture of the microprocessor is discussed along with its instruction set. The interface between the microprocessor and various types of memory devices is discussed; including address, data and control bus systems and their timing. Assembly language programs utilizing the various addressing, data manipulation, and arithmetic operating modes are developed. Fee. F.

ELC 225—PC Systems Servicing (4.5,6)
Pre- or co-requisite: CIS 110 or consent of instructor.

This course covers the disassembly and reassembly of a Pentium microprocessor-based personal computer. Includes troubleshooting techniques to identify a malfunctioning component, module, or circuit boards. Also preventive maintenance procedures and identification of I/O addresses, interrupt request lines, and direct memory access. Fee. Sp.

ELC 230—Electrical Drafting (3,5)
Prerequisite: CAD 100

Application of computer-aided drafting principles to electricity, electronics, and industrial applications. Use of electrical and electronics symbols, schematic diagrams, block diagrams, wiring diagrams and installation drawings required in circuit design as well as printed circuit board layouts and artwork masters. Fee. F, Sp.

ELC 270—Industrial Instrumentation (4,6)
Prerequisite: PHY 210

Operational principles of equipment and systems used to translate measurements of pressure, temperature, flow, quantity for direct readout or for feedback control systems using proportional, PI, PD, and PID control techniques. Fee. F, Sp.

ELC 298—ETA Certification Preparation (3,3)
Prerequisite: ELC 190, ELC 205

A seminar course to prepare students for certification testing by the Electronic Technician Assoc. Practice ETA test will be administered after a period of interactively assessing the depth of the student's knowledge of industrial electronics.

ELC 299—Special Topics in Electronics Engineering Technology (Variable,1-10)
Prerequisite: Completion of all 100 level ELC courses (except ELC 132)

Designed to be a third or fourth semester course to accommodate students with special needs, interests and requirements. Course subject matter will be taken from specific areas in electronics such as robotics, computers and communications, with the specific area selected, directed and scheduled by a faculty member in cooperation with the student. Fee. F, Sp.

Emergency Medical Services—Paramedic

EMS 210—EMS Paramedic Foundations (3,4)
Prerequisite: EMT-B licensure and admission to the program requires sponsorship by an approved ALS Agency

This course provides an overview of basic life support skills and knowledge. Introduces the student to prehospital laws, ethics, and role responsibilities Also includes basic pathophysiology, fluid replacement and pharmacology.

EMS 212—EMS Paramedic Respiratory (5,6)
Prerequisite: EMS 210

This course provides an overview of various airway emergencies. Introduces the student to assessment and history taking skills. Also includes basic radio communications. Skill acquisition will be integrated in the course of study.

EMS 214—EMS Paramedic Trauma (5,6)
Prerequisite: EMS 210 & EMS 212

This course provides an in-depth study of trauma related injuries. Treatment for trauma patients will be learned. Pre-Hospital Trauma Life Support (PHTLS) certification will be obtained upon successful completion of a written and practical examination.

EMS 216—EMS Paramedic Cardiovascular (5,6)
Prerequisite: EMS 210, EMS 212, & EMS 214

This course provides an in-depth study of cardiovascular emergencies. Treatment for cardiac patients will be learned. Electrocardiogram (EKG) interpretation will be introduced. Advanced Cardiac Life Support (ACLS) certification will be obtained following successful completion of a written and practical exam.

EMS 218—EMS Paramedic Medical/Maternal Child (5,6)
Prerequisite: EMS 210, EMS 212, EMS 214 & EMS 216

This course provides a comprehensive study of the gynecological and obstetric patient. Introduction to the care of the pediatric patient. Management of gynecological emergencies, pregnant patients and pediatric emergencies will be a primary focus.

EMS 220—EMS Paramedic Medical (4,4)
Prerequisite: EMS 210, EMS 212, EMS 214, EMS 216 & EMS 218

This course provides a comprehensive study of patients with medical, psychiatric, and environmental emergencies. Disaster management and assessment based management are covered. Care of individuals with special challenges will be introduced.

EMS 222—EMS Paramedic Field Internship (4,5)
Prerequisite: EMS 210, EMS 212, EMS 214, EMS 216, EMS 218 & EMS 220

This course provides for study in medical incident command, hazardous and rescue awareness and ambulance operations. This course will allow students to utilize concepts and skills learned in the class and apply them in the prehospital setting. They will work supervised by licensed paramedics. Internship requires 280 contact hours.

Emergency Medical Technician

EMT 206—Emergency Medical Responder (3,4)

The Emergency Medical Responder course prepares the EMR student to provide pre-hospital assessment and care for patients across the life span with a variety of medical conditions and traumatic injuries. Areas of study include an introduction to emergency medical services systems, roles and responsibilities of EMRs, medical emergencies, trauma, and special considerations for working in the pre-hospital setting. This course provides students with the knowledge and skills necessary to work in the capacity of a First Responder to sustain life, reduce pain and minimize the consequences of injury or of sudden illness until advance medical help can arrive.

EMT 215—Emergency Medical Training (8,10)

Course provides pre-hospital emergency care under medical appropriate emergency vehicle, training in emergency care skills, including management of bleeding, fractures, airway obstruction, cardiac arrest and emergency childbirth. Students will also complete clinical rotation hours in the field. Completion of this course with a grade of B or better qualifies students to sit for the state or national exam.

Engineering

EGR 101—Engineering Graphics (IAI: EGR 941) (3,6)
Prerequisite: MTH 100 with a grade of "C" or better or qualifying score on the Placement Test.

This course is designed to give the student the basics of engineering graphics as required by the profession. The primary tool of the course is Auto CAD 2013, and students learn how to create orthographic, sectional and auxiliary views of various parts and components. Students are introduced to the software as a tool through a "problem solving" approach and are taught CAD commands needed to solve various drawing problems. Emphasis is placed upon proper drawing techniques, views and dimensioning. Fee. F, Sp.

EGR 201—Electrical Circuits (4,5)
A college transfer course; consult the C&CSC for more details.
Prerequisite: MTH 203; MTH 205 concurrent

Introductory circuit analysis including Kirchoff's Laws, nodal and loop analysis, equivalent circuits, operational amplifiers and magnetically coupled circuits. Transient and steady state analysis of R, L, and C networks with DC, sinusoidal, and non-sinusoidal forcing functions under zero and non-zero initial conditions. Frequency response of networks, Bode plots, and polyphase circuits are also studied, along with computer based circuit simulation. Fee.

EGR 203 – Statics (IAI: EGR 942) (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisites: MTH 203 and PHY 210 with a "C" or better, or instructor consent.

Resultants of force systems, reactions on rigid bodies, friction, centroids, moments of areas, moments of inertia of solids.

EGR 204 - Engineering Dynamics (IAI: EGR 943) (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisites: EGR 203

Acceleration, velocity, displacement, dynamics of rigid bodies, impulse, momentum, energy, work power.

EGR 205—Engineering: Statics and Dynamics (IAI: EGR 944) (5,5)
A college transfer course; consult the C&CSC for more details.

Topics to be studied include particle statics, general principles and force vectors, rigid body equilibrium, moments of inertia, distributed forces and centroids, analysis of structures, virtual work, friction, particle kinematics (rectilinear and curvilinear); Newton's laws; energy, work, and momentum methods; planar dynamics and rigid bodies' rigid body kinematics; impulse and momentum; and vibrations.

English

To assure correct placement in the proper introductory English course, new students are required to take the Placement test prior to registration. Note: all English 101 and English 102 and some English 98 and 99 classes use computers as a tool to facilitate writing. It is highly recommended that students who lack basic keyboarding skills enroll in OAT 100.

ENG 098—Writer's Workshop II (3,3)
Prerequisite: Qualifying score on Compass/ASSET

Utilizing a process-oriented approach, students develop and organize paragraphs and multi-paragraph writings, often in response to class readings. Particular attention is paid to basic punctuation, verb tenses, subject/verb agreement, and sentence clarity and complexity. Students are also introduced to basic structural and rhetorical elements of academic essay writing. F, Sp, S.

ENG 099—Writer's Workshop III (3,3)
Prerequisite: Qualifying score on Compass/ASSET or ENG 098 with a grade of "C" or above.

Utilizing a process-oriented approach, students work on writing clear, well-developed academic essays, often in response to readings. Students are encouraged to develop a thoughtful, personal voice using Standard English sentences, with special attention to word choice and sentence variety. This class also addresses lingering punctuation and grammar errors. F, Sp, S.

ENG 101—Composition and Rhetoric (IAI: C1900) (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: Qualifying score on the Placement test or ENG 099 with a grade of "C" or above.

Theory, practice of narrative, descriptive, expository and argumentative writing. Thematic/rhetorical method. Sentence development, paragraphs, compositions, diction, mechanics, analysis, interpretation of prose models. Also offered as Honors. Fee. F, Sp, S.

ENG 102—Composition and Research (IAI: C1901R) (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ENG 101 with a grade of "C" or above.

Continuation of ENG 101. Research; writing of complex materials using conventions of standard academic English and documentation format(s); critical reading and analysis of varied texts. Also offered as Honors. F, Sp, S.

ENG 103—Introduction to American Literature I, Colonial Period-1860 (IAI: H3914) (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ENG 101 with a grade of "C" or above.

Historical survey of American cultural and literary movements through study of major writers from the Exploration and Colonial period through the Civil War. Also offered as Honors. F, Sp, S.

ENG 104—Introduction to American Literature II, 1860 to Present (IAI: H3915) (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ENG 101 with a grade of "C" or above.

Historical survey of American cultural and literary movements through the study of writers from 1860 to the present. Also offered as Honors. F, Sp, S.

ENG 105—Creative Writing: Fiction (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ENG 101 with a grade of "C" or above.

The structure and elements of fiction and the writing process will be studied with students producing fully-developed works of fiction. Sp.

ENG 108—Creative Writing: Poetry (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ENG 101 with a grade of "C" or above.

The structure and elements of poetry and the writing process will be studied with students producing fully-developed works of poetry. F.

ENG 111—Introduction to Literature I (IAI: H3900) (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ENG 101 with a grade of "C" or above.

Analytical approach to literature. Literature may include the novel, short story, poetry and drama. Also offered as Honors. F, Sp, S.

ENG 113—Introduction to Children's Literature (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ENG 101 with a grade of "C" or above.

Historical and genre approach to children's literature. Evaluating and selecting literature for children. Involving children in fiction and nonfiction literature.

ENG 121—Technical and Business Writing (3,3)
Prerequisites: ENG 101 with a grade of "C" or above; basic keyboarding recommended

Technical report writing, business communications, special reports, proposals. Attention given to integration of charts, drawings, and tables into expository prose. Taught on the microcomputer. Fee.

ENG 123—Ethnic Studies in African American Literature (IAI: H3910D) (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ENG 101 with grade of C or above

Examination of literary works by African American authors. A survey of genres, including narratives, drama, essays and poetry.

ENG 124—Introduction to Linguistics, Structure and Function of American English (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ENG 101 with a grade of "C" or above.

Methods of linguistic analysis integrated with study of languages in general and American English in particular. Language levels as well as dialects are studied. Also offered as Honors. Sp.

ENG 202—Introduction to British Literature I (IAI: H3912) (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ENG 101 with a grade of "C" or above.

Survey of literature movements from the Old English Period to the Enlightenment period of the 18th century, including Beowulf, Chaucer, Spenser, Shakespeare, Swift and Milton. Also offered as Honors. F, Sp.

ENG 203—Introduction to British Literature II (IAI: H3913) (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ENG 101 with a grade of "C" or above.

Continuation of English 202. Survey of literature movements from the Romantic Period of the 18th century through the 20th century, including the major Romantic and Victorian writers as well as the modern short story writers. Also offered as Honors. F, Sp.

ENG 204—Shakespeare (IAI: H3905) (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ENG 101 with a grade of "C" or above.

Study of Shakespeare's plays, including selections from the following: Henry V, Hamlet, Midsummer Night's Dream, Macbeth, Twelfth Night, All's Well That Ends Well, King Lear, Merchant of Venice, Anthony and Cleopatra, Othello and The Tempest. Emphasizes Shakespeare as a practical man of the theater. F, Sp.

ENG 206—World Literature I (IAI: H3906) (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ENG 101 with a grade of "C" or above.

Survey of Western and non-Western literature from the earliest texts up to Cervantes. Also offered as Honors.

ENG 207—World Literature II (IAI: H3907) (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ENG 101 with a grade of "C" or above.

Survey of major Western and non-Western literature from 1500's to the present. Also offered as Honors.

ENG 208—Introduction to Women's Literature (IAI: H3911D) (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: ENG 101 with a grade of "C" or above.

This course examines various types of literary works by women authors reflecting women's experiences, attitudes, and the many roles women create for themselves. Also offered as Honors. F, Sp, S.

First Aid

FAD 205—Emergency Care and Safety (2,2)
A college transfer course; consult the C&CSC for more details.

This course is designed for the general public, to prepare people by providing them with the knowledge and skills to meet the needs of most situations when emergency first aid and/or cardiopulmonary resuscitation is required and medical assistance is not excessively delayed. It incorporates personal safety and accident prevention information to acquaint individuals with the causes of many accidents so that action can be taken to eliminate or minimize such causes. Fee. F, Sp, S.

Geography

GEO 103—Geography of the Developed World (IAI: S4901) (3,3)
A college transfer course; consult the C&CSC for more details.

Examines the geographic problems and prospects associated with urban and industrial development in Europe, North America and other economically advanced areas of the world. F.

GEO 104—Geography of the Emerging World (IAI: S4902N) (3,3)
A college transfer course; consult the C&CSC for more details.

Examines the ways in which location, climates, resources, and cultural factors promote and inhibit change in the developing areas of Asia, Africa and Latin America. Sp.

Geology

GLG 101—Physical Geology (IAI: P1907L) (4,5)
A college transfer course; consult the C&CSC for more details.

An introduction to the dynamic processes of the earth for the non-science as well as science major. Emphasis is placed on integrating basic Earth Science concepts with the excitement of modern geology. Laboratory included. Fee. F, Sp, S.

Graphic Art: see Art 130, 230, 251, 260, 265, 270

Health and Wellness

HLT 101—Health and Wellness (2,2)
A college transfer course; consult the C&CSC for more details.

This course deals with the basic factors which influence the health of the individual. Includes: physical and mental outlook on life, intelligent use of foods, living with others, sexual adjustment, disease prevention, choosing health services and protecting our environment. Fulfills state teacher certification requirement. F, Sp, S.

HLT 105—Professionalism in Healthcare (3,3)
Prerequisite: Concurrent with PHB-101

This course provides an overview of the health care system and expectations of them as health care professionals. Emphasis is place on professional development, professionalism, business correspondence and technical writing, patient-centered health care, customer relationship management, and networking. Resumes, internships and related processes will be addressed in this course.

HLT 110–Survey of Allied Health Careers (2,2)

This course is designed to give students an overview of the allied health care industry and related health careers. Students will explore personal values and academic goals through individual projects, class exercises and group interaction as they learn the educational requirements of specific allied health career certificates, degrees and develop the baseline skills necessary for working in healthcare including critical thinking, ethical reasoning, effective communication and self-directed lifelong learning. Lastly, students will survey all of the allied health career program options at South Suburban College.

Health Information Technology

HIT 100—Foundations of Health Information Technology (1,1)
Prerequisite: Open enrollment

This course is intended for those individuals that are interested in applying to the Coding Specialist Certificate program. An overview of the profession is provided with an emphasis on the day to day role, employment settings, salaries and opportunities, membership in professional organizations, program completion requirements, overview of the certification process and the process for maintaining the coding specialist credential.

HIT 101—Health Information Technology (3,4)
Prerequisites: Admission to Coding Specialist Program and HIT 100,103 & BIO 115

This course introduces the student to the contents of the health record in paper- and electronic-based formats. The student will analyze, synthesize and evaluate the contents of the health record gaining a detailed understanding of documentation requirements, health care data sets, data monitoring and compliance reporting, data definitions, vocabularies, terminologies, nomenclatures, and dictionaries. The student will comprehend the difference between data and information, classification systems and nomenclatures, and primary and secondary data sources. Through hands-on experiences the student will gain a detailed understanding of health information specialty systems for release of information (ROI), coding, chart management, registries, etc. A grade of C of better is required to pass this course successfully. This course requires two hours of lecture and one hour of lab per week (4 contact hours). Fee.

HIT 102—Fundamentals of Medical Terminology (1,1)

This course introduces students to the basic concepts, which includes word roots, prefixes, suffixes, compounding elements and combining-form elements. Course introduces fundamental terms and exercises relating to disease states and disorders of the major body systems and moves to specialty area terms. This course is required for students in Allied Health Programs.

HIT 103—Medical Terminology (3,3)
Prerequisite: RDG 082

This course is for students who intend to apply to the following programs: Medical Assistant, Coding and Billing Specialist, Medical Transcription, Court Reporting and the Associates in Applied Science with Medical Emphasis. This course introduces prefixes, suffixes, word root abbreviations, disease, operative and drug terms related to medical science, hospital service, and paramedical specialties.

HIT 104—Introduction to ICD-10-PCS Coding (3,4)
Prerequisites: Admission to Coding Specialist Program and HIT 100, 103 & BIO 115

The course introduces the ICD-10-PCS coding system, which is used in the United States to classify procedures that are performed in the inpatient hospital setting. Emphasis is placed on learning ICD-10-PCS guidelines and reviewing and dissecting clinical documentation in order to accurately build an ICD-10-PCS code. Further, students will abstract and code procedures from inpatient records utilizing an encoder program. A grade of C of better is required to pass this course successfully. This course requires two hours of lecture and one hour of lab per week (4 contact hours). Fee.

