COURSE DESCRIPTIONS

The courses of study offered at Dutchess Community College are arranged alphabetically in this section. Before planning a specific academic program, the student must consult the official lists of courses offered in both day and evening issued prior to the beginning of each semester. The College reserves the right to cancel any course when the enrollment is insufficient to support the course. The right is also reserved not to offer a course if resources become unavailable or if the course has been deleted from any curriculum since the last printing of the catalog. Normally, however, every course will be offered at least every other year. A student who needs a course which is not offered, or which is fully enrolled, should confer with the appropriate department head.

Courses numbered below 100 are non-credit and preparatory in nature; 100-level courses are usually designed for first-year students; 200-level courses are generally designed for and often restricted to second-year students.

Below the number and title of each course description is the credit hour value granted for the course in terms of lecture and/or laboratory hours. Generally, a credit hour is earned for 15 50-minute sessions of classroom instruction with a normal expectation of two hours of outside study for each class session. Similarly, two or three 50-minute sessions of laboratory or field work each week for a semester would normally earn one credit hour.

It should be understood that courses may be composed of various types of instruction; for example, a lecture course which also has required laboratory periods, or a lecture course having an additional requirement for supervised independent study or tutorial activity, or a course which may utilize self-paced instructional materials within a given time period under the supervision of the instructor.

Prerequisites are intended to ensure that a student has sufficient preparation before advancing to the next course in a sequence. Prerequisites, where stated, must be met before enrollment will be permitted.

A course fee is applied to each course that has scheduled laboratory hours and/or requires dedicated space, such as a laboratory, studio, or physical education facility, and/or specialized equipment. The course fee is billed when the student registers for the course. Currently, the fees range from $15 to $25. Also, for some courses, students may be required to purchase individual or expendable supplies.

In addition to course fees, students in some courses in nursing, medical laboratory technology, phlebotomy, and dietetic technology are required to purchase insurance, and some students in a few health and physical education courses may pay for Red Cross Certification.

NOTE: Courses are listed alphabetically by their three-letter designation.

ACCOUNTING

ACC004 COURSE SPECIFIC STUDY SKILLS FOR ACC 104
1 Lecture 0 Lab 1 Credit Hour(s)
ACC 004 is a study skills course designed for those students who require support in ACC 104. Taught by the instructor of ACC 104, with which it is content correlated, ACC 004 will include practical work with note taking, textbook mastery, exam preparation and test taking techniques, as well as specific strategies necessary to the successful study of accounting.

NOTE: ACC 004 is a credit equivalent course. Equivalent credits do not satisfy degree requirements and are not calculated in a student's grade point average, but they do incur tuition charges and they do count towards full-time/part-time status.

ACC100 ACCOUNTING INTRODUCTORY SEMINAR
1 Lecture 0 Lab 1 Credit Hour(s)
This course is intended to provide Accounting, Bookkeeping and BAT students with an opportunity to learn and practice skills necessary to be successful in their respective program. This course will focus on personal goals and development, career planning, study skills, curriculum management and College resources.

ACC101 PRINCIPLES OF ACCOUNTING I
4 Lecture 0 Lab 4 Credit Hour(s)
The primary purpose of this course is to enable students to analyze, record, classify, summarize, and interpret accounting data. Topics include: the accounting equation; accounting statements and reports prepared according to generally accepted accounting principles; the accounting cycle; deferrals and accruals; the accounting system and internal controls; the measurement and control of cash, receivables, inventories, plant assets including intangible assets and natural resources. This course is not for Business Administration-Transfer students.

ACC102 PRINCIPLES OF ACCOUNTING II
4 Lecture 0 Lab 4 Credit Hour(s)
The primary purpose of this course is to enable students to analyze, record, classify, summarize, and interpret accounting data for sole proprietorships, partnerships, and corporations. Topics include: liabilities; partnership formation, division of earnings, and changes of ownership; corporations-capital transactions, income taxes and business decisions, financial reporting, ratio analysis, earnings measurement; the statement of cash flows; and an introduction to managerial accounting.
Prerequisite: ACC 101 with a C or better.

ACC104 FINANCIAL ACCOUNTING
4 Lecture 0 Lab 4 Credit Hour(s)
The primary purpose of this course is to enable students to analyze and interpret accounting data. Topics include: the accounting equation; accounting statements and reports; the accounting cycle; deferrals and accruals; the accounting system and internal controls; the measurement and control of cash, receivables, inventories, plant assets; corporations' capital transactions and business decisions, and long-term liabilities.

ACC110 PROFESSIONAL RECORDKEEPING
3 Lecture 0 Lab 3 Credit Hour(s)
This course is designed to prepare the modern office worker with the skills necessary for the day-to-day handling of common financial functions. Topics include: maintaining payroll, invoicing customers, maintaining receivables, maintaining payables, paying bills, balancing cash and receipts, preparing bank deposits, reconciling
bank statements, recording and processing data manually as well as recording and processing data using an automated accounting information system, preparation of financial statements and basic budgeting.

ACC204 MANAGERIAL ACCOUNTING
4 Lecture 0 Lab 4 Credit Hour(s)
The emphasis of the course is on how managers use accounting data internally in directing the affairs of organizations. The purpose of the course is to show what kind of accounting information is needed, where this information can be obtained and how this information is used by managers as they carry out their planning, control and decision making responsibilities.
Prerequisites: ACC 102 with a grade of C or better or ACC 104 with a grade of C or better.

ACC205 COMPUTERIZED ACCOUNTING APPLICATIONS
2 Lecture 1 Lab 2 Credit Hour(s)
This course is designed to introduce the student to the use of the computer in an accounting environment and give the student the skills necessary to record and prepare accounting transactions and reports. The student will be required to apply accounting knowledge through the use of the accounting software package, Quick Books Pro, for electronic preparation of accounting transactions, financial statements, financial budgets and other relevant business reports for both service and merchandising industries.
Prerequisites: BUS 103 and ACC 101.
Corequisite: BUS 109.

ACC213 ACCOUNTING SYSTEMS AND THE COMPUTER
3 Lecture 0 Lab 3 Credit Hour(s)
The purpose of this course is to familiarize the student with accounting systems and procedures with emphasis on computerized accounting systems, to acquaint the student with fundamental computer concepts and terminology, to give students hands-on computer experience through the preparation and processing of accounting related programs and software and to reinforce accounting theory and integrate it with computer practice.
Prerequisites: ACC 102 with a grade of C or better and BUS 109 and BUS 110.

ACC221 INTERMEDIATE ACCOUNTING I
4 Lecture 0 Lab 4 Credit Hour(s)
This course provides an in-depth study of financial accounting concepts and procedures. The following topics will be covered: the accounting environment and basic accounting concepts and theory; statement of income and retained earnings; balance sheet and statement of cash flows; the time value of money; cash, temporary investments, and receivables; inventories and plant assets.
Prerequisite: ACC 204 with a grade of C or better.

ACC241 INCOME TAX PROCEDURES
3 Lecture 0 Lab 3 Credit Hour(s)
A study of the federal income tax laws as they affect individuals. Principal topics are returns, rates, exemptions, income, deductions and losses, itemized deductions, business expenses and losses, cost recovery, employee expenses, special methods for computing tax, tax credits, property transactions - basis determination, non-taxable exchanges, capital gains and losses and depreciation recapture.
Prerequisite: ACC 104 or ACC 101 or permission of ACC Program Chair.

ACC260 INTERNSHIP IN ACCOUNTING
1 Lecture 8 Lab 3 Credit Hour(s)
This course is designed for students participating in a cooperative education work experience. It is open to matriculated ACC students. Students are placed with selected cooperative employers for a specific number of hours (minimum 120). They participate in weekly seminars and submit a paper or report related to the work experience. A written evaluation by the employer is also submitted.
Note: Sophomore status required. Students must register for both a lecture and a lab:
Prerequisite: Permission of department.

ACC271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student’s knowledge and competence in the field of accounting or related areas. The student’s time commitment to the project will be approximately 35 - 50 hours.

ACC272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to ACC 271, except that the student’s time commitment to the project will be approximately 70-90 hours.

ACC273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to ACC 271, except that the student’s time commitment to the project will be approximately 105-135 hours.

AIR CONDITIONING

ACR101 AIR CONDITIONING AND REFRIGERATION I
3 Lecture 15 Lab 8 Credit Hour(s)
This course will introduce the student to the basic theory of operation of simple refrigeration and air conditioning systems, heat transfer, materials, tools, installation techniques, and practices. Other topics included are measurements, bonding materials, heat and temperature, refrigerants and mechanical/electrical components. Personal and equipment safety will be stressed.

ACR102 AIR CONDITIONING AND REFRIGERATION II
3 Lecture 15 Lab 8 Credit Hour(s)
This course is a continuation of ACR 101. The student will work with a variety of complex and larger cooling and heat pump systems. These systems will use combinations of controls to operate components in a sequential manner. The design of such control systems and their construction are included. In addition, special systems such as automatic ice machines and self-defrosting equipment will be used to develop troubleshooting techniques and problem solving skills. Students will be prepared for and given the opportunity to take the technician certification examination as specified by the Clean Air Act. Those who pass the exam will be duly certified. Personal and equipment safety will be stressed.
Prerequisite: ACR 101 or permission of the instructor.

ACR271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student’s knowledge and competence in the field of air conditioning and refrigeration or related areas. The student’s time commitment to the project will be approximately 35-50 hours.

ACR272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to ACR 271, except that the student’s time commitment to the project will be approximately 70-90 hours.
Prerequisite: ARC 105.

**Introduction to structural drawings and detailing.**

The study of wood frame construction and materials. Topics include the basic concepts of drawing lines, lettering, use of instruments, orthographic projection, and pictorials. Plans, elevations, and sections of a single building are prepared. Building materials and construction are included. Emphasis is placed upon drawings that reproduce with a maximum of clarity and detail.

**Prerequisites:** Math A Regents with a grade of 65 or higher or concurrent enrollment in MAT 131.

**ARC 103 BASIC ARCHITECTURAL DRAWING**

1 Lecture 4 Lab 3 Credit Hour(s)

The basic concepts of drawing lines, lettering, use of instruments, orthographic projection, and pictorials. Plans, elevations, and sections of a single building are prepared. Building materials and construction are included. Emphasis is placed upon drawings that reproduce with a maximum of clarity and detail.

**Prerequisite:** Math A Regents with a grade of 65 or higher or concurrent enrollment in MAT 131.

**ARC 104 INTRODUCTION TO COMPUTER GRAPHICS**

0 Lecture 3 Lab 1 Credit Hour(s)

A required introductory course for Architectural Technology students. Students will gain hands-on experience with AutoCAD, the computer graphics program used in all Engineering Department programs.

**ARC 105 BUILDING MATERIALS AND CONSTRUCTION I**

2 Lecture 2 Lab 3 Credit Hour(s)

The study of wood frame construction and materials. Topics include foundations, framing methods, and finish materials for interior and exterior use in wood frame buildings. The laboratory will introduce wood detailing and field applications.

**Prerequisite:** Math A Regents with a grade of 65 or higher or concurrent enrollment in MAT 131.

**ARC 106 BUILDING MATERIALS AND CONSTRUCTION II**

2 Lecture 2 Lab 3 Credit Hour(s)

A continuation of ARC 105. Topics include masonry and steel in building construction, fabrication and utilization in the structural system, architectural detailing in masonry and steel, and an introduction to structural drawings and detailing.

**Prerequisite:** ARC 105.
ARC206 WORKING DRAWINGS II
1 Lecture 8 Lab 5 Credit Hour(s)
A continuation of ARC 205. Students complete working drawings for a moderate to large-sized building. Building types include small schools, apartment houses, office buildings, department stores and dining halls. All of the drawings for this course will be prepared on the computer.
Prerequisite: ARC 205.

ARC207 STRUCTURAL ANALYSIS
3 Lecture 0 Lab 3 Credit Hour(s)
This subject includes the study of the stresses and strains that occur in structural members. Shear and bending diagrams, investigation and design of beams, and deflection of beams are included. Investigation is made of the design of simple steel and concrete beams.
Prerequisite: ARC 202.

ARC211 MECHANICAL AND ELECTRICAL SYSTEMS IN BUILDINGS
3 Lecture 0 Lab 3 Credit Hour(s)
An introduction to environmental systems in buildings including major topics of illumination and heating and cooling, as well as minor topics of plumbing, fire protection and life safety, electrical power and acoustics. Students will be introduced to the impact of these systems on schematic design requirements. An emphasis will be placed on active and passive energy efficiency and sustainable design.

ARC214 PROFESSIONAL PRACTICE
2 Lecture 2 Lab 3 Credit Hour(s)
A study of functions performed in the architect's office from the time an architect is commissioned to do a project until the owner assumes occupancy. Topics include contracts, specifications, estimating, organization, job administration and scheduling. An emphasis on cost estimating and computer assisted estimating is included.
Co-requisite: ARC 110 and ARC 106, or permission of instructor.

ARC 216 DESIGN THEORY
2 Lecture 2 Lab 3 Credit Hour(s)
This course will provide the student with an opportunity to explore design based on movements in architecture and the theories that form the basis of architectural design, as defined by history, from antiquity to those of contemporary designers. The course exposes students to design problems and guides them through understanding architectural compositions and problem solving processes. Students analyze architecture and use this understanding to synthesize design solutions. Through the creative process, students begin the development of problem solving strategies associated with architectural design and implement them into a series of design projects.

ARC240 ARCHITECTURAL CAPSTONE PROJECT
1 Lecture 6 lab 4 Credit Hour(s)
ARC240 is a culmination of the Architectural Technology student's studies at the college. Students will work in groups to develop a project from project development through schematic design and design development through construction drawings. Both ARC and CNS students will work together for the first half of the semester. For the second half, ARC students will complete construction drawings for the project. CNS students will complete a partial set of the same building and a building materials takeoff of the building. Both groups of students will prepare a booklet of product data sheets for their projects. Building types include small schools, apartment houses, office buildings, department stores, and dining halls. All of the drawings for this course will be prepared on the computer using the AutoCAD system.
Prerequisite: ARC 205.

ARC271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Study plans will include research, analysis, and presentations or other projects, which advance the student's knowledge and competence in the field of architectural technology. The student's time commitment will be approximately 35-50 hours.

ARC272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to ARC 271, except that the student's time commitment to the project will be approximately 70-90 hours.

ARC273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to ARC 271, except that the student's time commitment to the project will be approximately 105-135 hours.

ART

ART100 VISUAL ART INTRODUCTORY SEMINAR
1 Lecture 0 Lab 1 Credit Hour(s)
This required course introduces students in the visual art programs to academic and career opportunities in the visual arts. The course will address the following topics: how to begin creating, preserving and documenting an art portfolio; career opportunities and internships; transfer opportunities; career options; student services; study skills including time management, research, writing, note and test taking, and presentation skills. This course is presented by art faculty, visiting professionals and alumni from various disciplines and specialties.

ART101 HISTORY OF ART
3 Lecture 0 Lab 3 Credit Hour(s)
An introduction to Western art based on an aesthetic and historical evaluation of artists, styles and cultures from the prehistoric period to the 18th, 19th century. Work will be viewed through visual presentation and field trips to museums and exhibits.

ART102 HISTORY OF MODERN ART
3 Lecture 0 Lab 3 Credit Hour(s)
The turn of the 20th century saw an explosion of changes which in turn redefined our visual vocabulary. This course introduces the major artists and movements of 19th and 20th century western art. Avant Garde art of the 19th century, the rise of high modernism and its subsequent decline in the postmodern era will be examined. Issues considered are artistic intention, spirituality in art, the birth and development of abstraction, art with political agendas and the implicit historic contexts of modern art. Work will be viewed through slide presentation and videotape.

ART103 ART OF CHINA, JAPAN AND INDIA
3 Lecture 0 Lab 3 Credit Hour(s)
The history of Chinese, Japanese, and art from India will be examined from prehistoric times to the present. Comparisons to the most familiar example of Western art will be offered whenever they add depth to the material. Various oriental media such as jade, lacquer and ivory calligraphy, landscape are studied in depth.

ART104 FUNDAMENTALS OF ART
3 Lecture 0 Lab 3 Credit Hour(s)
This visual arts course is intended for non artists. Course content includes art throughout history, both Eastern & Western, providing global insight into various cultures and a core understanding of the visual language used to analyze techniques and materials used in painting, sculpture, and architecture. Class activities include viewing and analyzing images from the prehistoric period to modern day, attending field trips to museums and art exhibits, and keeping a
written and visual journal documenting visual understanding of the art experiences explored in the course.

ART110 TWO DIMENSIONAL DESIGN
2 Lecture 2 Lab 3 Credit Hour(s)
This foundation studio course addresses visual dynamics on the 2D picture plane. Through the design process students explore visual elements and principles of organization. Projects cover technical skills, idea generation and development, and presentation. This course will provide the student with at least 5 works for portfolio.

ART111 THREE-DIMENSIONAL DESIGN
2 Lecture 2 Lab 3 Credit Hour(s)
This foundation studio course focuses on the visual dynamics and basic design issues that underlie three-dimensional works of art and design. Students will create three-dimensional projects using a variety of sculptural materials and methods that explore the formal elements and underlying design principles.

ART112 DRAWING I
2 Lecture 2 Lab 3 Credit Hour(s)
An introduction to the basic principles and practices of drawing. Students will complete a variety of projects that emphasize observation, line, value, shape, texture, picture plane organization, perspective, use of materials, methods for developing drawings from initial sketch to finished drawing and discussion of course concepts.

ART113 DRAWING II
2 Lecture 2 Lab 3 Credit Hour(s)
An expansion of Drawing I’s principles, practices and techniques with a focus on drawing the figure in contest. Students complete a variety of projects that emphasize observation, line, value, shape, texture, picture plane organization, foreshortening, use of materials, methods for developing drawings from initial sketch to finished drawing, and discussion of course concepts.
Prerequisite: ART112 with a grade of C or better, or permission of the instructor.

ART120 COLOR THEORY AND PAINTING
2 Lecture 2 Lab 3 Credit Hour(s)
This foundation studio course addresses color relationships, interactions and use in visual compositions.
Pre- or Co-requisite: ART 110.

ART140 GRAPHIC DESIGN I
2 Lecture 2 Lab 3 Credit Hour(s)
This course is an introduction to the theoretical and practical applications of graphic design. Assignments build visual discernment, conceptual thinking and awareness of design issues. Students complete a design portfolio of 4-5 pieces. Utilizing the industry-standard Macintosh platform and Adobe Photoshop software, students build technical design skills while learning problem-solving techniques and utilizing imagery and basic typography in different design contexts and formats. This course focuses primarily, but not exclusively, on raster-based graphics.
Prerequisite: ART 110 with a grade of C or better or permission of the instructor.

ART141 CALLIGRAPHY I
2 Lecture 2 Lab 3 Credit Hour(s)
The course covers the study and practice of lettering using the broad pen and pencil to develop original calligraphy and calligraphy for reproduction.

ART142 GRAPHIC DESIGN II
2 Lecture 2 Lab 3 Credit Hour(s)
This course is an intermediate in-depth exploration into graphic design. The student will build upon prior design awareness and technical skill and complete work of greater complexity in various aspects of graphic design. Advertising and audience awareness will be emphasized, as well as design trends and history. Possible projects include magazine spreads, advertisements, book covers, and dimensional work. It is recommended that students who take ART 142 have already taken ART 147.
Prerequisite: ART 140 and ART 145 with a grade of C or better.