HIT 105—Introduction to ICD-10-CM/PCS Coding (3,4)
Prerequisites: Admission to Coding Specialist Program and HIT 100, 103 & BIO 115

The course introduces the theory, structure, and organization of the International classification of disease using ICD-10-CM. Emphasis is placed on the importance of body structure, procedures, application of coding principles and official guidelines for coding and reporting. The student is introduced to diagnosis related groups (DRGs) and their relationship to coding using the encoder. A grade of C of better is required to pass this course successfully. This course requires two hours of lecture and one hour of lab per week (4 contact hours). Fee.

HIT 106—Introduction to CPT/HCPCS Coding (3,4)
Prerequisite: Admission to Coding Specialist Program and HIT 100, 101, 103, 104, 105, 108, 117.

The course introduces coding and reporting diagnostic and therapeutic procedures in the ambulatory care setting. Students will learn to read and interpret ambulatory health care documentation to code services and procedures using Current Procedural Terminology (CPT) nomenclature. Students will assign codes to non-acute care cases using CPT-4. Students will operate encoder and APC grouper software programs in the lab. A grade of C of better is required to pass this course successfully. This course requires two hours of lecture and one hour of lab per week (4 contact hours). Fee.

HIT 107—Intermediate ICD-10-CM/PCS & CPT Coding (3,4)
Prerequisite: Admission to Coding Specialist Program and HIT 100, 101, 103, 104, 105, 108.

A continuation of HIT 104, HIT 105 and HT 106, this course emphasizes case studies using more complex code assignments with ICD-10-CM, ICD-10-PCS, CPT and HCPCS coding systems. Students will continue hands-on exposure to computerized encoding systems. A grade of C of better is required to pass this course successfully. This course requires two hours of lecture and two hours of lab per week (4 contact hours).

HIT 108—Pathophysiology with Pharmacology (3,3)
Prerequisite: Admission to Coding Specialist Program and HIT 100, 103 & BIO 115

The mechanism of disease and its effect on the human body will be studied, with emphasis on etiology, symptoms, signs, diagnostic findings, and treatment. Special topics in pharmacology will be introduced, including terminology, drug category, uses, side effects, contraindications, and interactions of each body system in relation to the most common diseases, and common dosage ranges and routes. A grade of C of better is required to pass this course successfully.

HIT 114—Legal & Compliance Issues for Health Information Technology (3, 3)
Prerequisites: Admission to Coding Specialist Program and HIT 100, 101, 103, 104, 105, 108, 117.

This course covers legislative and regulatory processes, legal terminology, and professional related and practice-related ethical issues. Topics include confidentiality; privacy and security policies, procedures and monitoring; release of information policies and procedures; and professional-related and practice-related ethical issues. A grade of C of better is required to pass this course successfully.

HIT 116—Outpatient Billing & Reimbursement (3,3)
Prerequisites: Admission to Coding Specialist Program and HIT 100, 101, 103, 104, 105, 108, 117.

This course provides the student with the basics of filing insurance claim forms in an outpatient setting. Students are introduced to processing insurance claims, insurance terminology, reimbursement methodologies and completion/submission of the appropriate billing forms. A grade of C of better is required to pass this course successfully.

HIT 117—Inpatient Billing & Reimbursement (3,3)
Prerequisites: Admission to Coding Specialist Program and HIT 100, 103 & BIO 115

This course provides the student with the basics of filing insurance claim forms in an inpatient setting. Students are introduced to billing systems for hospitals, nursing homes, surgical centers, and rehabilitation centers including completion/submission of the appropriate billing forms. A grade of C of better is required to pass this course successfully.

HIT 200—Coding Exam Review and Internship (3,3)

This course provides the student with extensive hand on experience with coding 300 authentic health records from a variety of settings and specialties. It also prepares students for the CCS and CCS-P exams administered by the American Health Information Management Association (AHIMA). A grade of C of better is required to pass this course successfully. A fee is charged in this course which covers the cost of the national exam. This course requires two hours of lecture and four hours of lab per week (6 contact hours). Fee.

History

HIS 101—History of Modern Eastern Asian Civilization (3,3)
A college transfer course; consult the C&CSC for more details.
Focus on China and Japan, secondarily upon Korea and Vietnam. Emphasis on contrast between development of westernized, capitalistic Japan versus Communist China. On demand.

HIS 109—Europe to the 19th Century (IAI: S2903) (3,3)
A college transfer course; consult the C&CSC for more details.
Classical cultures of Greece, Rome, Medieval Europe, the Renaissance, Reformation and the Age of Kings. F.

HIS 110—History of Modern Europe (19th and 20th Centuries) (IAI: S2903) (3,3)
A college transfer course; consult the C&CSC for more details.
Emphasis upon people and events with worldwide impact; Bismarck and German unification; Karl Marx and Socialism, Lenin, Communism and Russian Revolution; Hitler, Nazism, and WW II; Cold War. Sp.

HIS 151—African-American History (3,3)
A college transfer course; consult the C&CSC for more details.
History of the African American from 17th century to present. F, Sp.

HIS 155—History of Latin America I (IAI: S2910N) (3,3)
A college transfer course; consult the C&CSC for more details.
Political, social and economic history of principal Latin American nations, including the origins and development of its peoples and cultures, to the present. An introductory course focusing on the growth and development of Latin America from its pre-colonial history to the present day. Special emphasis will be placed on the success and failure of democratic procedures and the relationship between Latin America and the United States. The influences of first peoples, African slaves, the Roman Catholic Church, the military and economics on the development of society and the government will also be explored. F. Sp.

HIS 203—Early American History (IAI: S2900) (3,3)
A college transfer course; consult the C&CSC for more details.
Survey of American History-Discovery through Civil War. F, Sp, S.

HIS 204—Later American History (IAI: S2901) (3,3)
A college transfer course; consult the C&CSC for more details.
Survey of American History-Reconstruction to present. F, Sp, S.

HIS 220—Topics in History (3,3)
Prerequisites: A required core history course or permission of the instructor.
Historical issues and trends. Analysis and evaluation of historical eras, movements, ideologies and personages. The topic may vary each semester and include areas such as Jacksonian Democracy, the Civil War, military history, The Civil Rights Movement, history of individual countries and cultures, etc.

HIS 271—History of Modern African Civilization (IAI: S2920N) (3,3)
A college transfer course; consult the C&CSC for more details.
Major societies of the past, with present problems in areas south of the Sahara. Africa's attempts to overthrow neocolonialism, problems of consolidation with countries; African unity; other present-day African affairs. F, Sp, S.

Human Services

HSA 101—Introduction to Human Services (3,3)
This course provides a foundation for exploring the fields of social work, counseling and human services as well as information on practicum, fieldwork, and internship. It is strongly advised for any student interested in the fields of professional helping.

HSA 102—Interviewing Principles and Techniques (3,3)
Use of interview in gathering and imparting information pertinent to making diagnostic assessments for the purpose of advocating, referring and/or establishing treatment plans; learning the skills and techniques necessary for effective interviewing.

HSA 107—Psychoactive Drugs (3,3)
The pharmacology of psychoactive drugs and their effect on the body systems is presented. Signs and symptoms of drug use, withdrawal, overdose/toxicity and effects of multiple drug use are discussed.

HSA 108—Introduction to Addiction Counseling(3,3)
An introductory course, focusing on the issue of substance abuse/chemical dependency. Emphasis will be on the pharmacology of psychoactive drugs, and signs and symptoms of psychoactive chemical use/abuse. Various theories of drug use in today's society will be studied, as well as types of treatment available, and the effectiveness of each. Legal considerations associated with the psychoactive substance are also discussed.

HSA 109—Addiction Treatment (3,3)

Examines current treatment modalities and strategies utilized in working with individuals who are chemically dependent. Focus is on the general management of substance abuse disorders, as well as exploring treatment issues for special population groups. A holistic approach to treatment, incorporating bio-psycho-social-spiritual aspects, is emphasized.

HSA 110—Sign Language I (3,3)

An introduction to sign language with emphasis on vocabulary building, sign principles and the development of expressive and receptive sign skills. Brief history of sign language and deaf education, manual and oral. Focus will be on ASL (American Sign Language) principles. F.

HSA 111—Sign Language II (3,3)

Prerequisites: HSA 110 or consent of instructor.

Continuation of HSA 110 at the intermediate level. Course focuses on vocabulary building, conceptual accuracy, and expressive and receptive skill building. Some discussion of job opportunities in areas of deafness and of the culture of the deaf. Sp.

HSA 112—Sign Language III (3,3)

Prerequisites: HSA 111 or consent of instructor.

This is an introduction to sign language interpreting with emphasis on expressive and receptive skill building. It is an advanced course that focuses on vocabulary building and increasing conceptual accuracy of hearing and deaf idioms. S.

HSA 113—Issues of Diversity (3,3)

This course focuses on cultural diversity as a positive force in a global world. The students will examine the influence of culture in their own lives, and on the lives of others. Through understanding of the importance of cultural differences, human service personnel will be better prepared to bring sensitivity and objectivity to the helping process. Cross-cultural intervention skills are emphasized.

HSA 209—Social Implications of Addictions (3,3)

Explores the effect of alcoholism and substance abuse on the individual, the family, peer group, employer and community in general. Examine theories and techniques of working with individuals and groups impacted by substance abuse.

HSA 212—Intro to Intergroup Relationships (3,3)

Examines principles of working with others in groups. Explores the group process techniques to enhance group function, and development of basic leadership skills. Sp.

HSA 213—Human Services Interventions (3,3)

Introduction to the principles, practices and guidelines used in human services with emphasis on ethical practice.

HSA 231—Human Services Internship I (3,11)

Prerequisite: Consent of coordinator

Ten hours per week of supervised experiences in facilities such as schools, health care centers, public welfare agencies, family and child welfare agencies that provide human service interventions. A weekly one hour seminar to discuss internship experience is included. This is a course with one hundred and fifty hours of supervised experience in social service agencies with a two hour weekly seminar. Malpractice Insurance Fee.

HSA 233—Addictions Studies Internship I (3,17)

Prerequisites: Consent of coordinator

Two hundred and fifty hours of supervised experiences in human services agencies that deal with prevention, intervention and counseling of individual and groups affected by substance abuse. A weekly one hour seminar to discuss internship experiences included. Scheduled synchronized sessions are included for the seminar part of the course. Fee.

HSA 234—Addictions Studies Internship II (3,17)

Prerequisites: HSA 233 or consent of coordinator

This second internship course encompasses the knowledge, skills and values gained in the first substance abuse internship. Additionally, the internship provides opportunities for the student to integrate the varied dimensions of substance abuse counseling. The course includes two hundred and fifty hours of supervised experiences in human services and a weekly one hour seminar. Schedule synchronized sessions are included for the seminar part of the course.

Humanities

HUM 210—World Mythology (IAI: H9 901) (3,3)
A college transfer course; consult the C&CSC for more details.

An introductory, interdisciplinary, cross-cultural examination of myth from the ancients to the present. Students will study the role of myth in human culture and the role myth plays in daily life. The course is divided into four units: Cosmic Myths, Myths of the Gods, Hero Myths, and Place and Object Myths. F, Sp.

HUM 220—Special Topics in the Arts (1-3, 1-3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: A required core humanities course or permission of the instructor.

A class or seminar investigating a special topic or issue in the visual and performing arts (art, music, theatre and dance). This course may be repeated once for credit. S.

Humanities & Fine Art

HFA 108—Introduction to Film Appreciation (IAI: F2908) (3,3)
A college transfer course; consult the C&CSC for more details.

A survey of film as an art form, emphasizing the elements of visual story telling, aesthetics, differences among genres, and criticism. Examines techniques such as pictorial composition, movement, sound, lighting, editing, mise-en-scene, form and narrative. Also offered as Honors. F, Sp, S.

HFA 109—Introduction to Film History (IAI: F2909) (3,3)
A college transfer course; consult the C&CSC for more details.

A survey of film history, emphasizing social, economic and political aspects and their effects on the cinema and society. Examines major national and international movements, studio and independent filmmaking, documentary, experimental and animated cinema. Also offered as Honors. Sp.

HFA 158—Drama into Film (IAI: HF908) (3,3)

This course focuses on drama as it moves from on-the-page-play format to on-the-screen film format. Emphasis is placed on visual perception of theatrical devices and characteristics of significant works by playwrights and filmmakers of the Western theatre in this interdisciplinary examination of theatre art. F,S.

HFA 201—General Humanities I (IAI: HF902) (3,3)
A college transfer course; consult the C&CSC for more details.

An introductory course which explores culture's attempts to understand humans and their world through important works of art, literature, music, philosophy and religion. The focus is upon key cultural concepts expressed through various creative forms from ancient times through the Renaissance era. No previous knowledge of art or music is required. Also offered as Honors. F, Sp, S.

HFA 202—General Humanities II (IAI: HF903) (3,3)
A college transfer course; consult the C&CSC for more details.

An introductory course which explores culture's attempts to understand humans and their world through important works of art, literature, music, philosophy and religion. The focus is upon key cultural concepts expressed through various creative forms from the seventeenth century to the contemporary world. No previous knowledge of art or music required. HFA 201 is not a prerequisite. Also offered as Honors. F, Sp, S.

HFA 203—Humanities of Eastern Asia (IAI: HF904N) (3,3)
A college transfer course; consult the C&CSC for more details.

An exploration of man's attempts to express his understanding of his nature and the world in which he lives through his art, music, literature and philosophy. Focus centers on Asian cultures including China, Japan, India and Indonesia. Fee. On demand.

See also: ART 105-History of Art Survey I, ART 106-Art History Survey, Renaissance Through Modern, ART 107-Art Appreciation, ART 139-History of Photography, ART 219-Non-Western Art

Law Enforcement: see Criminal Justice System

Magnetic Resonance Imaging

MRI 200-Patient Care and Safety (3,3)
Prerequisites: Admission to the MRI Program or MRI Fast Track Program

This course introduces the history of nuclear magnetic resonance. Medical ethics, patient care, and health informatics are discussed. The role of the MR technologist and scope of care is presented. The hazards of the MRI environment to the patient, staff and public are examined.

MRI 201—MRI Principles I (3,3)
Prerequisites: MRI 200, concurrent with MRI 202, MRI 210

This course provides an introduction to the theories, and concepts of magnetic resonance properties, the types of magnets utilized, and the NMR signal generation. MR terminology, pulse sequencing, and basic principles of magnet safety will be introduced.

MRI 202— MRI Clinical Education I (3,16)
Prerequisites: MRI 200, concurrent with MRI 201, MRI 210

This course provides an introduction to practical clinical experience of the MRI department. A weekly seminar is included. MRI scanning of anatomy and common pathologies will be explored. Clinical assignment is by Program Coordinator. A total of 160 clinical hours required. Students are awarded a letter grade.

MRI 203—MRI Principles II (3,3)

Prerequisites: MRI 200, MRI 201, MRI 202, MRI 210, or MRI Fast Track students having successfully completed MRI 200, MRI 201, and MRI 210. Concurrent with MRI 205, and MRI 211.

Spatial encoding, k-space, MRI protocol optimization and advanced imaging techniques and MR angiography will be presented in this course. Imaging parameters and artifact techniques will be introduced, as well as MRI contrast agent's effects on MR images.

MRI 205—MRI Clinical Education II (3,16)

Prerequisites: MRI 200, MRI 201, MRI 202, and MRI 210. Concurrent: MRI 203 and MRI 211.

This course provides the continuation to practical clinical experience and education in the MRI department. A weekly seminar is included. MR scanning of anatomy and common pathologies will be explored. Clinical assignment is by Program Coordinator. A total of 256 clinical hours required.

MRI 206—Clinical Education III (3,16)

Prerequisites: MRI 200, MRI 201, MRI 202, MRI 210, MRI 203, MRI 205, and MRI 211.

The seminar will include a review and discussion of MRI principles, sequences and methods. Emphasis is placed on the interdependence of theory and principles in preparation of the ARRT examination. 128 hours (16 hours per week for 8 weeks) of advanced clinical experience in assigned MRI department. Clinical assignment is by Program Coordinator. Students are awarded a letter grade.

MRI 210–Sectional Imaging Anatomy I (3,3)

Prerequisites: AAS in Radiologic Technology or equivalent, or BIO-185 and BIO 186

Online study of human anatomy in the transverse, longitudinal, and coronal planes. Emphasis on the organs in the abdomen, pelvis, thorax, and head. Demonstration of how these structures appear on ultrasound scans, computerized tomography, and MRI. Completion of Sectional Imaging and Anatomy I does not guarantee admission into the MRI Program.

MRI 211–Sectional Anatomy II (3,3)

Prerequisite: MRI 210

Online Study of human anatomy in the transverse, longitudinal, and coronal planes. Emphasis on the organs in the abdomen, pelvis, thorax, and head. Demonstration of how these structures appear on ultrasound scans, computerized tomography, and MRI. Completion of Sectional Imaging and Anatomy II does not guarantee admission into the MRI Program.

Management Information Systems

MIS 101—Computer Literacy and Applications (3,4)

A college transfer course; consult the C&CSC for more details.

An exploration of how the computer impacts all aspects of society: the home, job place, and business, scientific and allied health careers. Course content includes an overview of operating systems software and computer hardware, an overview of management information systems and programming languages; hands-on computer problem-solving experiences using word processing, spreadsheet, database management, presentation graphics; and communication including the Internet. To facilitate your success in this course, previous keyboarding or typing instruction is highly recommended to create and manipulate files on the microcomputer. Fee. MIS 101 is also offered as an online course. Students considering the online format must have Internet access and familiarity with the Internet and email, as well as attaching files to email messages. The hands-on portion of the course uses the latest version of Microsoft Office; therefore students taking this course via the Internet must have the latest version of Office software available as well. Fee.

MIS 102—Computer Logic (3,4)

Prerequisite: Previous or concurrent enrollment in MIS 101 is recommended.

Computer Logic is intended to provide students with in-depth practice in techniques used to analyze and solve problems which avail themselves to computerization. This class does not teach a specific programming language, but instead focuses on methods common with all languages. Topics will include flowcharting, decision tables, pseudocode, files and arrays.

MIS 104—BASIC/Visual Basic Programming (3,4)

A college transfer course; consult the C&CSC for more details.

Prerequisite: MIS 102 or equivalent.

Computer programming in BASIC/Visual BASIC. Students learn the basic elements of programming including: source code preparation and program flow. Students will learn the fundamental syntax requirements of this very popular language; write elementary programs; and progress to more advanced topics: input-output, using disk files, menu writing, creating user friendly programs. Fee.

MIS 110—Intro to Computer Technology (3,4)

Prerequisite: MIS 101 or equivalent.

A study of the fundamentals of Microsoft Windows operating system environment for microcomputers. The student will explore the unique hardware of microcomputers that is controlled by the operating system and the commands that control the Windows environment. The student will customize and manage the Windows system. Fee.

MIS 111—Advanced Operating Systems (3,4)
Prerequisite: MIS 101 or equivalent.

Manipulation of the UNIX/Linux operating system and the many utilities contained within it will be covered in this course as well as an overview of the UNIX/Linux shell. Fee.

MIS 130—Data Communication & Networking (3,3)
Prerequisites: MIS 110 with a grade of "C" or better

This course will teach students about the transmission of data, voice and video. The course also covers Networking and Network applications. The topics of Local Area Network, Wide Area Network and Wireless Transmission will be introduced. Packet analyzers will be discussed and utilized.

MIS 135—Internet Fundamentals (1,2)

This course is an exploration of the many uses of the internet. The student will learn the basic network skills that drive the Internet as well as its many uses. Emphasis will be placed on learning to uses the Internet's many tools and wise use of the information received. Students will learn to protect their computer and themselves from many of the hazards found on the Internet. Fee.

MIS 190—Windows Workstation Certification (3,4)
Prerequisites: MIS 101 or equivalent.

This is an advanced course in Windows configuration and networking. The course will provide a strong foundation for the workstation portion of the Microsoft certification test requirements. The student will learn advanced Windows skills, and to use Windows as a network workstation. This course will not include a Microsoft Certification exam. Fee.

MIS 195—Windows Server Administration (3,4)
Prerequisites: MIS 101, CIS 180, and MIS 110 or equivalent.

This course will provide a strong foundation for the server portion of the Microsoft certification test requirements. The student who completes this course will have a full utility belt of resources with which to tackle everyday Windows networking administration problems. This course will not include a Microsoft Certification exam. Fee.

MIS 205—Computer Systems Development (3,4)
Prerequisite: MIS 101 or equivalent.

The design of business information systems and their integration into an overall computer-based total quality management information system (TQM). Study of basic approaches and methods used in the development of integrated business information systems. Topics include: systems study and analysis, system flowcharting, data collection techniques, performance specifications, file design and management, determination of processing and equipment requirements, and calculation of network charts. The concepts of Total Quality Management will be stressed throughout the course. A continuing comprehensive case study, which covers the entire scope of a systems development project, will be utilized.

MIS 206—Field Project I (3,arranged)
Prerequisite: An interview with the instructor is required. Written permission will then be provided for eligible students.

This course provides students an opportunity to receive college credit by being employed at a business establishment and receiving on-the-job Information Technology training, working a minimum of 15 hours weekly. The college will assist the student in finding and maintaining a coordinator approved Information Technology work-site. One hour specialized seminars are held once a week with the instructor to provide students with needed information to help them prepare for a successful Information Technology career. On demand.

MIS 212—Visual C# Programming (3,4)
Prerequisites: MIS 102 or equivalent.

C# Programming is offered for students who have a good working knowledge of C language. It is designed to teach the extensions of C and to introduce the concepts of object oriented programming emphasizing the ideas of class, objects, and inheritance. Fee.

MIS 213—Computer Information Security (4,4)

This course will teach students about the aspects of Computer and Information Security. The course will cover security issues affecting hardware, software and information. The topics of Cyber Crime, Network Security, Internet Security, Malware, Denial Of Service Attacks, Security Management, Encryption And Cryptography will also be covered.

MIS 214—Advanced Visual BASIC (3,4)
Prerequisite: MIS 104

A study of the essentials of the object oriented language "Visual BASIC". The concepts of object oriented programming will be the foundation of the course. The use of Visual BASIC command structures as well as visual programming environment will be taught. Students will create programs to run in the Windows environment. Fee.

MIS 215—IT Project Management (3,4)
Prerequisite: MIS 205 or equivalent.

This course will study the principles necessary to determine the feasibility and costs of undertaking an IT systems development project, as well as techniques to manage and control systems project. Fee.

MIS 216—JAVA Programming Introduction (3,4)
Prerequisite: MIS 102

An introduction to programming for the Internet World Wide Web, using the Java compiler. Language basics, creating screen forms using interactive objects, scripts, as well as graphics, and hyperlinks will be taught.

MIS 221—Database Processing (3,4)
Prerequisite: MIS 101 or equivalent.

An introduction to database processing covering the primary database structures, including their definition, creation and manipulation. The design, implementation and administration of a database will also be considered. Fee.

MIS 230—Help Desk Concepts (3,4)
Prerequisite: MIS 101

This course will teach students about Help Desk Concepts. The course will cover the problem solving process that is used to solve challenging computer problems and the tools of technologies that are used to determine the cause of the problem. Fee.

MIS 250— Management Information System (3,4)
Prerequisites: MIS 101 and MIS 110

This course will teach students about aspects of Management Information Systems. The course will cover Management Information Systems issues effecting Information Technology, Information Systems and Information System Resources. The topics of Hardware and Software, Database Processing, Data Communication, the Internet, E-Commerce, Business Intelligence and System Development will be covered.

MIS 299—Special Topics in Computer Information Systems (Variable,1-6)
Prerequisite: Permission of Instructor.

A third or fourth semester course to meet the needs of advanced students. This course addresses the rapid change in computer technology by presenting leading-edge concepts. Topics will be determined and/or approved by the instructor. Fee. On demand.

Manufacturing

MFG 101—Manufacturing Safety (3,4)

Provides the student with an introduction to the manufacturing world and provides specific instruction to facilitate safe work practices in industrial environments. Introduces manufacturing specializations such as mechatronics, precision machining and welding. Covers fire safety, pressurized gases, electrical hazards, and safe machine usage. Students will also become acquainted with OSHA policy. Students will have the opportunity to earn the Safety Certification through Manufacturing Skill Standards Council (MSSC). Fee.

MFG 102—Manufacturing Math (2,2)

This course is designed for students in a manufacturing environment. The primary goal of this course is to help individuals acquire a solid foundation in the basic skills of math that relate to industrial manufacturing. Reviews arithmetic, introduces basic algebraic and right triangle trigonometric techniques. This course is not transferable, does not satisfy the prerequisite for any other mathematics course, and does not satisfy any general education requirements.

MFG 103—Quality & Measuring in Manufacturing (3,4)

This course provides exploration of the field of manufacturing, including key skills needed in the manufacturing world and provides an introduction to controlling and improving quality in a manufacturing setting. It explores ways that manufacturers use data and analysis to improve quality. Students will have the opportunity to earn the Quality and Measurement Certification through the Manufacturing Skill Standards Council (MSSC). Fee.

MFG 104—Production in Manufacturing (3,4)

This course provides further exploration of the field of manufacturing, including key skills needed in the manufacturing world and provides the basics of how manufacturing transforms materials into products. Students will learn about the varying types of production, the materials that are used in production and the types of processes used in manufacturing including machining, casting and assembly. Students will have the opportunity to earn the Production Certification through Manufacturing Skill Standards Council (MSSC). Fee.

MFG 107—Manufacturing Maintenance (3,4)

This course provides further exploration of the field of manufacturing, including key skills needed in the manufacturing world, provides a basic understanding of tools and equipment used in manufacturing, and knowledge of how to improve productivity through predictive and preventive maintenance. Students will have the opportunity to earn the Maintenance Certification through Manufacturing Skill Standards Council (MSSC). Fee.

MFG 120—Manufacturing Internship (2,7)

Applies and expands manufacturing skills and knowledge in the workplace environment. Students will have an on-site supervisor who will assign duties in the workplace. Scheduled face-to-face on campus sessions will be conducted to assess the student's progress, problem areas, and review appropriateness of work involvement. Actual permissible duties and activities will be determined based upon the student's knowledge and skills. Student must complete a minimum of 80 hours at the work site. **(Starts last 8 weeks)**

MFG 121—Industrial Safety (2,2)

This course provides a basic overview of the concepts of safety in industrial plant situations. Topics include tool and machine safety, fire protection, eye safety, basic electrical safety, ladder safety, and government safety regulations as well as the elements of a good safety program.

MFG 122—Industrial Blue Print Reading I (2,2)

Industrial Blueprint Reading I is a course designed to progress logically from an introduction to blueprint reading through a study of the fundamental skills and concepts involved in reading, sketching, and interpreting drawings.

MFG 123—Mechanical Drives I (4,6)

Mechanical Drives I teaches the fundamentals of mechanical transmission systems used in industrial, agricultural, and mobile applications. Learners will study and practice industry-relevant skills including how to operate, install, analyze performance, and design basic mechanical transmission systems using chains, v-belts, spur gears, bearings, and couplings.

MFG 124—Electricity and Motors (4,6)

This course is a study of basic electricity for industrial electricians. It includes a study of electric machines commonly found in industrial, commercial, and residential applications: single phase AC motors, three-phase AC electric motors, and DC electric motors. Students practice industry-relevant skills including operation, installation, analyzing performance, and selecting electric machines for various applications. Troubleshooting techniques will be emphasized throughout this course.

MFG 131—Equipment Maintenance (3,4)

This course provides basic theory of power transmission equipment and practical applications of it. Basic concepts and procedures for the maintenance and replacement of bearings: "V" timing and flat belts: chain and chain drives: shaft couplings; gearing, clutches and brakes; lubrication; centrifugal pumps; bearings; screw threads; mechanical fasteners; packing and seals will be studied. Basic troubleshooting techniques needed to maintain equipment will be emphasized.

MFG 132—Industrial Hydraulics (3,4)

This course is designed to safely introduce all components, circuits, and principles commonly used in industry, and to fully acquaint the student with principles of hydraulic fluid power. Practical working circuits with many variations will be developed in a laboratory environment. Electro-mechanical demonstrations tie machine fluid power and electrical behavior together for industrial situations. Also basic trouble-shooting techniques will be addressed.

MFG 133—Industrial Pneumatics (2,3)

This course is designed to safely introduce all components, circuits, and principles commonly used in industry, and to fully acquaint the student with principles of pneumatic power. Practical working pneumatic circuits with many variations will be developed in a laboratory environment. Electro-mechanical exercises tie machine pneumatic power and electrical behavior together for industrial understanding. Troubleshooting techniques will be emphasized throughout this course.

MFG 134—Programmable Controllers (PLC) (3,4)

This course teaches the fundamentals of programmable controllers (PLC) systems. It focuses on the underlying principles of how PLCs work and provides practical information about installing, programming, and maintaining a PLC system. No previous knowledge of PLC systems or programming is necessary. This course presents PLCs in a generic sense, and the content is broad enough to allow the information to be applied to a wide range of PLC models. All topics are covered in small segments, developing a firm foundation for each concept and operation before advancing to the next. Each topic covered contains a variety of generic programming assignments that are compatible with most types of PLCs.

MFG 136—Maintenance Technology Internship (2,6)

Applies and expands industrial maintenance skills and knowledge in the workplace environment. Students will have an on-site supervisor who will assign duties in the workplace. Scheduled face-to-face on campus sessions will be conducted to assess the student's progress, problem areas, and review appropriateness of work involvement. Actual permissible duties and activities will be determined based upon the student's knowledge and skills. Student must complete a minimum of 80 hours at the work site.

Mathematics

To assure correct initial placement into the proper math course, new students are required to take a Math placement test prior to registration. An Internet component may be required for some sections of math. Contact the Math Department for more information.

MTH 093—Pre-Algebra (3,3)

Prerequisite: Qualifying score on the Placement Test.

Since a deep understanding of arithmetic is required to prepare students for algebra, calculators are not permitted. Topics include fractions, decimals, percent, signed numbers, linear equations, and problem solving.

MTH 095—Elementary Algebra (4,4)

Prerequisite: MTH 093 with a grade of "C" or above, or qualifying score on the Placement test.

Elementary concepts of algebra will be covered, including linear and quadratic equations, inequalities, and linear systems; operations and polynomials; factoring; graphing linear equations; slope; introduction to functions; appropriate word problems. This course is available online. F, Sp, S.

MTH 096—Elementary Geometry (3,3)

Prerequisite: MTH 093 with a grade of "C" or above, or qualifying score with Placement into MTH 095 or higher

An introductory course in geometry. Topics covered include Euclidean axioms and theorems, proofs, points and lines, quadrilaterals and other polygons, circles, area and perimeter, and similarity. F.

MTH 097—Essential Intermediate Algebra (4, 4)

Prerequisite: Qualifying score on the Placement Test, OR MTH 093 with a grade of "C" or above.

This course will provide students with the algebraic background necessary for MTH 115 or MTH 126. Qualifying students should have no other math requirements for their degree or major. This course is not a prerequisite for MTH 165 or MTH 145. Topics include fundamental algebraic properties; expressions and equations; linear, quadratic, radical, rational, and exponential functions; set theory; applications. Scientific calculator required. F, Sp, S.

MTH 100—Intermediate Algebra (4,4)

Not intended as a college transfer course; consult the C&CSC for more details.

Prerequisite: One year of high school algebra and qualifying score on the Placement test or MTH 095 with a grade of "C" or above.

This course is a continuation of elementary algebra. Topics include functions and graphs, rational expressions, radicals, quadratic equations and functions, complex numbers, inequalities, and appropriate applications. This course is available online. F, Sp, S.

MTH 103—Fundamentals of Mathematics (3,3)

Prerequisite: MTH 095 or MTH 097 with a grade of "C" or above or qualifying score on the Placement Test.

Topics include numeration systems, sets, the real number system, variables, graphing, logic, probability, descriptive statistics, and geometry. Sp.

MTH 106—Technical Mathematics I, Algebra & Trigonometry (5,5)

Prerequisite: Qualifying score on the Placement test, or MTH 096 and MTH 100 with grades of "C" or above.

Applications to technologies stressed. Review of algebra and geometry; linear equations; graphs; exponents and radicals; exponential and logarithmic functions; study of trigonometry, including trigonometric functions, graphs of trigonometric functions, triangle solutions and vectors. A graphing calculator is required, model TI-83 or 84 preferred. On demand.

MTH 111—Technical Mathematics II, Analytic Geometry and Calculus (5,5)

Prerequisites: Prerequisites: MTH 106 with a grade of "C" or above.

Theory and development of higher degree equations, determinants, sequences and series; analytic geometry; basic statistics; introduction to calculus; emphasis on applications. A graphing calculator is required. On demand.

MTH 115—General Education Mathematics (IAI: M1904) (3,3)

A college transfer course; consult the C&CSC for more details.

Prerequisite: MTH 100 or MTH 097 with a "C" or above or qualifying score on the Placement test.

This course, for non-science majors, is designed to provide a strong background and an appreciation for advanced mathematics. Four of the following topics (geometry, counting techniques and probability, graph theory, logic/set theory, mathematics of finance, game theory, linear programming, and statistics) will be studied in depth. Problem solving skills will be developed; a scientific calculator will be required. This course is available online. F, Sp, S.

MTH 126—Fundamentals of Statistics (IAI: M1902) (3,4)

A college transfer course; consult the C&CSC for more details.

Prerequisite: MTH 097 or MTH 100 with a grade of "C" or above or qualifying score on the Placement test.

An introductory course designed to provide students with an understanding of reasoning involved in a statistician's approach to a wide variety of problems. The student will be given hands-on experience with data collection and analysis. This course is intended as a general education mathematics course, and is not intended for business or mathematics majors.

MTH 145—Math Concepts & Structures I (4,4)
A college transfer course; consult the C&CSC for more details.
Prerequisite: MTH 100 with a grade of "C" or above or qualifying score on the Placement test, and successful completion of high school geometry or MTH 096.

An introductory content-oriented course for elementary school teachers; not a methods course. Topics include problem solving, set theory, numeration systems, number theory, ratio and proportion, integers, rational numbers and the real number system, functions and their graphs. The understanding of algorithms is emphasized. A scientific calculator is required. F.

MTH 146—Math Concepts & Structures II (IAI: M1903) (4,4)
A college transfer course; consult the C&CSC for more details.
Prerequisites: MTH 145 with a grade of "C" or above, and successful completion of high school geometry or MTH 096.

A continuation of Math 145. Topics include probability, statistics, informal geometry, measurement, congruency and similarity, Euclidean constructions, and coordinate geometry. A scientific calculator is required. Sp.

MTH 161—Finite Mathematics (IAI: M1906) (4,4)
A college transfer course; consult the C&CSC for more details.
Prerequisite: MTH 165 with a grade of "C" or above, or qualifying score on the Placement test, and successful completion of high school geometry or MTH 096.

Designed for students not majoring or minoring in mathematics, this course will present an introduction to mathematical topics with applications to business, economics, social science and biology. Functions and graphs, sets, matrix theory and operations, systems of linear equations and inequalities, linear programming, counting techniques, probability and mathematics of finance will be covered. Markov chains and game theory may be covered, time permitting. A graphing calculator is required, model TI-83 or 84 preferred. Every other S (even years).