ART145 LAYOUT AND TYPOGRAPHY
2 Lecture 2 Lab 3 Credit Hour(s)
An introductory exploration of typography progressing to layout concepts, grid and alignment principles, and basic layout. Utilizing the Macintosh platform and Adobe InDesign, an industry-standard layout program, design projects will include typographic exercises, creating a personal logo, stationery design, typographic solutions to a magazine cover, and/or other layout assignments.
Prerequisite: ART 140.

ART147 DESIGN AND ILLUSTRATION
2 Lecture 2 Lab 3 Credit Hour(s)
This course is an introduction to vector-based graphics. Utilizing the Macintosh platform and Adobe Illustrator, an industry-standard illustration program, students will explore the conceptual and technical issues of logos, icons, color for print media (primarily) and informational, dimensional and some production issues. Students will learn the Bezier curve and other vector basics to create shapes, patterns, graphics and illustrations. Projects may include logos, icons, shopping bag design, pattern design, and T-shirt design for the student portfolio.

ART150 BLACK AND WHITE PHOTOGRAPHY I
2 Lecture 2 Lab 3 Credit Hour(s)
This is an introduction to the medium through the use of non-automatic cameras, light meters, black and white film processing and print enlarging. Craftsmanship is stressed. Students must have an SLR camera with manually adjustable lens openings, shutter speeds, and focus, as well as a working built in light meter. Photography courses require a substantial amount of student-purchased supplies, which may cost $150 or more, in addition to camera and required text.

ART151 BLACK AND WHITE PHOTOGRAPHY II
2 Lecture 2 Lab 3 Credit Hour(s)
This course provides further study in black-and-white photography with an emphasis on visual and technical craft through more advanced camera and darkroom techniques. Students need to have an SLR camera with manually adjustable lens openings, shutter speeds, and focus, as well as a working built-in light meter. Photography courses require a substantial amount of student-purchased supplies, which may cost $150 or more, in addition to camera and required text.
Prerequisite: ART 150 with a grade of C or better, or permission of instructor.

ART153 LIGHTING FOR THE VISUAL ARTS
2 Lecture 2 Lab 3 Credit Hour(s)
Light as a basic principle common to all visual arts is explored. Students will learn to use tungsten, quartz and flash as well as natural light to illustrate basic lighting techniques. Both black-and-white and color materials will be used for this course. A final portfolio of photographs and color slides will be produced. This course is intended for students interested in photography, however, it will also teach lighting concepts useful for video, film and television production.
Prerequisite: ART 150 or permission of instructor.

ART154 PHOTOGRAPHING ART WORK
0 Lecture 2 Lab 1 Credit Hour(s)
A hands-on course in which students learn how to use various cameras and films to make a photographic record of their art
work. This course is particularly appropriate for commercial art and architectural design students who need slides and/or prints of their work for transfer applications, job interviews or publications. The final project will be to photograph the student’s portfolio.

ART155 HISTORY OF PHOTOGRAPHY
3 Lecture 0 Lab 3 Credit Hour(s)
In 1839, the invention of photography revolutionized the way we see and respond to the world. This course begins with the early years of photography and follows all the aesthetic movements and technical developments in photography up to the present moment. Slide lectures, print viewing and field trips serve as the primary means of instruction.

ART157 COLOR PHOTOGRAPHY I
2 Lecture 2 Lab 3 Credit Hour(s)
This course is an introduction to color photography and digital print reproduction. Students can shoot color film for later digitalization or create direct files using a digital camera. Reproduction will be done using professional grade inkjet photographic printers. Emphasis is on understanding how color is perceived and can be used as a powerful creative tool in commercial and fine art photography. No prior study of black and white photography is required for this course. Note: Student must have access to a 35mm or larger film camera with manually adjustable settings or to a digital camera having at least 4 mega pixel resolution. Photography courses require a substantial amount of student purchased supplies, which may cost $150 or more.

ART161 FOUNDATIONS OF ANIMATION
2 Lecture 2 Lab 3 Credit Hour(s)
An introductory course covering various aspects of the history, theory and practice of animation. This course includes a broad overview of traditional and computer animation techniques from the earliest experiments until today. Studio sessions of this introductory course will emphasize creating computer 2-D animations using the popular animation program, Flash.

ART172 BASIC CERAMICS
2 Lecture 3 Lab 3 Credit Hour(s)
This course is an introduction to the nature and properties of clay. It provides students a range of experience in working with clay, including hand building and throwing techniques, firing processes and glaze application techniques. It provides a context for understanding historical and contemporary ceramics.

ART191 JEWELRY AND METALS
2 Lecture 2 Lab 3 Credit Hour(s)
This is an introduction to jewelry design to enable the fabrication of simple jewelry. The course includes an exploration of a variety of fabrication techniques such as soldering, cold connections, forging, casting, surface embellishments and stone setting.

ART209 TIME BASED MIXED MEDIA
2 Lecture 2 Lab 3 Credit Hour(s)
This is an advanced art/communications studio course that focuses on integration and experimental use of current studio art practices (painting, drawing, photography, ceramics, installation, sculpture), digital media, and the communication media arts. Exploration and innovative use of video and sound are integral components of the course. Students should have basic computer skills and a working knowledge of digital video media.
Prerequisites: ART 110, ART 111, or COM 110

ART222 WATERCOLOR
2 Lecture 2 Lab 3 Credit Hour(s)
The course includes painting on paper with water-based media including gouache, watercolor, and acrylic. Emphasis is placed on working from observation, exploration of materials and techniques, integration of wet and dry media, concept development, and presentation of completed works.
Prerequisite ART 120 with a grade of C or better.

ART225 MIXED MEDIA AND COLLAGE WORKSHOP
2 Lecture 2 Lab 3 Credit Hour(s)
This course covers the development of art forms utilizing a variety of media and material to express content and meaning. Prerequisites: ART 110 and ART 111 or permission of instructor.

ART226 PAINTING
2 Lecture 2 Lab 3 Credit Hour(s)
This is a painting course designed for students who have completed fundamental studies of 2D design, drawing, and color theory. Emphasis is on working from observation, exploring color and technical application of acrylic or oil paints, and expressing ideas through concept and thematic development. Prerequisites: ART 110, ART 112 and Art 120.

ART227 INTERMEDIATE DRAWING
2 Lecture 2 Lab 3 Credit Hour(s)
This is an intermediate drawing course focusing on continued development of observational drawing skills and further study of techniques using a variety of black, white and color media. Concept development, such as narrative, series and themes, abstraction and non-figuration may also be addressed. Prerequisites ART 113 and ART 120.

ART241 CALLIGRAPHY II
2 Lecture 2 Lab 3 Credit Hour(s)
This course covers the study and practice of advanced lettering using the broad pen and pencil to develop original calligraphy and calligraphy for reproduction. Prerequisite: ART 141 with a grade of C or better or permission of the instructor.

ART254 PHOTOJOURNALISM WORKSHOP
2 Lecture 2 Lab 3 Credit Hour(s)
This course is an exploration of the photojournalistic approach. Emphasis is on producing, editing, and refining an in-depth photographic essay. The work of historic and contemporary photojournalists will serve as examples of the diverse approaches to photojournalism.

ART255 ADVANCED PHOTOGRAPHY
2 Lecture 2 Lab 3 Credit Hour(s)
This course is a study of advanced photographic processes, techniques and theory both technical and visual, challenging the student to develop problem-solving skills on a more professional level. A major course component is a term assignment: a project in an area of interest of the students’ choosing that will culminate in the production of a portfolio used for transfer, exhibition, or job seeking. Prerequisites: ART 150, ART 151, 153 or permission of the instructor.

ART257 COLOR PHOTOGRAPHY II
2 Lecture 2 Lab 3 Credit Hour(s)
This course builds upon the fundamentals of digital photographic reproduction learned in ART 157 (Color Photography I) and adds additional content related to computer imaging. Using images the students shoot themselves and the image manipulation tools found in Adobe Photoshop students will create photographic illustration and art involving extensive image modification and multiple image compositing.
Note: Access to a film camera with manually adjustable settings or to a digital camera having at least 6 megapixel resolution is required. Photography courses require a substantial amount of student-purchased supplies, which may cost $150 or more. Prerequisite: ART 157 with a grade of C or better.
ART260 INTERNSHIP
0 Lecture 12 Lab 3 Credit Hour(s)
An internship of not less than 135 hours in an approved area of
the student's choice that will provide practical experience. It will be
completed under the direct supervision of a full-time employee at
the internship site. This may be done in any aspect of art including
illustration, gallery work, art education, graphic design, advertising
design, marketing, communication design or any other related
practice. Students will keep a portfolio of work, a journal about
the work experience and submit a short paper at the end of the
internship detailing the experience. In addition to prerequisites
below, ART 142 and ART 147 recommended prior to taking course.
Prerequisites: ART 110, ART 112, ART 140, ART 145 and permission
of Program Chair.

ART264 WEB DESIGN
2 Lecture 2 Lab 3 Credit Hour(s)
This course is an introduction to the art of designing web sites.
Students will be introduced to HTML markup language and
software (Dreamweaver) for creating web pages, and techniques
for designing web sites containing text and images. The emphasis
will be on information structure, creation of design elements and
the creation of a web site that is easy to navigate and visually
compelling. Students will learn to use frames, tables, cascading style
sheets, forms and other components of web design. In addition to
the prerequisites, it is recommended that the student also have taken
ART 147.
Prerequisites: ART 110, ART 140 and ART 145 or permission of the
department.

ART271 SPECIAL STUDY PROJECT
I 1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students
with the cooperation and approval of a faculty member. Proposed
study plans require departmental approval. Projects may be based
on reading, research, community service, work experience, or other
activities that advance the student’s knowledge in the field of art or
related areas. The student’s time commitment to the project will be
approximately 35-50 hours.

ART272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to ART 271, except that the student’s time commitment to the
project will be approximately 70-90 hours.

ART273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to ART 271, except that the student’s time commitment to the
project will be approximately 105-135 hours.

ART274 CERAMICS: HAND BUILDING
2 Lecture 3 Lab 3 Credit Hour(s)
This course is a continued exploration of clay as it relates to hand
built forms, building on basic skills gained in Basic Ceramics.
Advanced hand building techniques, continued experimentation
with glaze application, as well as an introduction to the chemistry
and calculation of glazes and further development of students' under-
ASTRONOMY

NOTE: Students should assume that all laboratory science courses (AST, BIO, CHE, GLG, MTH, PHS and PHY) will incorporate some level of math. There are no science courses designed to be ‘math free’. The nature of the lab is to perform experiments and gather data that will test scientific theory. Working with data will require, at a minimum, some basic mathematics, including use of (+, -, x) calculator. Therefore, even for science course with no stated math prerequisites, it will be expected that students have math competency at the level of MAT091 (Beginning Algebra) or its equivalent.

AST131 SOLAR SYSTEM ASTRONOMY
3 Lecture 2 Lab 4 Credit Hour(s)
A survey of the solar system, including the earth-moon system, the planets and their satellites, asteroids, meteors, comets, and the nearest star, our sun. Study ranges from a historical view of the universe to our modern day view of the planetary system as provided by optical and radio telescopes, spectrographic study and space exploration. Among topics to be considered are the nature of light and telescopes, planetary surfaces and atmospheres, the origin of the solar system and extraterrestrial life. Laboratory work is supplemented by field trips and celestial observations with the unaided eye and telescopes.

AST132 ASTRONOMY OF STARS AND GALAXIES
3 Lecture 2 Lab 4 Credit Hour(s)
This course is a study of the universe beyond the solar system. The course begins by developing the theory of stellar evolution from observations and physical principles and discussing the formation of stars, supernovae, pulsars, black holes, etc. The course then proceeds to examine interstellar matter and to deal with the evolution of galaxies. Finally, the course deals with the origins of the universe itself and examines the various scenarios about the future of the universe.

AST271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student’s knowledge and competence in the field of astronomy or related areas. The student’s time commitment to the project will be approximately 35-50 hours.

AST272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to AST 271, except that the student’s time commitment to the project will be approximately 70-90 hours.

AST273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to AST 271, except that the student’s time commitment to the project will be approximately 105-135 hours.

AVIATION SCIENCE - PILOT

AVI100 AVIATION INTRODUCTORY SEMINAR
1 Lecture 0 Lab 1 Credit Hour(s)
This course is designed for students in the aviation science curricula. The course will focus on personal development and effective strategies for successful completion of the degree requirements. Personal educational goals and curriculum management, transfer and employment opportunities, technical skills.

AVI101 INTRODUCTION TO FLIGHT
4 Lecture 0 Lab 4 Credit Hour(s)
This course is a study of the required knowledge for a Private Pilot’s license. Subjects covered in this course include: theory of flight, basic aerodynamics, airplane operation/systems/performance, navigation, flight computations, communications, publications, regulations and basic emergency procedures. Students are provided the information necessary to complete the FAA Private Pilot Knowledge Exam for an Airplane/SEL. This class will be successfully completed and a grade provided when the FAA written exam is passed. The fee for the FAA written test is not covered in the course fee.
Prerequisite: Minimum scores as provided here on Writing Skills and Algebra Skills placement tests. Writing Skills Placement Test: minimum score of 44 on ASSET or 71 on COMPASS. Algebra Skills Placement Test: minimum score of 41 on Elementary Algebra ASSET, or 49 on Algebra COMPASS.

AVI102 AVIATION HISTORY
3 Lecture 0 Lab 3 Credit Hour(s)
This course provides a general description of the entire field of aviation starting with the early achievements of flight and progressing through milestones to the present age. This course contains an overview of the governmental involvement with the aviation industry from establishing the postal routes, safety regulations, and airline subsidies through deregulation of the airline industry. This course includes the contributions to aviation by women, minorities, and other cultures. The introduction and development of power flight, from Zeppelins, Flying Boats, through the Boeing 777, and the X-30 Oriental Express and beyond is also explored. An extended field trip will be made to the Rhinebeck Aerodrome to see the aircraft from early years of flight.

AVI104 INSTRUMENT FLIGHT
4 Lecture 0 Lab 4 Credit Hour(s)
This course is a study of the instrument flying techniques and procedures in conjunction with modern ILS, VOR, ADF, GPS, and radar facilities. The course includes the study of basic attitude instrument flying, instrument navigation procedures, holding, precision and non-precision approach and departure procedures and macro and micro-metrology and analysis. Students are provided the information necessary to complete the FAA Instrument Rating Knowledge Exam. This class will be successfully completed and a grade provided when the FAA knowledge exam is passed. The fee for the FAA written test is not covered in the course fee.
Prerequisites: AVI101 or equivalent.

AVI110 AVIATION LAW 3
Lecture 0 Lab 3 Credit Hour(s)
Course will cover the history of aviation law. The Code of Federal Regulations as they pertain to the aviation community. Ecological concerns regarding aviation noise, noise abatement, and the role of the State and Federal Government. Liability issues and tort reform, as they pertain to private and commercial flight operations.
Prerequisites: AVI 100 and AVI 102.

AVI111 INTRODUCTION TO FLIGHT LABORATORY
0 Lecture 3 Lab 1 Credit Hour(s)
This course provides a student with the practical flight experience in a single engine aircraft to acquire a Private Pilot’s license, Aircraft, SEL Certificate. The primary flight training includes dual and solo flight time to meet FAA practical testing standards in such training as basic flight maneuvers, takeoff and landing, night flying and cross-country procedures. Minimum FAA flight training hours apply and students will, in most cases, exceed those minimum hours in order to meet practical test standards. Completion of the FAA knowledge exam is required for the certificate. The cost of flight school is considerable and is subject to change.
Prerequisite: FAA Second Class Medical Certificate (required), FAA
skills are formulated and evaluated throughout this course. Continued use of effective communication in crew resource management as it applies to complex and high performance aircraft. This course provides a student with continued practical experience in flight safety operations to include Part 91 and Part 135 regulations, emergency procedures and planning, flight safety, and aeronautical safety organizations, and modern hardware (Doppler radar, HSOS, LLWHS, TCAS etc.).

**AVI 116 FLIGHT SAFETY**
3 Lecture 0 Lab 3 Credit Hour(s)
This course introduces practical safety material, organizations and equipment necessary to conduct safe daily flight operations. All factors including weather, maintenance, equipment and human factors will be examined, with particular emphasis on critical decision making under stress conditions. Proper decision making will be based on knowledge of formal weather briefing techniques, flight plan filing, search and rescue methods, post-crash survival, aircraft maintenance programs, accident/incident reports and forms, airport rescue and fire fighting, the role of NTSB and flight safety organizations, and modern hardware (Doppler radar, HSOS, LLWHS, TCAS etc.).

**AVI 208 COMMERCIAL FLIGHT 3**
Lecture 0 Lab 3 Credit Hour(s)
This course is a study of the required knowledge information for a Commercial Pilot’s license. Subjects covered in this course include: advanced aerodynamics, advanced aircraft systems, physiology, emergency procedures and planning, flight safety, and aeronautical decision making. There is a focus on crew resource management and flight safety operations to include Part 91 and Part 135 regulations and operations. Students will receive an instructor endorsement for the Commercial Pilot Knowledge Exam at the completion of the course requirements for an airplane-SEL. The fee for the FAA Knowledge Exam is not covered in the course fee.

**AVI 209 COMMERCIAL FLIGHT PRACTICUM**
0 Lecture 3 Lab 1 Credit Hour(s)
This course provides a student with continued practical experience in crew resource management as it applies to complex and high performance aircraft. Continued use of effective communication skills are formulated and evaluated throughout this course. Students are introduced to the function and operation of advanced aircraft systems; practical experience in accelerated stalls and advanced maneuvers in order to apply aerodynamic theory. Students are trained on advanced aircraft systems including constant speed propellers and retractable landing gear, the associated emergency procedures for these systems and planning for commercial flight situations. Students completing this course in conjunction with AVI 218 will receive the practical flight experience requirements necessary to complete the FAA Commercial Practical Exam and receive a Commercial Pilot Certificate, Airplane, SEL. The cost of flight school is considerable and is subject to change.

**AVI 218 COMMERCIAL FLIGHT LABORATORY I**
0 Lecture 3 Lab 1 Credit Hour(s)
This course provides a student with the practical flight experience in a single engine aircraft toward the FAA cross country requirement to obtain a Commercial Pilot Certificate. This course alone will not complete all requirements for the commercial certificate. Students will gain flight experience in day and night cross-country both dual and solo. Students will be introduced to the crew resource management concept, function and practical use of standard operating procedures, minimum equipment lists and commercial flight operations (Part 135 and Part 121) scenarios. The cost of flight school is considerable and is subject to change.

**AVI 271 SPECIAL STUDY PROJECT I**
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Prior to registering for any special studies course, the approval of the department head must be obtained. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student’s knowledge and competence in the field of Aviation Science and related areas. The student’s time commitment to the project will be approximately 35-50 hours.

**AVI 272 SPECIAL STUDY PROJECT II**
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to AVI 271, except that the student’s time commitment to this project will be approximately 70-90 hours.

**AVI 273 SPECIAL STUDY PROJECT III**
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to AVI 271, except that the student’s time commitment to this project will be approximately 105-135 hours.
BEHAVIORAL SCIENCES

BHS100 PERSONAL EFFECTIVENESS
2 Lecture 0 Lab 2 Credit Hour(s)
An exploration, via lectures, films, and group experiences, of various aspects of effective interpersonal functioning. Topics will include: reacting to frustration, failure, anger, and fear; effectively expressing one’s feelings and needs; the importance of awareness and development of one's potentials through active and responsible choosing; and developing constructive coping skills.  
Note: Recommended only for students with 11 or fewer earned college credits.