MTH 165—College Algebra (4,4)
A college transfer course; consult the C&CSC for more details.
Prerequisite: Qualifying score on the Placement test or MTH 100 with a grade of "C" or above and successful completion of high school geometry or MTH 096. (Grade of "B" in MTH IOO is recommended.)

This course emphasizes a graphical approach to college algebra. Topics include linear, polynomial, rational, exponential, and logarithmic functions; systems of equations and inequalities; matrices. Applications and data analysis will be emphasized. Graphing calculator required, TI-83 or 84 preferred. This course is available online. F, Sp, S.

MTH 169—Precalculus (5,5)
A college transfer course; consult the C&CSC for more details.
Prerequisites: Qualifying score on the Placement test or MTH 165 with a grade of "C" or above. (Grade of "B" or above in MTH 165 is recommended).

An intensive course designed to prepare students for calculus. Topics include a review of function theory; trigonometry; conic sections; sequences and series; parametric equations; introduction to limits. Graphing calculator required, TI-83 or 84 preferred. F, Sp, S.

MTH 180—Calculus for Business and Social Science (IAI: M1 900-B) (4,4)
A college transfer course; consult the C&CSC for more details.
Prerequisites: Qualifying score on the Placement test, or MTH 165 with a grade of "C" or above.

This course is designed specifically for students in business and the social sciences with emphasis on applications of basic concepts rather than proof. Differentiation and integration of algebraic, exponential and logarithmic functions, curve sketching, partial derivatives. Graphing calculator is required, TI-83 or 84 preferred. Sp, S.

MTH 190—Calculus and Analytic Geometry I (IAI: MTH 901) (IAI: M1 900-1) (5,5)
A college transfer course; consult the C&CSC for more details.
Prerequisite: Qualifying score on the Placement test, or MTH 169 with a grade of "C" or above required. (Grade of "B" or above in MTH 169 recommended)

Basic terminology, limits, derivatives of algebraic and transcendental functions, antiderivatives, definite integrals, and applications. Graphing calculator required, TI-83 or 84 preferred. F, Sp, S.

MTH 200—Introduction to Linear Algebra (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: MTH 190 or MTH 180

Basic concepts of linear algebra and matrix theory. Emphasis on interpretation and development of computational tools. An introduction to abstract mathematical ideas. Topics include systems of linear equations, matrix operations, vectors and vector spaces, linear transformations, determinants and characteristic vectors. Graphing calculator required. Every other S (odd years).

MTH 203—Calculus and Analytic Geometry II (IAI: MTH 902) (IAI: M1 900-2) (5,5)
A college transfer course; consult the C&CSC for more details.
Prerequisite: MTH 190 with a grade of "C" or above.

More applications of the definite integral, derivatives and integrals involving exponential, logarithmic and inverse trigonometric functions, techniques of integration, infinite series, and conic sections. Graphing calculator is required, TI-83 or 84 preferred. F, Sp, S.

MTH 204—Calculus and Analytic Geometry III (IAI: MTH 903) (IAI: M1 900-3) (5,5)
A college transfer course; consult the C&CSC for more details.
Prerequisite: MTH 203 with a grade of "C" or above.

Polar coordinates, two and three dimensional vectors, solid analytical geometry, partial differentiation, moments, multiple integration, vector analysis including Green's Theorem and Stoke's Theorem. Graphing calculator is required, TI-83 or 84 preferred. Sp.

MTH 205—Differential Equations (IAI: MTH 912) (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: MTH 203 with a grade of "C" or above.

Methods for classifying and solving differential equations and systems of differential equations. Applications relevant to physics, engineering and mathematics. This course provides a foundation for further work in mathematics. Graphing calculator required, TI-83 or 84 preferred. Every other F (even years).

MTH 211—Introductory Statistics (IAI: BUS 901) (IAI: M1 902) (4,4)
A college transfer course; consult the C&CSC for more details.
Prerequisite: MTH 165 or MTH 161 with grades of "C" or above, or qualifying score on the Placement test.

Methods of collection, presentation and interpretation of quantitative general, business and economic data. Other topics include averages, measures of variation, probability, sampling, interval estimation, tests of significance, linear regression and correlation and computer application for the analysis of data. A graphing calculator is required, TI-83 or 84 preferred. Fee. F, Sp, S.

Medical Assistant

MAS 100—Phlebotomy For Health Care Providers (2,3)

This course is designed to introduce health care providers to blood drawing experiences as well as basic skills to perform routine laboratory screening procedures. This course does not qualify students to take the National Boards/Certification Examinations.

MAS 101—Pharmacology for Health Care Providers (2,3)

Prerequisites: Admission to the program, BIO 115 or BIO 185/186, MIS 101, MAS 104 and HIT 103

The focus of this course is on pharmacological principles and the disease process. The student will be taught relationships between drugs, drug interaction and drug application for specific diseases.

MAS 104—Medical Office Foundations (1,1)

The course explores opportunities available for students interested in medical assistant, medical transcriptionist and coding/billing specialist careers. Included will be an introduction to the basic skills needed to perform these jobs.

MAS 105—Administrative Medical Assistant I (3,3)
Prerequisites: Admission to the program, BIO 115 or BIO 185/186, MIS 101, MAS 104, HIT 103 and concurrent with MAS 106, MDR 115 and OAT 170

This course introduces the student to the role of the administrative medical assistant. It covers the flow of activities from the time a patient first makes an appointment leading to the time when the patient first arrives for services.

MAS 106—Clinical Medical Assistant I (3,4)
Prerequisites: Concurrent with MAS 105, MDR 115, OAT 170

This course introduces reviews introductory skills performed by the clinical medical assistant. These skills include: maintaining medical asepsis, obtaining vital signs, measuring hearing and vision acuity, recording electrographs and performing spirometry.

MAS 107—Administrative Medical Assistant II (3,3)
Prerequisites: MAS 105; concurrent with MAS 101, MAS 108 and PSY 101

This course introduces the medical assistant to coding of patient diagnosis along with office procedures for proper payment/ reimbursement by the insurance company.

MAS 108—Clinical Medical Assistant II (3,4)
Prerequisites: MAS 106; concurrent with MAS 101, MAS 107 and PSY 101

This course presents an overview of basic medical office laboratory skills. The student will be introduced to blood drawing and routine physician office laboratory screening procedures.

MAS 111—Medical Assistant Externship (3, 12)
Prerequisites: MAS 107, MAS 108

Students are placed in an ambulatory care setting for practical application of the administrative and clinical skills acquired in the medical assistant program. Students will be under the supervision of the program coordinator and the partnering medical facility for the entire duration of the clinical extern experience. Each student must complete 160 unpaid externship hours, upon completion of externship and successful completion of the MAS student will be eligible to sit for certification through the AAMA or the AMT.

MAS 115—Medical Law and Ethics (3,3)
Prerequisite: Admission to the program,

This course is designed to be an introduction to the day-to-day legal and ethical considerations arising through work in the medical professions. Discussions will include the legal responsibility, professional liability, civil liability and problems created by advanced life support technology and physician-patient relationships.

Mental Health-See Human Services Associate

Music

MUS 105—Aural Foundations of Improvisation I (2,3)
Prerequisite: Three years prior musical experience or instructor approval

Development of aural recognition and responses to the fundamental elements of melody and harmony within the be-bop style (ca. 1940). Open to all experienced performers. F, Sp.

MUS 106—Fundamentals of Music (3,3)
Concurrent enrollment in MUS 107 is required

An introductory music theory course for music and non-music majors. It covers rudiments of music, such as music notation, rhythm, meter, time signature, key signatures, major scales, minor scales, intervals, transposition and chords. Each student has access to an electronic keyboard for direct application of classroom work. F,Sp,S.

MUS 107—Fundamentals of Ear Training (1,2)
Concurrent enrollment in MUS 106 is required

An introductory aural skills course for music majors to perform four major tasks: (1) singing intervallic exercises, tonal indexing, dyadic exercises and harmonic drills; (2) hearing rhythm, meter, intervals, chords and melody; (3) writing of memorized melodies; and (4) dictating intervals, melody and chords. F,Sp,S.

MUS 109—Introduction to Music Business (3,3)
A college transfer course; consult the C&CSC for more details.

This is an introductory course that provides the student with a comprehensive overview of the music industry and the diverse career paths in the field of music. Students will explore the topics of music publishing, the recording industry, live sound, music products retail, promotion and artist management, songwriting, and music entrepreneurship.

MUS 115—Introduction to Music Literature (3,3)

A survey of music literature including Western Art Music from the Middle Ages to the present. Emphasis is placed on hearing, following musical scores and becoming acquainted with significant composers and music literature from commonly accepted music period. (This course is intended for music majors). Sp-odd, On demand.

MUS 116—Music Theory I (3,3)
Prerequisite: MUS 106 or Pass the Theory Placement Exam. Concurrent enrollment in MUS 117 is required

First music theory course for all music majors in the four-semester sequence. It covers melodic axioms and diatonic harmonic idioms of the common-practice period music, harmonic series, scale patterns, harmonic analysis of tonal music, principles of binary and ternary forms, realization of the Figured Bass numerals and melodic harmonization in piano and homophonic textures. F,Sp, on demand.

MUS 117—Ear Training and Sight Reading I (1,2)
Prerequisite: MUS 107 and/or permission of instructor. Concurrent enrollment in MUS 116 is required

First aural skills course for all music majors in the four-semester sequence. This course is also known as an applied music theory course, in which students apply what they learn in music theory to ear training and sight singing. It consists of two essential parts: singing and writing. The first portion contains different kinds of singing exercises that help students improve their proficiency in tonal retention, visual recognition and tonal reference, and vertical perception. The drills include tonicization patterns, intervals, tonal indexing, memorized melodies, dyadic progression and harmonic progression. Techniques of sight-singing will also be taught. The second part addresses on the speedwriting of memorized melodies and the dictation of interval, rhythm, melody and harmony. F,Sp, on demand.

MUS 118—Italian Diction (1,2)
A college transfer course; consult the C&CSC for more details.
Prerequisite: Music majors or permission of instructor.

Italian diction for singers. An introduction to correct pronunciation of Italian songs and arias with translation only to aid in understanding of the music. On demand.

MUS 119—German Diction (1,2)
A college transfer course; consult the C&CSC for more details.
Prerequisite: Music majors or permission of instructor.

German diction for singers. An introduction to correct pronunciation of German songs and arias with translation only to aid in understanding of the music. Fee. On demand.

MUS 123—Music Appreciation (IAI: F1900) (3,3)
A college transfer course; consult the C&CSC for more details.

An introduction to the aural elements and structures of music through a historical survey of Western Art Music from the Middle Ages through the twentieth century. Through recordings and live performances emphasis is placed on aural perception of musical stylistic characteristics of significant works by composers of Western Art Music. Fee. F, Sp, S.

MUS 126—Music Theory II (3,3)
Prerequisite: MUS 116 and/or permission of instructor. Concurrent enrollment in MUS 127 is required

Continuation of MUS 116 with the addition of two types of chromatic harmony: secondary dominant and chords of modal mixture. Analysis of binary and ternary forms will be discussed. Sp, S on demand.

MUS 127—Ear Training and Sight Reading II (1,2)
Prerequisite: MUS 117 and/or permission of instructor. Concurrent enrollment in MUS 126 is required

Continuation of MUS 117 with the addition of singing, writing and dictation in secondary dominant and chords of modal mixture. Sp, on demand.

MUS 131-145—Private Applied Music (2,4)
Some sections are intended as college transfer courses; consult the C&CSC for more details.
Prerequisite: Music majors and/or permission of instructor.

Major instrument or voice: Piano, 131; Voice, 133; Brass, 135; Woodwinds, 137; Strings, 139; Percussion, 141; Organ, 143; and Classical guitar, 145. May be repeated once for credit; 15 one-hour lessons per semester; minimum of two hours practice per day. F, Sp.

MUS 146—Private Beginning Composition (2,4)
Prerequisite: MUS 116, MUS 117, and/or permission of instructor.

Music composition in its beginning stages. Areas of concentration include organization of pitch, rhythm, and harmony from phrase to section to short form construction in tonal music; analysis of the common-practice period composers' repertoire; instruction in range, characteristics, and idiom of instruments and voice; and writing of small musical forms for simple media. 15 one hour lessons per semester. F, Sp.

MUS 151-165—Private Applied Music (1, 2)
Some sections are intended as college transfer courses; consult the C&CSC for more details.
Prerequisite: Ability to read music notation or consent of instructor.

Minor instrument or voice. Piano, 151; Voice, 153; Brass, 155; Woodwinds, 157; Strings, 159; Percussion, 161; Organ, 163; and Classical Guitar, 165. May be repeated once for credit; 15 half-hour lessons per semester with a minimum of one hour practice per day. F, Sp, S.

MUS 169—Class Instruction Piano I (1,2)
A college transfer course; consult the C&CSC for more details.

Beginning piano in electronic keyboard studio. Elective course designed for non-music majors. F, Sp, S.

MUS 170—Class Instruction Piano II (1,2)
A college transfer course; consult the C&CSC for more details.
Prerequisite: MUS 169 or consent of instructor.

Continuation of MUS 169 with further development of pianistic skills for non-music majors. (Pass/fail option) Fee. F, Sp, S.

MUS 171—Keyboard Harmony I (1,2)
Prerequisite: MUS 169 and/or permission of instructor. Concurrent enrollment in MUS 116 and 117 is required

First keyboard harmony course for all music majors in the four-semester sequence. It covers primary harmonic progression patterns, accompaniment patterns, transposition in diatonic keys, figured-bass realization exercises and melody harmonization exercises. F, Sp, S on demand.

MUS 172—Keyboard Harmony II (1,2)
Prerequisite: MUS 171 and/or permission of instructor. Concurrent enrollment in MUS 126 and 127 is required

Continuation of MUS 171 with the addition of playing secondary harmonic progression patterns and transposition in chromatic keys. F, Sp, S on demand.

MUS 173—Class Instruction, Voice (1,2)
A college transfer course; consult the C&CSC for more details.

An introductory class in voice training geared to the student who does not want to take private lessons. Breathing, sound production, diction, posture, learning of songs and other basic techniques are covered in class. F, Sp.

MUS 174—Class Instruction, Voice (1,2)
A college transfer course; consult the C&CSC for more details.
Prerequisite: MUS 173 or consent of instructor.

Continuation of MUS 173—with emphasis on vocal literature. Sp, On demand.

MUS 175—Class Instruction, Brass (1,2)
A college transfer course; consult the C&CSC for more details.

An introduction and subsequent advancement in playing cornet, trumpet, flugel horn and French horn. Learn correct embouchure and finger technique and reading in treble and bass clefs. On demand.

MUS 176—Class Instruction, Brass (1,2)
A college transfer course; consult the C&CSC for more details.

An introduction and subsequent advancement on low brass instruments, i.e., trombone, baritone and tuba. Correct embouchure, finger technique and slide technique, coupled with learning to read bass clef music. On demand.

MUS 177—Class Instruction, Woodwinds (1,2)
A college transfer course; consult the C&CSC for more details.

Class instruction in beginning clarinet, saxophone and flute with an emphasis on materials and unique problems in teaching beginning students to play these instruments. On demand.

MUS 178—Class Instruction, Woodwinds (1,2)
A college transfer course; consult the C&CSC for more details.
Prerequisite: MUS 177 or permission of instructor.

Continuation of MUS 177. Class instruction on the double reeds with attention to problems in teaching beginning oboe and bassoon including the study of various methods, materials and reed adjusting. On demand.

MUS 179—Class Instruction, Strings (1,2)
A college transfer course; consult the C&CSC for more details.

Violin and viola playing and teaching for instrument and music education majors. On demand.

MUS 180—Class Instruction, Strings (1,2)
A college transfer course; consult the C&CSC for more details.

Cello and bass playing and teaching for instrument and music education majors. On demand.

MUS 181—Class Instruction, Percussion (1,2)
A college transfer course; consult the C&CSC for more details.
Techniques and performance on percussion instruments. On demand.

MUS 183—Jazz Combo (1,2)
A college transfer course; consult the C&CSC for details.
Prerequisite: Audition, invitation or consent of instructor.
Open to experienced community and student jazz performers. Repertoire will be drawn from traditional and contemporary composers from the beginning of the twentieth century to present. On demand.

MUS 184—Brass Ensemble (1,2)
A college transfer course; consult the C&CSC for details.
Prerequisite: Audition, invitation or consent of instructor.
Open to experienced community and student Brass players. Repertoire will be drawn from traditional and contemporary composers written and/or arranged for brass ensemble. On demand.

MUS 185—Percussion Ensemble (1,2)
A college transfer course; consult the C&CSC for details.
Prerequisite: Audition, invitation or consent of instructor.
Open to experienced community and student Percussion players. Repertoire will be drawn from traditional and contemporary composers written and/or arranged for percussion ensemble. On demand.

MUS 186—Woodwind Ensemble (1,2)
A college transfer course; consult the C&CSC for details.
Prerequisite: Audition, invitation or consent of instructor.
Open to experienced community and student Woodwind players. Repertoire will be drawn from traditional and contemporary composers written and/or arranged for woodwind ensemble. On demand.

MUS 216—Music Theory III (3,3)
Prerequisite: MUS 126 and/or permission of instructor. Concurrent enrollment in MUS 217 is required
Continuation of MUS 126 with the addition of three types of chromatic harmony: augmented sixth chords, Neapolitan sixth chords, and non-dominant fully-diminished seventh chords. Tertian chords of ninth, eleventh, and thirteenth; altered dominants; and chromatic mediants will also be taught. The principles of the fugue, variation techniques, sonata and rondo forms will be presented. F, on demand.