BHS103 SOCIAL PROBLEMS IN TODAY’S WORLD
3 Lecture 0 Lab 3 Credit Hour(s)
This course is an examination of current social problems that confront the individual, the United States, and the international community. Concepts of the behavioral sciences are introduced. The course presents a broad range of social problems, with particular focus on the complex relationships between contemporary issues. Students are presented the current research data that explains both the causes and possible resolutions to important social issues.

BHS110 INTRODUCTION TO HUMAN SERVICES
3 Lecture 0 Lab 3 Credit Hour(s)
An overview of human services and human service education. Other topics include the history of the field, major theoretical perspectives for treatment, roles, skills and professional development of workers, target populations and problem identification.

BHS142 CRIMINOLOGY
3 Lecture 0 Lab 3 Credit Hour(s)
A study of crime and society's response to crime, the rehabilitation of the criminal offender and the prevention of crime. Various theories concerning the causes of crime are studied. Current social problems and their relevance to crime causation are discussed.  
Prerequisite: BHS 103 or permission of department head.

BHS201 CONTEMPORARY PROBLEMS AND ISSUES IN
2 Lecture 0 Lab 2 Credit Hour(s)
This course surveys significant problems and issues germane to the field of substance abuse. Attention will be given to cause-effect relationships, family issues, grief and loss, policy and the law and evolving trends and attitudes. Recent research will be examined with consideration of implications for prevention and control.  
Prerequisite: BHS 242 or permission of department head.

BHS202 PHYSICAL ANTHROPOLOGY
3 Lecture 0 Lab 3 Credit Hour(s)
The study of humans as physical organisms, with an emphasis on the interaction between biology and culture. Physical Anthropology focuses on the evolution of the human species as well as modern human physical variation. The sub-fields of paleontology, genetics, primatology and archaeology are explored.

BHS203 SOCIOCULTURAL ANTHROPOLOGY
3 Lecture 0 Lab 3 Credit Hour(s)
Designed to introduce the student to the major issues and fundamental concepts in the field of sociology. Areas selected for analysis are culture and its transmission, personality and socialization, social roles and processes, groups and elements of group behavior, and social status and class. These focal areas are then used to examine various social institutions, including the family, religion, the economic system, education and the political system. Trends of modern society are considered.

BHS204 ANTHROPOLOGY
3 Lecture 0 Lab 3 Credit Hour(s)
The study of human behavior in a biological and cultural context. The various sub-divisions of anthropology, their concerns, techniques and findings are explored: physical anthropology, archaeology and cultural anthropology. Course work and analyses are integrated with the course background.

BHS205 THE FAMILY
3 Lecture 0 Lab 3 Credit Hour(s)
The study of the family from a sociological viewpoint, with special reference to the American family. The course emphasizes the historical and cross-cultural study of the family; patterns of dating and mate selection; sexual norms and relationships; marital and family relationships; marital crisis and divorce; the family and social policy; and the future of the family as a social institution.

BHS206 CULTURAL ANTHROPOLOGY
3 Lecture 0 Lab 3 Credit Hour(s)
The systematic study of human behavior in a cultural context. Major topics include the evolution of culture, linguistics, sociocultural systems, and globalization with an emphasis on a non-western, non-eurocentric viewpoint. The methodology of Anthropological research is also studied.

BHS207 EDUCATION IN AMERICAN SOCIETY
3 Lecture 0 Lab 3 Credit Hour(s)
An introductory study of education as a major social institution with special attention being given to the philosophies, patterns, cultural diversity, and issues which have characterized the American system. A consideration of higher education is included.

BHS208 THE FAMILY
3 Lecture 0 Lab 3 Credit Hour(s)
The study of the family from a sociological viewpoint, with special reference to the American family. The course emphasizes the historical and cross-cultural study of the family; patterns of dating and mate selection; sexual norms and relationships; marital and family relationships; marital crisis and divorce; the family and social policy; and the future of the family as a social institution.

BHS209 RACIAL AND ETHNIC RELATIONS
3 Lecture 0 Lab 3 Credit Hour(s)
Racial, cultural and ethnic minority groups in American society. The nature and patterns of interaction are examined, including contact, conflict, assimilation, acculturation, pluralism and segregation. Current situations are stressed.  
Prerequisite: BHS 103 or permission of department head.

BHS210 THE SOCIOLOGY OF RELIGION
3 Lecture 0 Lab 3 Credit Hour(s)
The sociological interpretation of religion is the empirical study of religion as a social institution. Major issues in the analysis of religion include: the origins of religion; the functions of religion; the relation of religion and society; types of religious authority; liberation theology and contemporary world religious movements; women, race, and sex and religion; religion and social and cultural differentiation.

BHS212 CHILD ABUSE
3 Lecture 0 Lab 3 Credit Hour(s)
A systematic examination of child physical and sexual abuse. Various historical factors, dynamics, and symptoms will be discussed using theoretical and empirical constructs.

BHS214 INTRODUCTION TO WORLD ARCHAEOLOGY
3 Lecture 0 Lab 3 Credit Hour(s)
An introduction to the methods employed in modern archaeology and their application in fostering knowledge of the earliest cultures and civilizations to emerge in human history. Both Old World and New World civilizations will be examined.

BHS215 FIELD ARCHAEOLOGY
2 Lecture 2 Lab 3 Credit Hour(s)
This course is designed for the beginning archeology student who wishes to gain practical, hands-on experience in field excavation; the course consists of classroom study in field techniques and actual field excavation. Topics include history, survey, dating, field techniques, laboratory techniques, curation and report writing. Special emphasis is placed on New York State Archaeology and the requirement of the New York State Office of Parks, Recreation and Historic Preservation. The field excavation will take place on landscapes publicly held by the citizens of Dutchess County where the commercial excavation would be prohibitive. Sites that have
been assessed as endangered by the State Archaeologists will be
given priority.

BHS216 THE SOCIOLOGY OF HEALTH AND MEDICINE
IN THE US
3 Lecture 0 Lab 3 Credit Hour(s)
This course introduces the student to sociological phenomena as they
relate to human health and diseases, mainly in the United States, but
also with some consideration of health organizations, philosophy
and delivery in the other areas of the world. Included in the course
are comparative distributions of diseases among different population
groups, individual responses, attitudes and beliefs toward health
and illness, medical care providers and organizations, financing
and delivery of health care, and the roles of social factors in the
etiology and outcome of diseases.

BHS220 COMPARATIVE SOCIAL SYSTEMS IN THE US AND
1 Lecture 4 Lab 3 Credit Hour(s)
This course provides an opportunity to experience firsthand operation
of selected social systems for comparison and contrast to those in the
United States. The social systems considered and the international
settings may vary from one offering to the next. Consult the master
schedule of courses for details.

BHS221 COMPARATIVE SOCIAL SYSTEMS IN THE US AND
1 Lecture 2 Lab 2 Credit Hour(s)
For selected students.
Note: May be offered as an independent course or in conjunction
with BHS 220 and/or 222. Students must register for both a lecture
and a lab.
Prerequisite: Permission of the instructor.

BHS222 COMPARATIVE SOCIAL SYSTEMS IN THE US AND
1 Lecture 2 Lab 2 Credit Hour(s)
For selected students.
Note: May be offered as an independent course, or in conjunction
with BHS 220 and/or BHS 221. Students must register for both a
lecture and a lab.
Prerequisite: Permission of instructor.

BHS231 TOPICS IN BHS I
1 Lecture 0 Lab 1 Credit Hour(s)
This course is designed to explore a specific topic area in the
Behavioral Sciences in greater depth than would occur in an
introductory level offering. The topics will vary and may be drawn
from Anthropology, or from Sociology, or from any of their various,
applied sub-fields. The classroom instruction will amount to a period
five weeks of the semester, or its equivalent in formal lecture/
discussion.

BHS232 TOPICS IN BHS II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to BHS 231, except that the instructional time will take place
over a period of 10 weeks of the semester, or its equivalent in formal
lecture/discussion.

BHS233 TOPICS IN BHS III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to BHS 231, except that the instructional time will take place
for the entire fifteen weeks of the semester, or its equivalent in formal
lecture/discussion.

BHS242 DRUG AND ALCOHOL USE AND ABUSE
3 Lecture 0 Lab 3 Credit Hour(s)
A study of the problems and factors attendant to alcoholism and
other substance abuse, including a survey of the physiological and
pharmacological aspects of such use. Various theories and current
rehabilitative methods will be examined as will dependency states,
socio-psychological factors and alternatives to mood-modifying
substance use/abuse.

BHS245 ISSUES AND ETHICS IN THE HUMAN SERVICES
3 Lecture 0 Lab 3 Credit Hour(s)
Designed for students completing the Human Services programs in
CHC or CMH, this course considers the application of the theories/
skills/values acquired in the designated programs to current and
future trends in the field, as well as addressing specific issues
confronted by human services professionals.
Prerequisites: BHS 110, PSY 102, PSY 134, PSY 202, PSY 203,
PSY 235 or PSY 201, CHC or CMH 103, 104, 203.

BHS251 TOPICS IN THE BEHAVIORAL SCIENCES I
1 License 0 Lab 1 Credit Hour(s)
This course is designed to explore a specific topic area in the
Behavioral Sciences in greater depth than would occur in an
introductory level offering. The topics will vary and may be drawn
from Anthropology, or from Sociology, or from any of their various,
sub-fields. The classroom instruction will amount to a period
five weeks of the semester, or its equivalent in formal lecture/
discussion.

BHS252 TOPICS IN THE BEHAVIORAL SCIENCES II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to BHS 251, except that the instructional time will take place
over a period of 10 weeks of the semester, or its equivalent in formal
lecture/discussion.