MUS 217—Ear Training and Sight Reading III (1, 2)
Prerequisite: MUS 127 and/or permission of instructor. Concurrent enrollment in MUS 216 is required
Continuation of MUS 127 with the addition of singing, writing, and dictation in all types of chromatic harmony. F, on demand.

MUS 218—English Diction (1,2)
A college transfer course; consult the C&CSC for more details.
Prerequisite: Music majors or permission of instructor.
English diction for singers. An introduction to correct pronunciation of English songs and arias. On demand.

MUS 219—French Diction (1,2)
A college transfer course; consult the C&CSC for more details.
Prerequisite: Music majors or consent of instructor.
This course is designed to aid voice majors in the pronunciation of French songs. Emphasis is on diction only. Grammar is not taken up at all. The International Phonetic Alphabet is introduced to assist in the recognition of sounds. Besides being a diction class, a considerable amount of songs are learned with the help of recordings, thus acquainting the students with more French song repertoire. On demand.

MUS 220—Introduction to Rock 'n Roll (3,3)
A college transfer course; consult the C&CSC for more details.
A study of contemporary pop music and its background from the early 1900's to today. Course shows the influence of earlier pop music, jazz, blues, and rock on today's music through style (jazz, rock, soul, disco); medium (concerts, film, television, recordings); sociological implications (poverty, prejudice, drugs); and through the message conveyed (lyrics, literature, art). Fee. F, Sp.

MUS 221—Introduction To Jazz (3,3)
A college transfer course; consult the C&CSC for more details.
This course will introduce students to the history and fundamental characteristics of jazz. Emphasis will be placed on the contributions of performers and their individual styles. F, Sp.

MUS 223—Introduction to African American Music (IAI: F1905D) (3,3)
A college transfer course; consult the C&CSC for more details.
This course will introduce students to the history and fundamental characteristics of African American music. Emphasis will be placed on the stylistic characteristics, performers, and the social influences of each time period and/or style. F,Sp,S.

MUS 225—Introduction to Music Technology (3,3)
An introduction to the world of electronic music, with an emphasis on digital synthesis, microcomputer applications, and the MIDI (musical instrument digital interface) standard. Students will study the principles of sound synthesis, learn to operate standard components of a MIDI studio and use computer software to record and play MIDI sequences. Students will be expected to schedule two hours per week in the Music Technology Studio.) F, Sp, S, on demand.

MUS 226—Music Theory IV (3,3)
Prerequisite: MUS 216 and/or permission of instructor. Concurrent enrollment in MUS 227 is required

Continuation of MUS 216. The course covers harmonic materials in post-tonal music, musical styles of post-Romantic and Impressionistic music, set theory, twelve-tone techniques and other twentieth-century compositional techniques. Sp, on demand.

MUS 227—Ear Training and Sight Reading IV (1,2)
Prerequisite: MUS 217 and/or permission of instructor. Concurrent enrollment in MUS 226 is required

Continuation of MUS 217 with an emphasis on singing, writing and dictation in post-tonal and atonal melodic and harmonic material. Sp, on demand.

MUS 228 – Music Technology II (3,3)
Prerequisite: MUS 225 or consent of instructor.

A continuation of MUS 225 Introduction to Music Technology, with an emphasis on digital music publishing techniques. Students will expand their study of the principles of sound syntheses, manage standard components of a MIDI studio, and use computer software in composition. Students will be expected to schedule two hours per week in the Music Technology Studio. F, Sp, S, on demand.

MUS 231-245—Advanced Applied Music (2,4)
Some sections are intended as college transfer courses; consult the C&CSC for more details.
Prerequisite: MUS 131-145

Major instrumental or voice. Continuation of MUS 131-145 at sophomore level. 15 one-hour lessons per semester; minimum of two hours practice per day. Piano, 231; Voice, 233; Brass, 235; Woodwinds, 237; Strings, 239; Percussion, 241; Organ 243; Classical Guitar, 245. May be repeated once for credit. F, Sp.

MUS 246—Private Intermediate Composition (2,4)
Prerequisite: MUS 146, and/or permission of instructor.

Continuation of MUS 146. Composition at the secondary stages. Areas of concentration include organization of pitch, rhythm, and harmony from phrase to section to short form construction in post-tonal and atonal music; analysis of the late Romantic and twentieth-century composers' repertoire; instruction in range, characteristics, and idiom of instruments and voice; and writing of short musical forms for simple media. 15 one-hour lessons per semester. F, Sp.

MUS 251-265—Advanced Applied Music (1,2)
Some sections are intended as college transfer courses; consult the C&CSC for more details.
Prerequisite: MUS 151-165

Minor instrument or voice. Continuation of MUS 151-165 at sophomore level. One half-hour lesson per week. Piano, 251; Voice, 253; Brass, 255; Woodwinds, 257; Strings, 259; Percussion, 261; Organ, 263; and Classical Guitar, 265. May be repeated once for credit. Fifteen half-hour lessons per semester. F, Sp, S.

MUS 271—Keyboard Harmony III (1,2)
Prerequisite: MUS 172 and/or permission of instructor. Concurrent enrollment in MUS 216 and 217 is required

Continuation of MUS 172 with the addition of playing secondary dominant and chords of modal mixture. F, Sp, S on demand.

MUS 272—Keyboard Harmony IV (1,2)
Prerequisite: MUS 271 and/or permission of instructor. Concurrent enrollment in MUS 226 and 227 is required

Continuation of MUS 271 with the addition of playing Augmented Sixth Chords and Neapolitan Sixth chord. F, Sp, S on demand.

Music Performance Organizations

MUS 187—South Suburban College Voices (1,3)
A college transfer course; consult the C&CSC for details.

Open to experienced community and student vocalists. Performance of a broad spectrum of vocal music with emphasis on vocal jazz. F, Sp.

MUS 189—Madrigal Singers (1,2)
A college transfer course; consult the C&CSC for more details.
Prerequisite: Audition required

A select ensemble of singers specializing in Medieval, Renaissance and Baroque music and music for chamber ensemble from other eras. May be repeated three times for credit. On demand.

MUS 190—South Suburban Chorale (1,3)
A college transfer course; consult the C&CSC for more details.

Open to experienced community and student vocalists. Performance of major works of the choral repertoire, especially those involving instrumental accompaniment, two concerts per semester. F, Sp.

MUS 191—Opera Workshop (2,4)
A college transfer course; consult the C&CSC for more details.

Open to voice students with a minimum of one year of voice study on the collegiate level. Students will become acquainted with all phases of opera production, with emphasis on chamber opera work and excerpts from larger works. May be repeated once for credit. On demand.

MUS 195—Symphonic Band (1,3)
A college transfer course; consult the C&CSC for more details.

Open to experienced community and student instrumentalists. Repertoire drawn from standard and contemporary compositions utilizing full instrumentation. May be repeated three times for credit. Two concerts per semester. F, Sp.

MUS 197—Jazz Band (1,3)
A college transfer course; consult the C&CSC for more details.

Jazz, popular, and jazz-rock music utilizing commercial arrangements and those of director and students. May be repeated three times for credit. Open to experienced community and student instrumentalists. Two concerts per semester. F, Sp.

MUS 198—Orchestra (1,3)
A college transfer course; consult the C&CSC for details.

Open to experienced community and student orchestral performers. Repertoire will be drawn from traditional and contemporary composers. On demand.

MUS 199—Chamber Ensemble (1,2)
A college transfer course; consult the C&CSC for more details.

Literature for string, wind, percussion, brass and classical guitar. May be repeated once for credit. On demand.

Nanoscience

NAN 120—Fundamentals of Nanoscience I (4,6)
Prerequisites: ENG 101, BIO 105, MTH 165

This course will study the field of nanotechnology, the capability to observe and manipulate systems at the molecular or atomic scale that is affecting all traditional sciences. The course will provide an introduction to the history, tools, materials, current and emerging applications of nanotechnology.

NAN 130—Fundamentals of Nanoscience II (4,6)
Prerequisites: Approval by the Coordinator

This course will study the field of nanotechnology related to the fields of chemistry and physics. The course will emphasize the impact of new developments in nanotechnology. Atomic structure, bonding, photonics, quantum effects, and wave/particle structure will be discussed with a focus on nanotechnology. Feasibility of implementation will be covered, as well as the development of a nanoscale understanding of properties such as color, magnetism, electrical forces, strength and rigidity.

NAN 220—Nanoelectronics (4,6)
Prerequisites: Approval by the Coordinator

This course will cover the state of the art processes currently used for the fabrication of microelectronic and nanoelectronic devices. Students will learn to qualify and use semiconductor process equipment, inspect devices and perform electrical measurements on semiconductor devices. Considerations such as cost, manufacturing methodology, and societal impacts will be covered. Approaches for the development of quantum computers, holographic memories, and biological systems will be discussed.

NAN 230—Nanobiotechnology (4,6)
Prerequisites: Approval by the Coordinator

Studies the use of nanotechnology as it applies to biological and agricultural applications. Includes detecting and identifying DNA and proteins; drug delivery and medical imaging; mimicking biological systems to develop catalysts; nanoscale movement and information systems; and nanotechnology for agricultural applications such as ethanol production, sorbitol-based fuel cells, genetics, and uses of cellulose.

NAN 240—Nanomaterials (4,6)
Prerequisites: Approval by the Coordinator

Discusses the opportunity and challenge of nanomaterial-based products from pharmaceutical coatings to smog-reducing paints to individual crystal structure determination. Includes manufacturing processes along with reliability and quality control aspects.

NAN 250—Nanomanufacturing (4,6)
Prerequisites: Approval by the Coordinator

Presents an overview of quality methods as they relate to nanotechnology. Emphasizes statistical process control (SPC), design of experiments (DOE), gage repeatability and reliability (R & R), statistical significance, correlation, team-based problem solving, failure mode analysis, theory of inventive thinking (TRIZ), graphical statistical analysis, analysis of variance (ANOVA), and an introduction to ISO certification.

NAN 260—Nano Techniques (3,6)
Prerequisites: Approval by the Coordinator

Provides experimental exploration of an authentic scientific research topic under the supervision of a faculty member. This laboratory course is designed to teach the principles and practice of modern experimental nanotechnology.

NAN 299—Nano Internship (2,4)
Prerequisites: Approval by the Coordinator

Applies and expands nanoscience skills and knowledge in a research or industrial setting. This will provide students with authentic experiences using nanoscience instrumentation. Students must complete a minimum of 225 contact hours and submit a final report to earn credit hours.

Nursing-Basic Nurse Assistant Training Program (CNA)

NAS 100–Nurse Assistant Training Program (6,18)

The program offers instruction in lecture, campus laboratory, and supervised clinical experience. The student will learn basic nursing skills through 9-modules: Introduction to Health Care; Resident Rights and Responsibilities; Infection Control; Emergency Procedures; Injury Prevention in the Health Care Environment; Care of the Resident; Fundamentals of Rehabilitation/Restorative Nursing; End of Life Care; and Alzheimer's Disease and Related Dementias. Attendance is mandatory as prescribed by the Illinois Department of Public Health. Students are required to complete a minimum of 80 hours of theory/lab and 40 hours of clinical. Application of skills occur in the lab and long-term health care facilities. Upon successful completion of the program, the student is eligible to take the Illinois Nurse Aide Competency Exam (INACE). The Illinois Department of Public Health approves the Basic Nurse Assistant Training Program (BNATP). This program includes a lab and clinical component. Fee, F, Sp, S.

Nursing-Associate Degree (RN)

ADN 150—Fundamentals of Nursing (7,13)

Prerequisites: ENG 101, BIO 102, PSY 101, MTH 115 and admission to the program

Fundamentals of Nursing is a course that introduces fundamental nursing concepts, including patient assessment, safety, quality, patient-centered nursing care across the lifespan focused on diverse patients with uncomplicated healthcare conditions. Includes introduction to legal and ethical responsibilities of the nurse. Introduces caring, quality improvement, and communication used when interacting with patients and members of the interprofessional team. Introduces how nurses relate using clinical reasoning/nursing judgment, the nursing process, and evidence-based nursing practice. Includes fundamental principles of pharmacology and basic dosage calculations. Application of knowledge and skills occurs in the nursing skills laboratory, and/or simulation, and a variety of healthcare settings. Fee. F.

ADN 152—Intro to Medical-Surgical Nursing (7,13)

Prerequisites: ADN 150 or admission to LPN-RN bridge option, BIO 185, PSYCH 211

Introduction to Medical-Surgical Nursing is a course that assists with acquisition and application of basic medical/surgical nursing theory for adult patients, incorporating communication, collaboration, caring, and clinical reasoning/nursing judgment necessary for safe, patient-centered nursing care to diverse adult patients experiencing uncomplicated acute and chronic conditions requiring medical/surgical interventions. Incorporates evidence-based practice, quality improvement, professional standards, and legal and ethical responsibilities of the nurse. Includes principles of pharmacology and dosage calculations used in the care of adult patients. Application of knowledge and skills occurs in the nursing laboratory and/or simulation, and a variety of healthcare settings. Fee. S.

ADN 252—Intermediate Medical-Surgical Nursing (4,16)

Prerequisites: ADN 152, BIO 186, SOC 101

Intermediate Medical-Surgical Nursing builds on Introduction to Medical Surgical Nursing, focusing on concepts of nursing applied to the care of medical-surgical patients experiencing complicated chronic and acute health conditions, incorporating communication, collaboration, caring, and clinical reasoning/nursing judgment necessary for safe, patient-centered nursing care. Integrates evidence-based practice, quality improvement, professional standards, and legal and ethical responsibilities of the nurse. Includes principles of pharmacology and dosage calculations used in the care of adult patients. Application of knowledge and skills occurs in the nursing skills laboratory and/or simulation, and a variety of healthcare settings. Fee .F.

ADN 254—Childbearing Family and Children (4,16)

Prerequisites: ADN 152, BIO 186, SOC 101

Childbearing Family and Children applies nursing theory to the care of the childbearing family and children. This is a course that incorporates communication, collaboration, caring, and clinical reasoning/nursing judgment necessary for safe, patient-centered nursing care to women, the newborn, the family, and children. Integrates evidence-based practice, quality improvement, professional standards, and legal and ethical responsibilities of the nurse. Includes principles of pharmacology and dosage calculations applicable to the maternity patient, newborns, and children. Application of knowledge and skills occurs in the nursing laboratory and/or simulation, and a variety of healthcare settings. Fee. F.

ADN 256—Advanced Medical-Surgical Nursing (4,16)
Prerequisites: ADN 252, ADN 254, BIO 224 and Humanities elective

Advanced Medical-Surgical Nursing course builds on the previous Medical Surgical Nursing I courses, focusing on concepts of medical/surgical nursing theory applied to the care of adult medical surgical patients experiencing complex and unstable acute and chronic health conditions, incorporating communication, collaboration, caring and clinical reasoning/nursing judgment necessary for safe, patient-centered nursing care. This course integrates evidence-based practice, quality improvement, professional standards, and legal and ethical responsibilities of the nurse. Principles of pharmacology and dosage calculations applicable to the adult patient with complex healthcare issues are also presented. Application of knowledge and skills occurs in the nursing skills laboratory, and/or simulation, and a variety of healthcare settings. Fee. S.

ADN 257—Behavioral Health Nursing (4,16)
Prerequisites: ADN 252, ADN 254, BIO 224 and Humanities elective

Behavioral Health Nursing provides for the acquisition and application of psychiatric and mental health nursing theory, incorporating communication, collaboration, caring and clinical reasoning/nursing judgment necessary for safe, patient-centered nursing care. Integrates evidence-based practice, quality improvement, professional standards, and legal and ethical responsibilities of the nurse. Includes principles of pharmacology and dosage calculations applicable to patients requiring psychiatric/mental health interventions. Application of knowledge and skills occurs in the nursing skills laboratory and a variety of healthcare settings. Fee. S.

ADN 258—Transition into Practice (2,4)
Prerequisites: ADN 252, ADN254 , BIO 224 and Humanities elective

Transition into Nursing Practice course facilitates the transition of the student into the role of a professional nurse. Previously learned concepts continue to be emphasized along with evidence-based practice, quality improvement, and leadership. Emphasis is placed on contemporary issues, appreciation of human diversity, cultural competence and management concepts. Principles of delegation and conflict management will be emphasized. Strategies for personal and professional development will guide short term and long-term career goals. Legal and ethical issues are discussed with a focus on personal accountability and responsibilities. Standards of practice and the significance of functioning according to the state regulations and statutes are analyzed. Writing assignments as appropriate to the discipline are a part of this course. Fee. S.

Nutrition

NTR 100—Basic Nutrition (2,2)

This course covers the essential science foundation of basic nutrition and examines the role nutrition plays in health promotion and disease prevention throughout the life span. Knowledge and the tools necessary to recognize reliable information and apply nutrition to one's personal life are explored.

Occupational Therapy Assistant

OTA 101—Introduction to Occupational Therapy(3,3)
Open enrollment; program admission not required.
Prerequisites: ENG 101

Overview of the profession of occupational therapy with an emphasis on its history, philosophy, and the nature of occupation. Explore the role of occupational therapy practitioners in various practice settings.

OTA 102—Fundamentals of Occupational Therapy (4,6)
Prerequisite: Approval of coordinator

The study of occupational performance/roles and its affect on individuals who have had a physical disability. Lab experiences include training in adaptive activities of daily living, evaluation and mechanics of the wheelchair, accessibility issues and mobility. Fee.

OTA 103—Practice Skills and Techniques I (4,6)
Prerequisite: Approval of coordinator

The role of the COTA in the application of various assessments utilized during the occupational therapy process. Emphasis on treatment methods and techniques used in occupational therapy intervention for problems identified from the assessment data, medical chart and interview. These methods and techniques will be discussed and demonstrated. Fee.

OTA 104—Occupational Therapy Fieldwork I (2,9)
Prerequisite: Approval of coordinator

This Level I experience introduces the student to health care and community service agencies. Includes placement in various practice settings for orientation and observation of the occupational therapy process and the role of the OTA. Emphasis is based on adult physical dysfunction. Fee.

OTA 105—Occupational Therapy Interactions (2,2)
Prerequisite: Approval of coordinator

Principles of human interactions and problem solving techniques for developing therapeutic relationships are introduced in this course. Concept such as therapeutic use of self, stress management techniques and communication/ rapport are discussed and practiced.

OTA 108—Foundations of Occupational Therapy (2,2)

Prerequisite: Approval of coordinator

This course is the first course of the OTA program and is an overview of philosophies of occupational therapy, and the occupational therapy framework. The course serves as a foundation for clinical practice in the areas of analysis of activity, occupational performance and philosophy, motor learning and the group process.

OTA 201—Principles of Psychosocial Dysfunction (3,5)

Prerequisite: Approval of coordinator

Theory and techniques of occupational therapy with individuals who have been diagnosed with a mental illness. Occupational Therapy techniques such as the therapeutic use of self, group process and purposeful activities are emphasized. Experiences with group development and implementation will be stressed in the course, on fieldwork and in the community. Fee.

OTA 202—Principles of Physical Dysfunction (4,6)

Prerequisite: Approval of coordinator

Theory and techniques of occupational therapy with individuals who have had a medical, neurological, or orthopedic condition. Emphasis will be placed on occupational therapy intervention, activities of daily living, and adaptation of tasks for the conditions listed above. Fee.

OTA 203—Principles of Developmental Dysfunction (4,6)

Prerequisite: Approval of coordinator

Theory and techniques of occupational therapy in medical, neurological and orthopedic conditions affecting children, with emphasis on normal development, family roles, activities of daily living, and adaptation. Emphasis will be placed on occupational therapy intervention for the conditions listed above. Fee.

OTA 204—Occupational Therapy Fieldwork II (2,8)

Prerequisite: Approval of coordinator

This Level I fieldwork experience introduces the student to health care and community service agencies. Includes placement in various practice settings for orientation and observation of the occupational therapy process and the role of the OTA. Emphasis is based on developmental dysfunction and mental illness.

OTA 205—Professional Issues in Occupational Therapy (2,2)

Prerequisite: Approval of coordinator

Professional issues related to occupational therapy including: documentation, reimbursement, management skills, quality assurance, supervision issues, occupational therapy ethics and the credentialing process are addressed in this course.

OTA 210—Practice Skills and Techniques II (3,5)

Prerequisite: Approval of coordinator

An introduction to therapeutic activities, with concentration on the ability to analyze activities, the group process and methods of instruction/teaching. Emphasis will be on the occupational therapy group process and the student's ability to identify the purpose of therapeutic activities in occupational therapy intervention. Fee.

OTA 212—Occupational Therapy Internship I (5,16)

Prerequisite: Successful completion of academic prerequisites and approval of coordinator

Internship experience in a health care setting under direct supervision. Internship is application of knowledge acquired and skills learned in prerequisite courses. Level II Internship must be completed within 18 months following completion of academic preparation.

OTA 213—Occupational Therapy Internship II (5,16)

Prerequisite: Successful completion of academic prerequisites and approval of coordinator

Internship experience in a health agency under supervision. Internship is application of knowledge acquired and skills learned in prerequisite courses. Level II Internship must be completed within 18 months following completion of academic preparation. Malpractice insurance.

Office Administration & Technology

Unless otherwise indicated, all OAT courses are offered during fall and spring semesters. Students registering for online courses need to have the appropriate software, hardware, an Internet connection and know how to email with attachments, download files and unzip them.

OAT 100—Basic Keyboarding Skills (1.5,2)

Development of basic touch keyboarding skills for persons who will be using computer terminals for processing information. Fee.

OAT 101—Document Formatting I (3,4)

Prerequisite: MIS 101

Using the computer, the student with previous keyboarding/typing instruction will, by touch, review the numbers and symbols and will drill to improve speed and accuracy. Language arts skills, centering, business correspondence, reports, and tables will be introduced. Fee.

OAT 104—Keyboard Skill Building (3,4)

Prerequisite: Knowledge of the keyboard and ability to type by touch. Cannot be taken concurrently with OAT106

This course will help to improve accuracy and increase speed at the computer keyboard using a diagnostic approach of error analysis. Corrective methods will be used based on individual's particular keyboarding needs. Ability to keyboard by touch is necessary prior to enrolling in this course. Online Students must have their own access to the appropriate hardware including a printer. Fee.

OAT 106—Keyboard Refresher (1.5,2)

Prerequisite: Ability to type by touch cannot be taken concurrently with 104

This course will continue to improve accuracy and increase speed at the computer keyboard using a diagnostic approach of error-analysis. Corrective methods will be used based on individual's particular keyboarding needs. Online students must have their own access to the appropriate hardware including a printer. Fee.

OAT 115—Microsoft Outlook (1,1.5)

Students will learn to use a desktop information management application, Outlook, to manage and integrate Outlook components and integrate Outlook with other Office applications. Fee.

OAT 116—SharePoint (1,1.5)

This course is designed to introduce students to the use of SharePoint in a business environment. Students will learn how to navigate, organize and customize SharePoint as well as integrate its use with other software applications.

OAT 128— Microsoft Word (3,4)

Prerequisite: MIS 101 required, MIS 110 and OAT 101 recommended

*Excellent preparation for the MOS EXAM.

This course is designed to provide students with instruction in the beginning and advanced functions of Microsoft Word including creating, editing, storing, enhancing, merging and printing documents as well as creating headers, footers, footnotes, endnotes, tables, charts, macros and adding images. Working with styles, creating fill-in forms, and sorting is also covered. Previous keyboard experience necessary. Online students must have an Internet connection, be familiar with downloading and uploading files, and have access to current version of Microsoft Office, including Word, Access and Excel. Fee.

OAT 132— Microsoft Access (3,4)

Prerequisite: MIS 101 required, MIS 110 recommended

*Excellent preparation for the MOS EXAM.

This microcomputer application course introduces the following database functions: create, edit, sort, index, and print a data file or table; develop queries to extract information from the file, design and generate reports including derived columns and calculations, design graphs using Graph Wizard; link files by relating one file to another; and write macros. Previous keyboard/typing instruction is necessary to create business letters, business reports, memorandums, tables, etc. Online students must have an Internet connection, be familiar with downloading and uploading files, and have access to current version of Microsoft Office, including Word, Access and Excel. Fee.

OAT 135—Fundamentals of Desktop Publishing (3,3)

This course is designed to provide students with an introduction to a variety of desktop publishing tools for use in creating brochures, reports, and PDF documents for use in the workplace.

OAT 143— Microsoft Excel (3,4)

Prerequisite: MIS 101 required, MIS 110 recommended

*Excellent preparation for the MOS EXAM.

This course is designed to provide students with instruction in the basic as well as advanced features of Microsoft Excel, including the design and development of spreadsheets, creating charts, creating macros, working with lists, data tables, and scenarios, integrating with other Windows programs and the World Wide Web, and importing data into Excel. Ability to keyboard will be necessary to input text and numeric data. A knowledge of basics in accounting and/or business, though not required, would be helpful. Online students must have an Internet connection, be familiar with downloading and uploading files, and have access to current version of Microsoft Office, including Word, Access and Excel. Fee.

OAT 155— Microsoft PowerPoint (3,4)

Prerequisite: MIS 101 required, MIS 110 recommended
*Excellent preparation for the MOS EXAM.

This course is designed to provide students with instruction in the basic as well as advanced features of Microsoft PowerPoint, producing a quality, professional slide presentation to be used as overhead transparencies, an electronic presentation using a projection device attached to a personal computer, 35 mm slides, or run as a virtual presentation on the Internet. Students will learn to design presentations enhanced with graphics and sound as well as video clips. Keyboarding ability is necessary for entering text. Online students must have an Internet connection, be familiar with downloading and uploading files, and have access to current version of Microsoft Office, including Word, PowerPoint and Excel. Fee. F on campus. F, Sp online.

OAT 170—Business English (3,4)

Prerequisite: English 098 or exempt by Placement test.

This course covers English fundamentals, sentence structure, punctuation, business vocabulary and spelling. Online students must have access to an Internet connection. Fee.

OAT 172—Business Communication (3,4)

Prerequisite: ENG 098 or exempt by Placement test; OAT 170 recommended

Effective communication is studied with an emphasis on using written communication in a business environment. Activities include memos, letters, reports, resumes, and electronic mail. Proper spelling, punctuation, document formatting, and grammar are stressed. Online student must have access to an Internet connection and Word 2010 or higher. Fee.

OAT 173—Internet Applications (3,4)

This comprehensive course teaches the Internet Explorer browser and how to find information on the Internet using hyperlinks, search engines, email, FTP, listservers, chat, and conferencing. Students will also learn how to create web pages using Composer and HTML. Fee.

OAT 177—Dreamweaver (3,4)

Prerequisite: MIS 110 recommended, OAT 173

This course is designed to present more sophisticated tools to enhance web pages. Students will create web pages that incorporate forms, tables, frames, image maps, original animated graphics, and style sheets. Fee.

OAT 201—Administrative Support Procedures (3,3)

Prerequisites: OAT 128 and OAT 202 recommended

This course provides development of knowledge and skills that will be demanded on the job as well as communication and human relations skills necessary for a changing work environment. Concepts covered will include how to succeed in a diverse office environment, process technological information, communicate effectively, manage information, make travel and conference arrangements, begin and move ahead in a career as an administrative assistant. Students are provided an opportunity to apply what they have learned through the use of hands-on and records management simulations. Fee.

OAT 202—Document Formatting II (3,4)

Prerequisites: OAT 101; OAT 128 with a minimum grade of "C"

Students use the microcomputer and current word processing software to further develop keyboarding skills. This course also emphasizes the production of a wide range of typical business correspondence, tables, reports and forms from non-arranged and rough-draft sources based on current office practices. Online students must have their own access to an Internet connection, access to the appropriate hardware and software including Word 2013. Fee.

OAT 231—Administrative Support Internship (3, arranged)

Prerequisites: 2.0 Grade Point Average and consent of instructor.

This course provides students an opportunity to receive college credit by being employed in an administrative support position. The college will assist the student in finding and maintaining a coordinator approved work-site. Students are expected to login once a week to participate in online learning activities.

OAT 296—Special Topics in Office Administration & Technology (Variable,1-8)

This course addresses the rapid changes in the Office Administration and Technology (OAT) field by presenting leading edge subjects. The subject matter or topics will vary depending on changes in the industry. Fee.

For Additional Computer Courses: See Computer Information Sciences

Overview For College Success

OCS 121—Overview for College Success (1,1)

Overview for College Success (OCS 121) is a class that will help you plan and assist you in becoming a better student and support you in your work/life balance.

Student must enroll in OCS 121 if they meet ALL five of the following:

- First time degree seeking students
- Transfer student with less than 12 credit hours and no evidence of similar course on transcript
- Registering for 6 or more credits
- Test into 2 or more developmental classes
- Currently does not have OCS credit or registered for OCS

Paralegal

PLA 101—Fundamentals of Paralegalism (3,3)

This course is designed to give students a basic understanding of the various functions of the legal assistant in the American legal system and to build a foundation of basic knowledge and skill development which is necessary for someone seeking a career in the paralegal/legal assistant field. F,Sp.

PLA 103—Law Office Technology (3,3)

This course focuses on technology in the law office setting. Emphasis will be placed on completion of assignments demonstrating proficiency in various applications used in a law office as well as demonstrating proficiency with the issues created by technology in the law office. This course is designed to give the student both substantive and practical knowledge of law office technology and the issues that such technology creates. Consequently the assessment of the student will be based on 50% practical application and 50% theoretical knowledge. Sp.

PLA 201—Evidence and Investigation (3,3)

The course deals with discovery and preparation for trial. It includes the use of private investigators, techniques of preserving evidence, legal discovery tools and evidentiary rules governing discovery. This course is designed to give the student both theoretical and practical knowledge in the field of Evidence and Investigation. Consequently, the assessment of the student will be based on 50% practical application and 50% theoretical knowledge. Sp.

PLA 202—Litigation (3,3)

This course offers instruction on civil litigation procedures commencing from the initial client interview to and including the trial. Emphasis will be placed on procedures authorized under the provisions of the code of civil procedure. Special emphasis will be placed on the content and preparation of documents used in civil law suits. This course is designed to give the student both theoretical and practical knowledge in the field of Litigation. Consequently, the assessment of the student will be based on 50% practical application and 50% theoretical knowledge. F.

PLA 203—Legal Research and Writing I (3,3)

Prerequisites: ENG 101, BLW 201, and PLA 101, admission to the program

Practical training in the process of legal writing, research and analysis in two semesters. Hands-on approach to fact gathering, including interviewing; organization and interpretation; identifying basic legal theories and issues; briefing reported decisions; conducting traditional law library research; introduction to conducting electronic legal research; legal analysis and communicating applicable law via routine internal memorandum of law and opinion letters; and drafting routine legal correspondence, routine documents, pleadings, and discovery tools. Sp.

PLA 204—Paralegal/Legal Assistant Internship (3,11)

Prerequisites: Completion of PLA 101, BLW 201, 202, SPE 108, PLA 201, 202, 203; admission to the program, and approval of internship site by instructor. PLA 205 may be taken concurrently.

For students in the Paralegal/Legal Assistant Program. Required for students during their last semester of the program. Students gain on-the-job training in a coordinator approved or current employment approved business and/or a legal related site. Students will work a minimum of 210 hours over the course of the semester (15 hours per week for a period of 14 weeks during the fall or spring semester, or 26.25 hours for a period of 8 weeks during the summer semester). F, Sp, S hybrid (online & classroom.)

PLA 205—Legal Research and Writing II (3,3)

Prerequisite: Successful completion of PLA 203

A continuation of PLA 203, providing more in-depth, hands-on training in the process of legal writing, research and legal analysis so that the student is prepared to excel in the real world as a legal researcher and writer. Particular attention will be paid to: cover letter and resume drafting, drafting of forms, opinion letters, and the intra-office memorandum. F.

PLA 207—Real Property Practice (3,3)

Book principles of Real Property law, recording, title protection, legal descriptions, mortgages, deeds, closings, and leases. Emphasis will be placed on completion of instruments and other practicabilities of real estate law. This course is designed to give the student both theoretical and practical knowledge in the field of Real Estate. Consequently, the assessment of the student will be based on 50% practical application and 50% theoretical knowledge. Sp.

PLA 208—Law of Family Relations (3,3)

Course concerns basic understanding of Illinois family law, with emphasis on dissolution of marriage. Course also deals with the practicabilities, i.e., preparation of necessary documents, Cook County filing procedures and interview techniques. This course is designed to give the student both theoretical and practical knowledge in the field of Family Law. Consequently, the assessment of the student will be based on 50% practical application and 50% theoretical knowledge. Sp.

PLA 209—Estate Planning and Probate Law (3,3)

An introduction to the laws related to Estate Planning and Probate and training in the role of Paralegal as to estate planning and administration of estates, testate and intestate. This course is designed to give the student both theoretical and practical knowledge in the field of Estate Planning. Consequently, the assessment of the student will be based on 50% practical application and 50% theoretical knowledge. F Online.

PLA 210—Criminal Law for the Paralegal (3,3)

The course will provide the student with practical paralegal experience in investigation of the criminal case including preparation of documents, interview and preparation of witnesses and trial assistance. This course is designed to give the student both theoretical and practical knowledge in the field of Criminal Law. Consequently, the assessment of the student will be based on 50% practical application and 50% theoretical knowledge. F.

PLA 211—Alternate Dispute Resolution for the Paralegal (3,3)

This course will provide students with a description and overview of alternate dispute resolution mechanisms, voluntary and mandatory court-ordered arbitration, negotiation, mediation, mediation-arbitration, private judging and early neutral evaluation. The course will focus on client needs regarding the use of ADR, and will explore the changing climate of litigation-oriented practices. Paralegal participation and ethical concerns will be discussed in the context of each of these alternatives. This course is designed to give the student both theoretical and practical knowledge in the field of Alternative Dispute Resolution. Consequently, the assessment of the student will be based on 50% practical application and 50% theoretical knowledge. F.

PLA 212—Elder Law (3,3)

An introduction to the field of Elder Law. Areas of concentration include Introduction to Elder Law, Health Care and the Elderly, Employment, Housing, Guardianship, Elder Abuse, and Assistance for the Elderly. This course is designed to give the student both theoretical and practical knowledge in the field of Elder Law. Consequently, the assessment of the student will be based on 50% practical application and 50% theoretical knowledge. Sp. Online

PLA 213—Topics in Law (3, 3)

Contemporary critical legal issues and trends. Analysis and evaluation of statutes, regulations, and cases as well as notable secondary authorities. The topics may vary each semester and include such topics as the Americans with Disabilities Act, Constitutional Law, Bankruptcy, Workers Compensation, etc. This course may be repeated up to a maximum of 9 credit hours.

Patient Care Technician

PCT 200 —PCT Cert. Review (1,1)

A college transfer course; consult the C&CSC for more details. (if applicable)

Prerequisite: Admission to the PCT program

This course will prepare students to take the National Healthcare Association (NHA) exam in the following disciplines: Electrocardiography, Phlebotomy and Patient Care Technician. This course will use practice materials online from NHA. This course provides students with a basic foundation in the five domains of Patient Care, Compliance, Safety, and Professional Responsibility, Infection Control, Phlebotomy and Electrocardiography. Graduates of the PCT certificate will be eligible to sit for the national certification exam as a certified Patient Care Technician, Electrocardiography Technician and Phlebotomist.