BHS253 TOPICS IN THE BEHAVIORAL SCIENCES III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to BHS 251, except that the instructional time will take place
for the entire fifteen weeks of the semester, or its equivalent in formal
lecture/discussion.

BHS262 JUVENILE DELINQUENCY
3 Lecture 0 Lab 3 Credit Hour(s)
Designed to introduce students to the development of juvenile
delinquency in American society. This course emphasizes the
ways in which society structures juvenile delinquency as a social
phenomenon. The course presents various theories to explain both
the causes of juvenile delinquency, as well as society's response
to youth offenders, and examines programs, interventions and
punishments that attempt to change juvenile behavior.
Prerequisite: BHS 103 or permission of the department head.

BHS271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students
with the cooperation and approval of a faculty member. Prior
to registering for any special studies course, the approval of the
department head must be obtained. Proposed study plans require
departmental approval. Projects may be based on reading,
research, community service, work experience, or other activities
that advance the student’s knowledge and competence in the field of
social science and related areas. The student’s time commitment to
the project will be approximately 35-50 hours.

BHS272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to BHS 271, except that the student’s time commitment to the
project will be approximately 70-90 hours.

BHS273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to BHS 271, except that the student’s time commitment to the
project will be approximately 105-135 hours.
BIOLOGY

NOTE: Students should assume that all laboratory science courses (AST, BIO, CHE, GLG, MIL, PHS and PHY) will incorporate some level of math. There are no science courses designed to be 'math free'. The nature of the lab is to perform experiments and gather data that will test scientific theory. Working with data will require, at a minimum, some basic mathematics, including use of (+, -, x) calculator. Therefore, even for science course with no stated math prerequisites, it will be expected that students have math competency at the level of MAT091 (Beginning Algebra) or its equivalent.

BIO001 COURSE SPECIFIC STUDY SKILLS FOR BIO 101
1 Lecture 0 Lab 1 Credit Hour(s)
BIO 001 is a study skills course designed for those students who require support in BIO 101, General Biology, taught by the instructor of BIO 101 with which it is content correlated. BIO 001 will include practical work with notetaking, textbook mastery, laboratory techniques, exam preparation and test taking techniques, as well as specific strategies necessary to the successful study of biology.

NOTE: BIO 001 is a credit equivalent course. Equivalent credits do not satisfy degree requirements and are not calculated in a student’s grade point average, but they do incur tuition charges and they do count towards full-time/part-time status.

BIO003 COURSE SPECIFIC STUDY SKILLS FOR BIO 103
1 Lecture 0 Lab 1 Credit Hour(s)
This is a study skills course designed for students who require support in BIO 103 Human Biology. Its content correlates with Human Biology and is taught by a BIO 103 instructor. BIO 003 will include practical work with note-taking, textbook mastery, exam preparation and test taking techniques, as well as specific strategies necessary for success in the study of laboratory materials.

BIO030 INTRODUCTION TO BIOLOGY
2 Lecture 3 Lab 3 Credit Hour(s)
This course is designed for students in programs requiring Biology who are unprepared to enter a 100 level course as shown by testing and/or background. Course content includes study techniques, the nature of science, the scientific method, and the metric system, biochemistry, the cell, the laboratory report and basic laboratory techniques. This course requires basic mathematical skills. Students are encouraged to take the appropriate English and math courses determined by placement testing with this course. A grade of C or better is required to take BIO 130. This course is a prerequisite for BIO 130 for those students referred after testing.

NOTE: BIO 030 is a credit equivalent course. Equivalent credits do not satisfy degree requirements and are not calculated in a student’s grade point average, but they do incur tuition charges and they do count towards full-time/part-time status. Students must register for both a lecture and a lab. 2 Lecture, 3 Lab, 0 Credit Hour (3 Credit Equivalents).

BIO101 GENERAL BIOLOGY I
3 Lecture 2 Lab 4 Credit Hour(s)
An interdisciplinary study of basic biological concepts, including the nature of science, matter, the cell, characteristics of living matter, a brief survey of the living world and ecology. BIO 101 and BIO 102 are recommended for students who wish to pursue studies in the Biological and Life Sciences. Non-science majors are encouraged to consider BIO 103 and BIO 104 (see descriptions).

BIO102 GENERAL BIOLOGY II
3 Lecture 2 Lab 4 Credit Hour(s)
A continuation of BIO 101, including homeostasis in organisms, genetics, evolution and a consideration of the structure and function of tissues, organs and organ systems.
Prerequisite: BIO 101 with a grade of C or better.

BIO103 HUMAN BIOLOGY
3 Lecture 2 Lab 4 Credit Hour(s)
An introductory course which concerns the structure and function of the human body and the maintenance of homeostasis. The course is designed for non-science majors and does not fulfill the elective requirement of the LAX student.

BIO104 ENVIRONMENTAL BIOLOGY
3 Lecture 2 Lab 4 Credit Hour(s)
An introductory course focusing on people and their relationship to the external environment. The subject is treated in the context of conservation, ecology, taxonomy and human behavioral patterns.
Topics of current interest are discussed, such as pollution, local environmental issues and the economic uses of natural areas. The course is designed primarily for non-science majors and does not fulfill the elective requirement of the LAX program.

BIO107 ECOLOGY
3 Lecture 0 Lab 3 Credit Hour(s)
Field and laboratory study of ecological principles in biological communities of the Northeastern United States. The ecological basis of contemporary environmental problems are examined and related to human activities. Food webs, energy pyramids, community structure, limiting factors, and ecological succession are studied as they relate to environmental management practices.

BIO112 A BIOMEDICAL VIEW OF AIDS/HIV INFECTION
3 Lecture 0 Lab 3 Credit Hour(s)
This course is designed to examine the frequency and distribution of AIDS/HIV infection. It will provide a general understanding of HIV, its modes of transmission, and approaches to its control and management. In addition, the course explores current concepts in the areas of testing, treatment and prevention.

BIO115 ANATOMY AND PHYSIOLOGY FOR PARAMEDICS
4 Lecture 3 Lab 5 Credit Hour(s)
This one semester course is designed primarily for Paramedic students. It focuses on a problem-oriented approach to enhance understanding of the biological, chemical and physical principles underlying body system interactions in health and disease. The course is required for students in the Emergency Medical Technician- Paramedic program. Students must complete BIO 115 with a grade of C or better. It is not intended for Biology majors.

BIO116 INFECTIOUS DISEASES - PAST, PRESENT AND FUTURE
3 Lecture 0 Lab 3 Credit Hour(s)
The goal of this course is to examine the frequency and distribution of infectious diseases not only in the U.S. but worldwide. Using a social-behavioral-biological-medical-political and economical model, the course will provide a general understanding of why as a society we are experiencing the reemerging of old infectious diseases (e.g., TB, plague, malaria, pertussis) and the emerging of new infectious diseases (e.g., Ebola, Hepatitis, Manta virus). In addition, the course will explore approaches to prevention, control and management of these diseases.

BIO117 UNDERSTANDING CANCER
3 Lecture 0 Lab 3 Credit Hour(s)
This course is intended to introduce the student to various aspects of cancer including the biology of cancer, its impact on the patient and on society, treatment methods, risk assessment, prevention and future trends in dealing with the United States’ second leading killer. Instructional methods include lecture, video tapes, classroom discussions, interactive CD - ROM and Web-based activities and guest lectures. Nursing students may not use this course for free elective credit.
BIO 122 NUTRITION
3 Lecture 0 Lab 3 Credit Hour(s)
This course is a study of the role nutrition plays in maintaining health. The course will cover basic nutrition concepts, application of nutrition guidelines, awareness of nutrition’s role in disease management, life cycle nutrition, and food safety. Controversial issues related to nutrition and health will also be discussed.

BIO 130 INTRODUCTION TO PHYSIOLOGY
3 Lecture 2 Lab 4 Credit Hour(s)
Course content includes biochemistry, the cell, transport mechanisms, the laboratory report and laboratory techniques. This course requires basic computational skills. This course is a prerequisite for BIO 131 for those students referred after testing. A grade of C or better is required to take BIO 131. This course does not fulfill the elective requirement of the LAX student.

BIO 131 ANATOMY AND PHYSIOLOGY I
3 Lecture 2 Lab 4 Credit Hour(s)
The application of scientific principles from the areas of biology, chemistry and physics to the study of human anatomy and physiology. Required for nursing students and open to students in medically allied technologies. Not intended for biology majors. Prerequisite: For those students referred by testing, BIO 130 with a grade of C or better.

BIO 132 ANATOMY AND PHYSIOLOGY II
3 Lecture 2 Lab 4 Credit Hour(s)
BIO 132 is a continuation of BIO 131. Designed primarily for those students in the medically allied technologies. Note: Students must register for both a lecture and a lab. Prerequisite: BIO 131 with a grade of C or better.

BIO 141 HUMAN GENETICS AND VALUES
3 Lecture 0 Lab 3 Credit Hour(s)
An interdisciplinary course involving the study of basic human genetics principles relating to cytogenetics, birth defect syndromes, genetic counseling, application to developmental disabilities, biochemical genetics, ethics, human engineering, clinical diagnoses, community services, community residential facilities and current legislation.

BIO 203 INVERTEBRATE ZOOLOGY
3 Lecture 3 Lab 4 Credit Hour(s)
An introduction to the principles of the classification of animals, followed by a systematic study of invertebrate animals, including their morphology, physiology and natural history. Concepts of evolution, paleontology and ecology are discussed. Prerequisite: BIO 101.

BIO 204 GENERAL BOTANY
3 Lecture 3 Lab 4 Credit Hour(s)
An introduction to the dynamic aspects of the plant world, including principles of classification, physiology, a survey of the plant kingdom, conservation, ecology and evolution. Laboratory work deals with physiological experiments, plant identification, life histories and morphology. Field trips are scheduled. Prerequisite: BIO 101.

BIO 205 INTRODUCTION TO GENETICS
3 Lecture 3 Lab 4 Credit Hour(s)
An introductory study of the basic principles of inheritance, including the biochemical, physiological and evolutionary aspects. Laboratory work includes experiments with microorganisms and fruit flies. Prerequisites: BIO 101 and 102.

BIO 207 GENERAL MICROBIOLOGY
3 Lecture 3 Lab 4 Credit Hour(s)
A survey of microorganisms with major focus on the bacteria. Morphology, physiology, genetics and taxonomy are emphasized. Applied areas are included. Prerequisites: BIO 101-102, CHE 121-122 or permission of the instructor.

BIO 209 ANATOMY
3 Lecture 3 Lab 4 Credit Hour(s)
A study of the various organ systems making up the total organism, with emphasis on human anatomy. Structural study of the skeletal, muscular, circulatory, respiratory, digestive, excretory, nervous and reproductive systems. Laboratory work will include dissection of the cat. Prerequisites: BIO 101-102 or permission of the instructor.

BIO 210 PHYSIOLOGY
3 Lecture 3 Lab 4 Credit Hour(s)
A study of the workings and functional interrelationships of the organ systems, with emphasis on human physiology. Includes the skeletal, muscular, circulatory, respiratory, digestive, excretory, nervous and reproductive systems. Laboratory work will include experiments and demonstrations utilizing living material. Prerequisites: BIO 101-102 and BIO 209 or permission of the instructor.

BIO 213 CELL PHYSIOLOGY
3 Lecture 3 Lab 4 Credit Hour(s)
A study of microorganisms, with emphasis on their morphology, physiology and medical significance. Intended for students in the medical-allied technologies. Not intended for biology majors, and does not fulfill the elective requirements of the LAX student. Prerequisites: BIO 131-132, with a grade of C or better, or permission of the instructor.

BIO 215 ENVIRONMENTAL MEASUREMENTS
2 Lecture 4 Lab 4 Credit Hour(s)
The study of standard qualitative and quantitative methods of environmental analysis, emphasizing the collection of field data, sampling techniques, population estimates, collecting techniques and practical applications. Prerequisites: BIO 101 and BIO 107 or permission of the instructor.

BIO 222 ENVIRONMENTAL CONTAMINANTS
3 Lecture 3 Lab 4 Credit Hour(s)
A study of the serious problems associated with hazardous and toxic substances in the environment. Topics include the classification of contaminants in the ecosystem, bioconcentration, assessment risks, and management techniques for hazardous material present in the atmosphere, hydrosphere and lithosphere. Prerequisite: BIO 101.

BIO 227 SPECIAL STUDY PROJECT I
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student’s knowledge and competence in the field of biology or related areas. The student’s time commitment to the project will be approximately 35-50 hours.
BUS100 BUSINESS ADMINISTRATION INTRODUCTORY SEMINAR
1 Lecture 0 Lab 1 Credit Hour(s)
Designed for students in the business curricula, this course will focus on personal development and effective strategies for successful completion of the AAS and AS degrees. Personal educational goals, career planning, good study approaches, reading and writing skills, and using college resources, such as the library and Internet, will be among the topics examined in the seminar. Students will develop an individual 'plan for the self' emphasizing individual goals and how they expect to achieve them.

BUS101 BUSINESS MATHEMATICS
3 Lecture 0 Lab 3 Credit Hour(s)
This course focuses on the application of fundamental arithmetical computations to practical business problems. Topics studied include: percentages, purchase discounts, interest calculation, mark-up and mark-down, taxes and payroll. Students may use personal calculators as an aid in covering course content.

BUS102 INTRODUCTION TO BUSINESS
3 Lecture 0 Lab 3 Credit Hour(s)
A survey course introducing business and non-business students to the world of business. This course will provide the student with a basic knowledge and understanding of the major aspects of the American business system and their interrelationships. Topics include economic systems, forms of business ownership, legal aspects of business, the management of resources, the importance of the market, capital acquisition and financing, accounting, risk management, information acquisition and distribution, social responsibility and opportunities in business.

BUS103 KEYBOARDING FOR INFORMATION PROCESSING
1 Lecture 1 Lab 1 Credit Hour(s)
Development of basic touch keyboarding skills for individuals who will be using keyboards for inputting information. Instruction will occur using computer terminal keyboards and specialized keyboarding computer software.
Note: This course will be offered on a seven-week basis, four hours per week.

BUS104 BUSINESS ORGANIZATION AND MANAGEMENT
3 Lecture 0 Lab 3 Credit Hour(s)
A study of the managerial process and the social and organizational forces that shape and define the manager’s job. The objective of the course is to examine the basic managerial functions of planning, organizing, motivating and controlling in order to develop an understanding of issues as they are found in business practice.

BUS105 ADVERTISING
3 Lecture 0 Lab 3 Credit Hour(s)
A study of the procedures and techniques of advertising. Attention is given to the purposes of advertising, the creation of advertising ideas, the writing of copy, trademarks, fundamentals of advertising layout, selecting and using media, market research and the advertising agency.

BUS106 PROFESSIONAL SELLING
3 Lecture 0 Lab 3 Credit Hour(s)
The role of selling in the context of a marketing environment. Creative, ethical, professional selling and its practical application to industrial, wholesale, retail and service situations are explored. Topics include communication skills, planning sales calls and sales presentation, meeting objections, closing the sale, service after the sale, careers in sales and the use of technology, such as computer software and the Internet.

BUS107 PRINCIPLES OF MARKETING
3 Lecture 0 Lab 3 Credit Hour(s)
A study of principles underlying the development and distribution of goods and services for organizational and consumer needs. Topics include: development of the marketing concept, legal and cultural environment, marketing research, segmentation, buyer behavior, product development, pricing, wholesaling, retailing, advertising, selling and Internet applications.

BUS109 INTRODUCTION TO MICROSOFT EXCEL
1 Lecture 0 Lab 1 Credit Hour(s)
This course is designed to introduce students to the basics of spreadsheet software using Microsoft Excel. This course will cover worksheet basics, creating, formatting, editing and printing worksheets and charts. An introduction to Windows will also be included.

BUS110 INTRODUCTION TO MICROSOFT ACCESS
1 Lecture 0 Lab 1 Credit Hour(s)
This course is designed to introduce students to the basics of database software using Microsoft Access. This course will cover basic database management, the functions of creating, editing, printing and manipulating a database. An introduction to Windows will also be included.

BUS111 INTRODUCTION TO MICROSOFT POWERPOINT
1 Lecture 0 Lab 1 Credit Hour(s)
This course is designed to introduce students to the basics of presentation software using Microsoft Power Point. This course will cover presentation basics, creating, formatting, editing, printing and delivering presentations. An introduction to Windows will also be included.

BUS112 INTRODUCTION TO MICROSOFT WORD
2 Lecture 0 Lab 2 Credit Hour(s)
This course is designed to introduce students to the basics of word processing software using Microsoft Word. This course will cover basic word processing features including creating, editing, formatting, and printing documents including letters, multi-page reports, tables and mailing labels. An introduction to Windows will also be included.
Prerequisite: BUS 103 with a grade of C or better.
BUS141 INTRODUCTION TO HOSPITALITY AND TOURISM
3 Lecture 0 Lab 3 Credit Hour(s)
An introduction to global travel and tourism and the role they play as major retailers. Topics include career options, corporate travel administration, transportation, hotel industry, tourism boards, convention centers and park services. The role of tourism and marketing procedures will also be included.

BUS161 MANAGEMENT OF RETAIL OPERATIONS
3 Lecture 0 Lab 3 Credit Hour(s)
The principles of successful retail store management are analyzed. The topics discussed include retailing as an economic force, types of retail stores and their organizational structure, planning and management of store services, customer behavior and the basics of merchandising.

BUS162 FUNDAMENTALS OF FASHION
3 Lecture 0 Lab 3 Credit Hour(s)
The first course deals with a basic fashion vocabulary; how fashion trends develop; the producers, designers, retailers and consumers of fashion. Fashion influences from Europe and the U.S. as well as the fashion press, are also discussed. The way we live and the things we do are related to fashion as an element of change in our economy.

BUS208 SMALL BUSINESS MANAGEMENT
3 Lecture 0 Lab 3 Credit Hour(s)
A practical application of management principles to small business. Topics include: how to start a small business, franchising, sources of capital, how to buy a small business, location analysis, employee relations, financial control, inventory control, advertising, selling, credit and legal aspects of business. Prerequisite: BUS 102 or BUS 104 or permission of the department.

BUS210 BUSINESS COMMUNICATION
3 Lecture 0 Lab 3 Credit Hour(s)
This course provides instruction and practice in various forms of written and oral communication used in the workplace. The focus of written work is on developing an effective writing style for memos, letters and reports; learning appropriate business document formatting and improving grammar, punctuation and usage. Oral communication skills are developed by preparing and delivering business presentations and by working in group settings. Electronic communication methods include the use of e-mail and the Internet. Prerequisite: ENG 101.

BUS215 BUSINESS LAW I
3 Lecture 0 Lab 3 Credit Hour(s)
An introduction to the legal environment in which business functions. Topics studied include the judicial system, business related torts, intellectual property, the law of contracts and sales. Prerequisite: BUS 102 or BUS 104 or permission of department.

BUS216 BUSINESS LAW II
3 Lecture 0 Lab 3 Credit Hour(s)
As a continuation of BUS 215, the course focuses on the impact of the law in such areas as real property, personal property, bailment wills, trusts, estates, agency, business organizations and bankruptcy. Prerequisite: BUS 215 or permission of department.