Pharmacy Technician

PHT 100—Pharmacy Technician Orientation (3,3)

This course highlights the general practice of pharmacy and the role delineation between pharmacists and technicians. Field trip(s) to pharmacy facilities are included. (This course is similar to PHT 115 but contains NO LAB).

PHT 101—Pharmaceutical Mathematics (3,3)

Prerequisite: Admission to program, MTH 095 or equivalent with a grade of A or B

The student learns how to perform the basic pharmaceutical calculations necessary to dose the patient's medications correctly. The dosage calculations deal with ratio and proportion, percentages, ratio strength, dilution/concentration problems and IV admixture calculations. Registration for this course can only happen twice.

PHT 102—Pharmacy Operations I (3,4)

Prerequisites: Admission to the program

Course simulates daily activities in the pharmaceutical practice settings. Topics include: order entry processes, medication distribution systems, inventory, prescription processing, billing, repackaging, cart fills, floor stock, controlled substance distribution, pharmaceutical computer systems, utilization of drug information resources, and proper communication techniques. Fee.

PHT 103—Sterile Products (3,5)

Prerequisites: PHT 101

Provides an introduction to the operation of an intravenous admixture program. Specific study topics Include: medication and parenteral administration, facilities-equipment-supplies utilized in admixture preparation, techniques utilized in parenteral product compounding, terminology and calculations used in the preparation of parenteral products, parenteral medication incompatibilities, and quality assurance in the preparation of parenteral products. Fee.

PHT 104—Pharmacology I (3,3)

Prerequisites: BIO 115 and admission to the program

Course provides practical knowledge of pharmacology including pharmaceutical nomenclature and classification, mechanisms of drug actions, interactions, indications and contraindications, side effects, and methods of administering therapeutic agents primarily in the nervous, endocrine, skeletal, muscular, cardiovascular, respiratory, and gastrointestinal systems.

PHT 105—Pharmacy Technician Internship I (1,5)

Prerequisite: Approval of coordinator

Application of the basic pharmacy technician concepts in a community pharmacy setting with rotation options in an extended care facility pharmacy or home health care agency pharmacy. Internship requires 150 contact hours. Fee.

PHT 106—Pharmacy Technician Internship II (2,6)

Prerequisite: Approval of coordinator

An advanced level internship rotation in a pharmacy setting such as community hospital or medical center, intravenous home health care facility, drug information center or a customized rotation based on a student's previous experience. Internship includes 16 hours of seminar. Internship requires 150 contact hours. Fee.

PHT 107—Pharmacy Law (1,1)

Prerequisites: Admission to program

Course reviews the laws affecting the pharmacy practice. Course highlights include the Food, Drug and Cosmetic Act, Federal and State Controlled Substance Acts and the State Board of Pharmacy laws.

PHT 108—Pharmacy Operations II (3,4)

Prerequisite: PHT 102 or approval of program coordinator

Emphasis on the expanded responsibilities of pharmacy technicians. Topics include: Insurance processing, inventory control, investigational drugs, compounding activities, clinical pharmacy technician activities, chart reviews, quality assurance, herbal medication, robotics/automation, immunizations, managed care pharmacy, home care pharmacy, long term care, home monitoring units, patient compliance, physical assessment monitoring, technician organization membership and medical/surgical supplies. Fee.

PHT 109—Pharmacology II (3,3)

Prerequisite: BIO 115

Course provides practical knowledge of pharmacology including mechanisms of drug actions, interactions, indications and contraindications, and medication side effects in the following therapeutic categories: dermatology, sensory (eye and ear), immunology, hematology, urinary/renal, infectious disease, oncology, nutrition, toxicology, recombinant technology and over-the-counter medications.

PHT 111—Pharmacy Informatics (3,3)

Prerequisite: Approval of program coordinator

This course will discuss the emerging role of informatics in the profession of pharmacy with special emphasis given to the impact of pharmacy informatics that will have on the role of pharmacy technicians.

PHT 115—Fundamentals of Pharmacy Tech Practice (6,8)

Prerequisite: Open registration

Course provides career entry fundamentals needed to work in a community (or entry) pharmacy setting. Instructions methods include both lecture AND lab, as well as a field trip. (Course is similar to PHT 100 but this course, PHT 115, contains a lab) Fee.

PHT 116—Pharmacy Technician Orientation Lab (3,4)
Prerequisite: Previous or concurrent enrollment in PHT 100
This laboratory course provides the practical application of prescription processing in a community (entry-level) pharmacy setting. Fee.

PHT 118—OTC, Herbal and Alternative Therapy (3,3)
This course offers a review of safe and effective nonprescription (over-the-counter) products used in medical conditions that are self-treatable. These therapies include the OTC medications, herbals, medical devices, and alternative treatment options.

PHT 120—Clinical Pharmacy Technician (3,3)
Prerequisite: Approval of program coordinator
This course will cover four major categories of a more advanced clinical pharmacy technician's responsibilities: general patient management, medication safety and regulatory requirements, leadership, and transitions of care. Topics included in this course are medication reconciliation, medication histories, national patient safety goals, patient interviewing, specialty pharmacy, the Joint Commission, medication safety, conflict resolution, time and project management, mentoring, compliance and transitions of care.

Philosophy

PHL 101—Introduction to Philosophy (IAI: H4900) (3,3)
A college transfer course; consult the C&CSC for more details.
A study of the major philosophical problems, such as the nature of reality, knowledge, and truth and the meaning of existence, as seen in the works of major Western thinkers. Also offered as Honors. F, Sp, S.

PHL 102—Ethics (IAI: H4904) (3,3)
A college transfer course; consult the C&CSC for more details.
An examination of the major philosophical theories of morality and their application to concrete cases. F, Sp, S.

PHL 103—World Religions (IAI: H5904N) (3,3)
A college transfer course; consult the C&CSC for more details.
An examination of major world religions through the study of their texts, doctrines and traditions. F, Sp, S.

PHL 105—Logic (IAI: H4906) (3,3)
A college transfer course; consult the C&CSC for more details.
A study of the basic concepts of logic. The main emphasis will be on learning the techniques for assessing validity. Other topics include informal fallacies, inductive logic, and language. F, Sp.

Phlebotomy

PHB 101—Phlebotomy/Health (4,5)
Prerequisites: BIO 115 or 185; and HIT 102, (Special permit to register is required.)
Topics include the role of the phlebotomist, review of medical terminology, infectious control and safety in the workplace, venipuncture collection equipment and supplies, skin puncture collection procedures, specimen handling, basic laboratory tests, quality assurance, communication skills and professionalism. Fee.

PHB 102—Phlebotomy Internship (2,8)
Prerequisites PHB 101 (Special permit to register is required.)
Course consists of 100 clinical hours of supervised phlebotomy practice at a local healthcare facility. The internship rotation is scheduled on an individual basis by the program coordinator. The completion of the internship hours often continues into the next semester. Fee. F, Sp.

Photography: see Art 139, 140 & 141

Physical Education

P-E 100—Physical Fitness I (1,2)
A college transfer course; consult the C&CSC for more details.
To acquaint the student with a basic knowledge and understanding of physical conditioning programs. Development of a personalized fitness program which includes a pretest evaluation, workouts in the Fitness Lab, and a post-test evaluation. (Pass/Fail option) Fee. F, Sp, S.

P-E 101—Physical Fitness II (1,2)
A college transfer course; consult the C&CSC for more details.
Prerequisite: P-E 100
To acquaint the student with a basic knowledge and understanding of physical conditioning programs. Development of a personalized fitness program which includes a pretest evaluation, workouts in the Fitness Lab, and a post-test evaluation. (Pass/Fail option) Fee. F, Sp, S.

P-E 106—Beginning Weight Training I (1,2)
A college transfer course; consult the C&CSC for more details.
Improvement of muscle tone and joint range of motion (flexibility) are stressed. Individual works at own pace. Fee. F, Sp, S.

P-E 113—Fitness Walking (1,2)
A college transfer course; consult the C&CSC for more details.
Examination of the importance of exercise in a healthy lifestyle. Participation in walking as an activity to improve health and fitness. F, Sp.

P-E 115—Low Impact/Step Aerobics (1,2)
A college transfer course; consult the C&CSC for more details.

Students will study the cardiovascular system and participate in low impact/step aerobics. Students will work to obtain 70% of their maximum heart rate for a thirty-minute period. Fee. F, Sp.

P-E 200—Physical Fitness III (1,2)
A college transfer course; consult the C&CSC for more details.
Prerequisite: P-E 101

To acquaint the student with a basic knowledge and understanding of physical conditioning programs. Development of a personalized fitness program which includes a pretest evaluation, workouts in the Fitness Lab, and a post-test evaluation. (Pass/Fail option) Fee. F, Sp, S.

P-E 201—Physical Fitness IV (1,2)
A college transfer course; consult the C&CSC for more details.
Prerequisite: P-E 200

To acquaint the student with a basic knowledge and understanding of physical conditioning programs. Development of a personalized fitness program which includes a pretest evaluation, workouts in the Fitness Lab, and a post-test evaluation. (Pass/Fail Option) Fee.

P-E 206—Progressive Weight Training II (1,2)
A college transfer course; consult the C&CSC for more details.
Prerequisite P-E 106

Some P-E 106 exercises are included. Exercises using leg weights are added. Work on individual weaknesses and additional muscle toning are stressed. Fee. F, Sp, S.

P-E 215—Advanced Impact Step Aerobics (1,2)
A college transfer course; consult the C&CSC for more details.
Prerequisite: P-E 115

Participation in advanced impact/step aerobics to maintain a designated maximum heart rate for a thirty-minute period. Incorporation of the study of the cardiovascular system. Fee.

P-E 216—Progressive Weight Training III (1,2)
A college transfer course; consult the C&CSC for more details.
Prerequisite: P-E 206

Some P-E 206 exercises are included. Exercises using leg weights are added. Work on individual weaknesses and the development of own programs are stressed. Fee. F, Sp, S.

P-E 226—Progressive Weight Training IV (1,2)
A college transfer course; consult the C&CSC for more details.
Prerequisite: P-E 216

Some P-E 216 exercises are included. Exercises using leg weights and working with the instructor to help achieve athletic goals are also stressed. Work on individual weaknesses and additional muscle toning are stressed. Fee. F, Sp, S.

Physical Science

PHS 101—Physical Science (IAI: P9900L) (4,5)
A college transfer course; consult the C&CSC for more details.

Survey of the physical sciences; unifying concepts of physics, chemistry and astronomy, including historical implications. For non-science majors. Laboratory included. Fee. Sp, F.

Physics

PHY 101—Mechanics and Heat (IAI: P1900L) (4,6)
A college transfer course; consult the C&CSC for more details.
Prerequisite: MTH 165 with a grade of "C" or above.

Introductory non-calculus course for students in liberal arts, medicine, architecture. Topics include mechanics and thermodynamics. Laboratory included. Fee. F.

PHY 102—Sound, Light, Electricity, Magnetism and Modern Physics (4,6)
A college transfer course; consult the C&CSC for more details.
Prerequisite: PHY 101 with a grade of "C" or above.

Continuation of PHY 101. Topics include sound, light, electricity, magnetism and modern physics. Laboratory included. Fee. Sp.

PHY 115—Topics in Applied Physics (3,3)
Prerequisite: MTH 100 with a grade of "C" or above.

An introductory level course in topics in physics for non-transfer students.

PHY 210—University Physics I (IAI: P2 900L) (4,6)
A college transfer course; consult the C&CSC for more details.
Prerequisite: MTH 190 with a grade of "C" or above.

Mechanics. Designed for students intending to transfer in engineering, mathematics, physical sciences. Laboratory included. Fee. F.

PHY 211—University Physics II (4,6)
A college transfer course; consult the C&CSC for more details.
Prerequisite: PHY 210 & MTH 203 with a grade of "C" or above.

Heat, Thermodynamics, Electricity and Magnetism. Designed for students intending to transfer in engineering, mathematics, physical sciences. Laboratory included. Fee. Sp.

PHY 212—University Physics III (IAI: EGR 913) (4,5)
A college transfer course; consult the C&CSC for more details.
Prerequisite: PHY 211 & concurrent registration or credit in MTH 204 with a grade of "C" or above.

Wave Motion, Sound, Light and Modern Physics. Designed for students intending to transfer in engineering, mathematics, physical sciences. Laboratory included. Fee. S.

Political Science

PSC 101—American National Government (IAI: S5900) (3,3)
A college transfer course; consult the C&CSC for more details.

Political power, its application, location, impact; demands on decision makers, their forms and sources; conversion process, congress, presidency, bureaucracy and courts; outputs, policies, implementation, court decisions. F, Sp, S.

PSC 102—American State and Local Governments (IAI: S5902) (3,3)
A college transfer course; consult the C&CSC for more details.

Formal institutions of power in states, local bodies, constitutions, intergovernmental relations, legislature, executive structures, courts, informal aspects of political power, resources, influence and culture. F, Sp, S.

PSC 108—Contemporary Political Problems (3,3)
A college transfer course: consult the C&CSC for more details.

An introduction to the study of contemporary political problems including political behavior, processes and institutions. Course includes an analysis 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.

PSC 210—Comparative Foreign Governments (IAI: S5905) (3,3)
A college transfer course; consult the C&CSC for more details.

Basic development, operation of governmental systems in England, France, Germany, Russia. Special attention to adaptations to contemporary political problems through use of comparative analysis. On demand.

Psychology

PSY 101—Introduction to Psychology (IAI: S6 900) (3,3)
A college transfer course; consult the C&CSC for more details.

This course is an introductory survey of the current subject matter and methods of Psychology. Specific topics include research methods, the biological basis of behavior, learning, memory, personality, life-span development, motivation, emotion, social behavior, and abnormal behavior and therapies. F, Sp, S.

PSY 103—Psychology of Personal Adjustment (3,3)
A college transfer course; consult the C&CSC for more details.

The dynamics of human personality and adjustment are explored in terms of scientific principles. Topics treated include personality development, principles of effective adjustment and mental adjustment, individual and social human relationships and variable of adjustment. F, Sp.

PSY 105—Organizational Psychology (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: PSY 101

Application of psychological methods and principles in organizational and work-related settings. Topics include job analysis/performance evaluation, organizational development, managerial behavior, and human relations.

PSY 202—Educational Psychology (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: PSY 101

Develop attitudes, understandings and proficiencies in application of psychological principles to the educative process. Attention given to learning process as it involves individuals, groups, institutions.

PSY 204—Social Psychology (IAI: S8 900) (IAI: PSY 908) (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: PSY 101

A survey of the behavior of individuals as influenced by the social context. This survey will include intra-personal processes such as the development of values, attitudes, self, self-perception and person perception; and interpersonal processes as relationships, leadership, social interaction and group processes. F, Sp.

PSY 205—Theories of Personality (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: PSY 101

An introductory treatment of the major personality theories. Emphasis will be on basic concepts, principles, dynamics, assessment, development and research.

PSY 206—Abnormal Psychology (IAI: PSY 905) (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: PSY 101

This course is an introductory survey of the field of Abnormal Psychology. The focus in the first part of the course will be on theoretical and empirical approaches in the study of abnormal behavior. In the latter part of the course, the focus will be on the description, classification, etiology and treatment of specific psychological disorders.

PSY 211—Human Growth and Development (Life-span) (IAI: S6 902) (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: PSY 101 or HSA 101

An introductory survey course into the field of developmental psychology emphasizing the cognitive, physical, personal, social and emotional development from conception through adulthood to death. Emphasis is on the normal child and his/her development through adulthood. F, Sp, S.

PSY 212—Adolescent Psychology (IAI: S6904) (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: PSY 101 or HSA 101

A study of the physical, social, psychological and intellectual growth of the adolescent. Emphasis will be placed on social changes that take place in the family, school and community and their impact on the adolescent. Sp.

PSY 220—Human Sexuality (3,3)
A college transfer course; consult the C&CSC for more details.

This course concerns itself with the fundamental facts, principles, theories and points of view concerning human sexuality with emphasis on the psychosocial aspects of human sexuality. The primary aim of this course is to provide a framework for and encourage responsible decision-making with respect to the sexual aspect of our total being. F, Sp.

Radiologic Technology

RAD 100—Foundations of Radiologic Technology (1,1.5)

Overview of the profession of radiologic technology with an emphasis on its history, philosophy, and the nature of the profession. Explore the role of the radiologic technologist.

RAD 101—Radiographic Fundamentals (2,4)
Prerequisite: Admission to the program concurrent with RAD 125 and BIO 186

The course introduces students to radiography and the role of the radiographer as a member of the health care team. Students are introduced to concepts, principles and procedures related to radiography, aseptic techniques and sound practices of patient care and professional behavior.

RAD 104—Radiographic Procedure 1 (3,4)
Prerequisite: Admission to the program; concurrent with RAD 125 and BIO 186

A study of the radiographic anatomy and examination procedures for the appendicular skeleton, the chest and bony thorax, and the vertebral column. Students are taught techniques and procedures related to reading various types of technique charts and are able to program x-ray units for correct exposures for designated radiographic examinations. Fee.

RAD 105—Radiographic Procedures 2 (3,4)
Prerequisite: RAD 101, RAD 104, RAD 106, RAD 125 and BIO 186; concurrent with RAD 126

A study of the radiographic anatomy and examination procedures for the digestive, urinary, and hepatobiliary systems, as well as the cranium, paranasal sinuses and facial bones. Students are taught to read various types of technique charts and program x-ray units for correct exposure for these examinations. Fee.

RAD 106—Radiographic Principles 1 (3,4)
Prerequisite: Admission to program; concurrent with RAD 125 and BIO 186

Introduction to the principles of radiography and factors controlling radiographic production and radiation protection. Radiation production, prime factors, radiographic film, intensifying screens, film and digital processing are presented. Fee.

RAD 107—Radiographic Principles 2 (3,4)
Prerequisite: RAD 106; concurrent with RAD 126

Continuation of RAD 106. The course is designed to enhance the necessary skills needed to evaluate the radiographic image and provide appropriate recommendations for improving the diagnostic quality of the radiograph. Fee.

RAD 125—Introduction to Clinical Practice (2,13)
Prerequisite: Admission to program; concurrent with RAD 101, RAD 104; and RAD 106

An orientation to practical clinical experience of the radiology department and the health care setting. A seminar is included. Clinical assignment by program coordinator. Pass/Fail grading. Fee; Malpractice Insurance.

RAD 126—Clinical Education 1 (3,17)
Prerequisites: RAD 125

Application of principles of radiographic positioning under the supervision of qualified registered ARRT technologist. Emphasis on appendicular and axial skeleton. Principles of exposure, image quality and other associated professional skills. Pass/Fail grading. Clinical affiliation assignment by program coordinator. Fee.

RAD 127—Clinical Education 2 (2,17)
Prerequisite: RAD 126; concurrent with PSY 101 or HSA 101

Application of principles of radiographic positioning under the supervision of qualified registered ARRT technologist. Emphasis on contrasted procedures, cranial procedures and other radiographic skills. Pass/Fail grading. Assignment of clinical and seminar by program coordinator. Fee.

RAD 204—Radiographic Procedures 3 (3,3)
Prerequisites: BIO 186; RAD 105 and 127; concurrent with RAD 225

Emphasis on routine special procedures including cardiovascular imaging, neuroradiography, reproductive system radiography and special studies of the viscera. The course details portable and surgical radiography, pediatric and geriatric radiography and related imaging modalities such as Internet, computer tomography, magnetic resonance imaging, ultrasonography and neuroradiography. Fee.

RAD 205—Radiologic Physics (3,4)
Prerequisites: PHY 115 and RAD 127; concurrent with RAD 225

Introduction of the structure of matter, electrical circuitry, and the basic elements of the operation of X-ray imaging equipment. Basic concepts of X-ray production, principles of diagnostic quality assurance for film production and equipment processing are discussed. Laboratory exercises related to the clinical setting activities are presented. Fee.

RAD 207—Radiobiology (3,3)
Prerequisite: BIO 186, PHY 115 and RAD 127; concurrent with RAD 225

An in-depth study of radiation biology, radiation regulations and radiation measurements. Somatic and genetic effects of ionizing radiation are presented. Radiation practices for staff and patients/clients are covered.

RAD 225—Clinical Education 3 (3,25)
Prerequisite: RAD 127; concurrent with RAD 204, 205 and 207

Continuation of radiographic experiences with emphasis on trauma, surgery and mobile procedures, and observation of radiologic interpretation. Pass/Fail Grading. Assignment of clinical and seminar by program coordinator. Fee; Malpractice Insurance Fee.

RAD 226—Clinical Education 4 (3,5)
Prerequisite: RAD 225 concurrent with RAD 208 and 235

Advanced clinical experiences with guided practice of special procedures. Experience with mobile units at bedside and in the operating room and emergency room. Pass/Fail Grading. Assignment of seminar and clinical by program coordinator. Fee.

RAD 235—Radiographic Seminar (3,3)
Prerequisite: RAD 204 and 225 concurrent with RAD 226

Review and discussion of radiographic principles, techniques and methods. Emphasis is placed on the interdependence of theory and principles in preparation for the ARRT examination. Fee.

Reading

To assure correct placement, new students will be required to take the Placement test prior to registration.

RDG 081—Reading & Learning Skills II (4,4)
Prerequisite: Qualifying score on the Placement test.

Reading 081 is the first course in a two semester developmental sequence that provides instruction and practice with reading techniques needed to process expository and narrative text. The course presents a variety of reading and vocabulary acquisition strategies, focusing on pre-reading techniques, word-attack strategies, comprehension monitoring, and summarizing. Fee.

RDG 082—Reading & Learning Skills III (3,4)
Prerequisite: RDG 081 with a grade of "C" or better or qualifying score on the Placement test.

Reading 082 is the second course in a two- semester developmental sequence. The course provides instruction and practice with reading techniques needed to succeed in college level courses. Students will learn how to critically read, while utilizing comprehension strategies, analyzing patterns of organizations and inferences, and applying organizational strategies for study purposes. Fee.

RDG 105—College Reading (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: Placement test or RDG 082 with a grade of "C" or above.

Designed to enrich overall reading skills. Emphasis on literal, effective and critical comprehension skills. Vocabulary enrichment, study skills, techniques and flexibility in reading rate. F, Sp, S* Health Professions emphasis.

Sign Language: see Human Services Associate

Sociology

SOC 101—Introduction to Sociology (IAI: S7900) (3,3)
A college transfer course; consult the C&CSC for more details.

Basic concepts about human relationships, interrelations of society, culture, individual; major social institutions, factors, processes in social cultural change. F, Sp, S.

SOC 102—Social Problems (IAI: S7901) (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: SOC 101

Sociological analysis of societal problems, e.g., poverty, sexism, child & spouse abuse, racism, divorce and unemployment. F, Sp.

SOC 105—Diversity and Inclusion (IAI:S7905D) (3,3)

This course focuses on identities and inequalities and the roles social identities play in societal privilege, power, and oppression. Dynamics of privilege and power impact social inequities, resulting in systemic racism, sexism, classism, and oppression. This course takes an intersectional approach-examining how race, gender, sexual orientation, ability, class, and religion all intersect to shape people's social identities and how they understand and experience the world. Throughout this course students will demonstrate an understanding of how identities and social location are shaped not only on an individual or interpersonal level, but also by systems of institutional power on a larger scale, both historically and in contemporary society. Finally, we explore how those who have historically faced oppression and/or are still experiencing oppression and inequalities are not without any power by looking at how those not in privileged or dominant groups have formed powerful social movements that have emerged in response to oppression by dominant groups.

SOC 204—Religion and Society (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisites: SOC 101 or ANT 101 and acceptance into Honors Program or consent of instructor.

An exploration of the varieties of religious experience from the Roman Empire to the present, the roles of ritual, texts and religious specialists in social integration; a comparison of established religious systems.

SOC 205—Marriage and the Family (IAI: S7902) (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: SOC 101

An analysis of the cross-culture variations in form of marriage and family; explanation of the American patterns in sex role, choice of mate, marital relationship and divorce. F, Sp.

SOC 206—Juvenile Delinquency (IAI: CRJ 914) (3,3)
A college transfer course; consult the C&CSC for more details.
Prerequisite: SOC 101

Social, psychological factors in delinquent behavior, causation, prevention, rehabilitation, role of community agencies; juvenile court. F, Sp.

SOC 225—Racial and Ethnic Relations (3,3)
A college transfer course; consult the C&CSC for more details.

Study of racial and ethnic groups in the United States, focusing upon the patterns of racial and ethnic relations.

Solar PV Installer

SPV 100—Introduction to Craft Skills (3,4)
Prerequisites: MTH 091

This introductory course is applicable to a variety of trades, covering the basics of construction site safety, calculations, hand tools, power tools, construction drawings, rigging, communication and employability skills and material handling. Students will be prepared to take the NCCER Core certification exam. Fee.

SPV 101—Solar PV Installation (3,4)

This course covers the basic concepts of PV systems and their components, along with general sizing and electrical/mechanical design requirements. Also provides an overview of performance analysis and troubleshooting. Successfully completion of this course will prepare students for the NCCER and North American Board Energy Practitioners (NABCEP) PV Entry Level Exams.

Spanish

Native speakers or bilinguals generally do not receive credit for Spanish. Students who have completed two years of high school Spanish with a grade of "C" or above within the last four years must enroll in Spanish 102. Students who have completed three years of high school Spanish with a grade of "C" or above within the last four years must enroll in Spanish 203. Notes for students pursuing an A.A., A.S., or A.F.A.: Students who plan to go on and earn a Bachelor of Arts degree or a degree from a College of Arts and Sciences should know that it is quite likely that they will need to complete a foreign language and therefore should complete their foreign language requirement before transfer.

SPN 101—Elementary Spanish I (4,5)

A college transfer course; consult the C&CSC for more details.

Course for beginners stressing the four language skills: listening, speaking, reading, and writing. Emphasis on the geography and culture of Spain and Latin America. Language lab practice required. F, Sp, S.

SPN 102—Elementary Spanish II (4,5)

A college transfer course; consult the C&CSC for more details.

Prerequisite: SPN 101 or two years of high school Spanish with a grade of "C" or above.

Continuation of Spanish 101 with more intensive listening, speaking, reading, and writing practice. Culture and civilization of Spain and Latin America emphasized. Language lab practice required.

SPN 113—Elementary Conversational Spanish (3,3)

A college transfer course; consult the C&CSC for more details.

Prerequisite: Taken concurrently with SPN 102, after completion of 102 or equivalent, or consent of instructor.

Development of oral proficiency at the first-year level through active participation in dialogues dealing with every day life, and discussion of cultural topics. Taught entirely in Spanish. On demand.

SPN 115—Spanish for Health Care Providers I (3,3)

A course designed for health care providers working with Spanish-speaking patients which emphasizes oral communication, medical terminology, and cross-cultural awareness. F.

SPN 203—Intermediate Spanish I (4,4)

A college transfer course; consult the C&CSC for more details.

Prerequisite: SPN 102 or three years of high school Spanish with a grade of "C" or above.

Continuation of SPN 102 with more advanced practice in the four language skills, literary readings, advanced grammar, and compositions. Culture and civilization of Spain and Latin America emphasized. Language lab practice required.

SPN 204—Intermediate Spanish II (IAI: H1900) (4,4)

A college transfer course; consult the C&CSC for more details.

Prerequisite: SPN 203 or equivalent.

Reading and analyzing stories and poetry by famous Spanish and Latin American writers, with general review of grammatical structures. On demand.

SPN 205—Spanish for the Spanish-Speaking (4,5)

A college transfer course; consult the C&CSC for more details.

Prerequisite: SPN 204 or equivalent, or consent of instructor.

Review of proper spoken and written Spanish, reading of selected literary materials; for native speakers of the language who lack formal training, and for students who have completed Spanish 204 or equivalent, or consent of instructor. On demand.

SPN 213—Intermediate Conversational Spanish (3,3)

A college transfer course; consult the C&CSC for more details.

Prerequisite: Taken concurrently with SPN 204, or equivalent or with consent of instructor.

Development of oral proficiency at the second-year level through active participation in dialogues dealing with everyday life, and discussion of cultural topics. Taught entirely in Spanish. On demand.

SPN 215—Spanish for Health Care Providers II (3,3)

Prerequisite: SPN 115 with a grade of "C" or better, or two years of high-school Spanish with a grade of "C" or better, or consent of instructor.

A course designed for health care providers working with Spanish-speaking patients which emphasizes more advanced oral communication, medical terminology, and cross-cultural awareness. On demand.

Special Education Associate: see Child Development, Education, and Human Services Associate

Speech

SPE 108—Oral Communication (IAI: C2900) (3,3)

A college transfer course; consult the C&CSC for more details.

Prerequisite: RDG 082 with a "C" or better.

Introduction to basic oral communication principles and skills. Focuses on study and practice in public speaking and discussion, preparation, organization and delivery techniques. Emphasis in critical listening skills, reading, thinking and writing. This course includes the mandatory execution of an informative and persuasive speech. Fee. F, Sp, S.

Speech Language Pathology Assistant

SPA 101—Introduction to Speech Language Pathology Assisting (3,3)

Prerequisites: Approval of the Program Coordinator

This course serves as an introduction to the field of Speech Language Pathology. This course will address professional standards, legal and ethical issues, and the scope of practice for Speech Language Pathologists, and the Speech Language Pathology Assistant in healthcare and educational settings.

SPA 121—Anatomy and Physiology of Speech & Hearing (3,3)

Prerequisites: Approval of the Program Coordinator

This course looks at the human anatomy and physiology and the interrelated components of speech and hearing including; the structure of the speech mechanism, muscles, and neurology involved with speech production.

SPA 131 – Language Development in Children (3,3)

Prerequisites: Approval of the Program Coordinator

This course delves into the typical development stages of language in children through adolescence. The focus will be an overview of the social, cognitive, and physical aspects of normal language acquisition.

SPA 141—Voice and Diction (3,3)

Prerequisites: SPA 121, SPA 131, and Approval of the Program Coordinator

A course designed to present the student with an overview of the anatomical and physiological bases for the principles necessary for effective oral communication, as it relates to articulation, language, voice, rhythm, and listening skills. This will accompany practical exercises to assist in the modification of speech behavior. Attention is given to phonetic and phonemic awareness of various dialects of English.

SPA 151—Communication Disorders in Children (3,3)

Prerequisites: SPA 121, SPA 131 and Approval of the Program Coordinator

The nature of language disturbances resulting from damage to the central nervous system, auditory impairment, environment, social, and psychogenic influences. The role of the Speech-Language Pathologist and Audiologist in educational and medical settings.

SPA 161—Intro to Phonetics (3,3)

Prerequisites: SPA 141, SPA 151 and Approval of the Program Coordinator

An introductory course in phonetics, the classification of speech sounds, which includes articulatory and perceptual analysis of speech sounds and transcription methods of American English into the International Phonetics Alphabet (IPA). Students in Speech Language Pathology Assisting are expected to apply the knowledge in the clinical setting.

SPA 171—Clinical Observation (2,3)

Prerequisites: SPA 141, SPA 151 and Approval of the Program Coordinator

Observation of the licensed and CCC SLP practitioner in various clinical settings. No hands on will be obtained through this experience. Prerequisite to Clinical Fieldwork I & II.

SPA 201—Screening Processes and Intervention Procedures (3,3)

Prerequisites: SPA 161 and Approval of the Program Coordinator

A study of screening tools, documentation, processes and intervention procedures used for children and adults with communication disorders. Administration of screening tests, hearing screenings and completion of protocols for screenings.

SPA 211—Clinical Fieldwork I (2,2)

Prerequisites: SPA 131, SPA 151, SPA 171 and Approval of the Program Coordinator

Application of supervised clinical practice procedures as required by the Speech Language Pathology Assistant in educational and medical settings.

SPA 221—Communication Disorders in Adults (3,3)

Prerequisites: SPA 171 and Approval of the Program Coordinator

An overview of communication disorders in adults, including classification, assessment and treatment of speech, language, swallowing, and voice and hearing disorders in adults. Role of the Speech Language Pathologist Assistant and Audiologist in a variety of settings.

SPA 231—Case Studies and Management for Speech Language Pathology Assistants (3,3)

Prerequisites: SPA 211 and Approval of the Program Coordinator

Organizational and functional skills required in the Speech Language Pathology workplace. Includes; interdisciplinary and supervisory relationships, client and public interaction, safety issues, technical writing, data collection, record keeping and computer applications.

SPA 241 – Clinical Fieldwork II (3,3)

Prerequisites: Must have completed SPA 171 and SPA 211 and approval of the Program Coordinator

Application of supervised clinical practice procedures as required by the Speech Language Pathology Assistant in educational and medical settings.

Teacher Aide/Child Development: see Child Development and Education

Typing: see Office Administration And Technology

Urban Studies

URB 101—Introduction to Urban Studies (3,3)

A college transfer course; consult the C&CSC for more details.

Phenomenon of urbanization. Growth of metropolitan areas; resultant changes in American lifestyles, values; present state of urban society in interrelationship between central city and suburban areas in regional planning. F, Sp.

URB 141—African-American Arts (3,3)

A college transfer course; consult the C&CSC for more details.

Contribution of African-Americans to art, music, philosophy from 1600 to 1970's.

URB 214—Minority Groups Politics (3,3)

A college transfer course; consult the C&CSC for more details.

Prerequisite: PSC 101 or 102

Basic political theory, as it relates to urban community power structures. Emphasis on political context within which Black communities exist; use and potential of political power in reform movement.

Welding

WLD 100—Introduction to Welding (5,7)

Prerequisites: MTH 091 or equivalent score on the math placement test

This includes fundamentals of blueprint reading; welding print format and types of fabrication blueprints; welding symbols and sizes; structural shapes and symbols. Introductory hands-on course in welding covering shielded metal/arc welding and flux cored arc welding theory and practices. This course is designed for a worker needing to perform light welding on the jobsite. *This course is not for Welding Processes majors.*

WLD 104—SMAW (4, 6)

Prerequisites: WLD 100

Principles and techniques of joining metals with Shielded Metal Arc Welding (SMAW) as the source. This course includes; SMAW welding uses; safety techniques; joint design; welding costs; electric currents and power sources; filler metal selection; hard facing; metal identification, and welding in the flat and horizontal as well as vertical and overhead positions. Fee.

WLD 110—GMAW (4, 6)

Prerequisites: WLD 100

Procedures and techniques in Gas Metal Arc Welding (GMAW). Includes health, safety, and environmental practices, welding terminology, GMAW processes and equipment, equipment operation and welding techniques, power source and wire feed types and controls, welding currents and polarities, welding filler metals in GMAW processes, shielding gases, and welding in the flat and horizontal as well as vertical and overhead positions. Course also includes safety and use in (PAC) Plasma Arc Cutting. Fee.

WLD 112—GTAW (4, 6)

Prerequisites: WLD 100

Procedures and techniques in the Gas Tungsten Arc Welding (GTAW) process to include health; safety; environmental practices; welding terminology; GTAW process and equipment; equipment operation and techniques; power source types and controls; welding currents and polarities; tungsten electrodes; shielding gases, welding in the flat and horizontal as well as the vertical and overhead positions. (PAC) Plasma Arc Cutting safety and practices will also be lectured and demonstrated.