BUS243 ADMINISTRATIVE OFFICE MANAGEMENT
3 Lecture 0 Lab 3 Credit Hour(s)
A study of current office management practices and procedures. Subjects include office organization and supervision, system and procedure analysis, data processing, office equipment, form design and control, office layout, storing and retrieving information, communication and office salary administration. Experience in solving office management problems is simulated through case studies and projects. Prerequisite: BUS 102 or BUS 104.

BUS244 HUMAN RESOURCE MANAGEMENT
3 Lecture 0 Lab 3 Credit Hour(s)
This course is designed to provide an in-depth study of the processes of managing the human resources of an organization. It includes the acquisition, training, and development, remuneration and reward, utilization, and motivation of an organization’s human assets. Major attention is paid to the legal and social aspects of the environment as they relate to human resources. The impact of unions on the organization’s human resources is also studied. Prerequisite: BUS 102 or BUS 104.

BUS254 INTERNATIONAL BUSINESS
3 Lecture 0 Lab 3 Credit Hour(s)
This course provides an overview of international business. Specifically, it provides the students with a description and analysis of the mechanics of doing business abroad. It discusses how the cultural, economic, environmental, legal and political differences they learned about in previous courses affect the success of U.S. business abroad. Lastly, it provides a discussion of the various functional areas of international business (management, marketing, accounting and finance). Prerequisite: BUS 102 or BUS 104.

BUS255 OFFICE PRACTICE
3 Lecture 0 Lab 3 Credit Hour(s)
This course will give students a perspective on the role of administrative support professionals and recognition of the technological developments that have affected office roles. Topics include the changing workplace, mastering technology, filing and records management, handling mail, succeeding in the work environment, time management, writing and presenting successfully, professional growth and human relations. Projects requiring the use of a variety of computer software as well as the use of the Internet and email will be included in this course. Prerequisites: BUS 103 and BUS 112.

BUS263 MERCHANDISE MANAGEMENT
3 Lecture 1 Lab 3 Credit Hour(s)
The functions of the buyer and the importance of developing buying plans are discussed. The elements of mathematical computation and retail accounting procedures necessary for employment in a merchandising capacity are emphasized. Topics include the six month plan, inventory procedures, open-to-buy, the stock sales ratio, model stocks, unit control procedures, customer preference merchandising and the role merchandising division.

BUS271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student’s knowledge and competence in the field of business or related areas. The student’s time commitment to the project will be approximately 35-50 hours.

BUS272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to BUS 271, except that the student’s time commitment to the project will be approximately 70-90 hours.

BUS273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to BUS 271, except that the student’s time commitment to the project will be approximately 105-135 hours.
BUS290 BUSINESS INTERNSHIP
1 Lecture 8 Lab 3 Credit Hour(s)
This course provides students with a real world laboratory in which to gain work experience in various types of businesses or similar institutions. The work experience will be 120 hours in duration. The internship will be customized to meet the specific needs of the student intern. Consequently, specific learning objectives must be developed by the collaboration of the intern, the on-site supervisor, and the faculty sponsor. Some typical areas of student learning can be focused on: accounting, marketing, advertising, sales, management, finance, insurance, real estate, public relations, human resources, banking, or any business-related area that meets the student's needs. In addition, interns meet one hour per week at a regularly scheduled time to discuss and share experiences. Internship logs and special reports are required.

Note: Matriculation in ACC and BUS; sophomore status with 30 credits, including 12 credits in BUS or ACC required.
Prerequisite: Permission of department.

BUS909 ENTREPRENEURSHIP
3 Lecture 0 Lab 3 Credit Hour(s)
This course is a study of entrepreneurship and the process of developing a business start-up as well as a study of the environmental, social and organizational forces that shape and define small business development from formation to existence. The purpose of the course is to examine the functions and experiences of entrepreneurship by developing an actual plan and business start-up to gain an understanding of issues as they are found in business planning, practice and small business management.
Prerequisite: 12 earned credits and permission of department.

CHEMICAL DEPENDENCY COUNSELING

CDC103 CHEMICAL DEPENDENCY COUNSELING PRACTICUM I
1 Lecture 4 Lab 2 Credit Hour(s)
Students will experience an extended placement at a mental health or social service agency serving individuals with chemical dependency issues. Emphasis will be placed on the organization of the agency and on services provided. Also, students are required to attend a weekly seminar class, meet weekly with a college field supervisor and complete log reports.
Corequisite: CDC 203.
Pre or Corequisite: PSY 102.

CDC104 CHEMICAL DEPENDENCY COUNSELING PRACTICUM II
1 Lecture 4 Lab 2 Credit Hour(s)
Students will experience an extended placement at a mental health or social service agency serving individuals with chemical dependency issues. Emphasis will be placed on understanding normal development and on communication skills. Also, students are required to attend a weekly seminar class, meet weekly with a college field supervisor and complete log reports.
Corequisite: CDC 204.
Pre or Corequisite: PSY 134.

CDC203 CHEMICAL DEPENDENCY COUNSELING PRACTICUM III
1 Lecture 8 Lab 3 Credit Hour(s)
Students will experience an extended placement at a mental health or social service agency serving individuals with chemical dependency issues. Emphasis will be placed on understanding atypical development and on treatment interventions. Also, students are required to attend a weekly seminar class, meet weekly with a college field supervisor and complete log reports.
Corequisite: CDC 103.
Pre or Corequisite: BHS 242.

CDC204 CHEMICAL DEPENDENCY COUNSELING PRACTICUM IV
1 Lecture 8 Lab 3 Credit Hour(s)
Students will experience an extended placement at a mental health or social service agency serving individuals with chemical dependency issues. Emphasis will be placed on understanding atypical development, treatment interventions and on special issues in the field of alcohol and drug abuse. Also, students are also required to attend a weekly seminar class, meet weekly with a college field supervisor and complete log reports.
Corequisite: CDC 104.
Pre or Corequisite: BHS 201.

COMPUTER ASSISTED DRAFTING

CAD206 COOPERATIVE WORK EXPERIENCE
0 Lecture 20 Lab 5 Credit Hour(s)
A 300-hour work experience in local industry relevant to the student's academic studies in the Computer Assisted Drafting Technology Program. The work experience must be deemed relevant and meaningful to the curriculum by the Chairperson of the program or designated others if the student is to receive academic credit for such activity. The student may receive compensation from the employer or work as an intern at no pay. In either case, the work experience will be carried out in accordance with state and federal laws and with an affiliation agreement entered into by the College and the Host Organization.
Prerequisite: ENR 101 and permission of instructor.
Pre or Co-requisite: ARC 104 or CAD 102.

CAD271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student's knowledge and competence in the field of computer assisted drafting or related areas. The student's time commitment to the project will be approximately 35-50 hours.

CAD272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to CAD 271, except that the student's time commitment to the project will be approximately 70-90 hours.

CAD273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to CAD 271, except that the student's time commitment to the project will be approximately 105-135 hours.
CHILD CARE

CHC103 CHILD CARE AND YOUTH PRACTICUM I
1 Lecture 4 Lab 2 Credit Hour(s)
Students will experience an extended placement at an agency serving children, youth and adults. Emphasis will be placed on the organization of the agency and on services provided. Also, students are required to attend a weekly seminar class, meet weekly with a college field supervisor and complete log reports.
Pre or Co-requisite: BHS 110.

CHC104 CHILD CARE AND YOUTH PRACTICUM II
1 Lecture 4 Lab 2 Credit Hour(s)
Students will experience an extended placement at an agency serving children, youth and/or adults with special needs. Emphasis will be placed on normal development and on communication skills. Students are also required to attend a weekly seminar class, meet weekly with a college field supervisor and complete log reports.
Prerequisite: CHC 103.

CHC203 CHILD CARE AND YOUTH PRACTICUM III
1 Lecture 8 Lab 3 Credit Hour(s)
Students will experience an extended placement at an agency serving children, youth and adults. Emphasis will be placed on atypical development and treatment interventions. Also, students are also required to attend a weekly seminar class, meet weekly with a college field supervisor and complete log reports.
Note: The prerequisite for students in the Direct Care Certificate is PSY 134 and CHC 103.
Pre or Corequisites: CHC 103 or CHC 104, PSY 235 and PSY 202.

CHC206 CHILD CARE AND YOUTH PRACTICUM IV
1 Lecture 8 Lab 3 Credit Hour(s)
Students will experience an extended placement at an agency serving children, youth and adults. Emphasis will be placed on atypical development, treatment interventions and on group living. Also, students are also required to attend a weekly seminar class, meet weekly with a college field supervisor and complete log reports.
Prerequisites: CHC 103 or CHC 104, PSY 235.

CHC271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student's knowledge and competence in the field of child care or related areas. The student's time commitment to the project will be approximately 35-50 hours.

CHC272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to CHC 271, except that the student's time commitment to the project will be approximately 70-90 hours.

CHC273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to CHC 271, except that the student's time commitment to the project will be approximately 105-135 hours.

CHEMISTRY

CHE111 INTRODUCTION TO CHEMISTRY I
3 Lecture 2 Lab 4 Credit Hour(s)
This course gives an introduction to chemical concepts and principles. Topics covered: basic definitions, chemical symbols, conversion factors, simple chemical calculations, chemical and physical properties and changes, atomic structure, chemical bonding, molecular geometry, kinetic theory of gases, chemical kinetics, chemical equilibrium, solutions and nuclear reactions. The course assumes no previous knowledge of chemistry and serves as an elective or a science elective for students in liberal arts or career programs. A scientific calculator is required.

CHE112 INTRODUCTION TO ORGANIC AND BIOCHEMISTRY
3 Lecture 2 Lab 4 Credit Hour(s)
A study of organic compounds with emphasis on structure, nomenclature, major reactions and applications. This is followed by an elementary introduction to biomolecules and their metabolism. The laboratory experiments illustrate reactions, synthesis, purification and characterization of organic or biomolecules. The student is encouraged to use the library as a resource.
Prerequisite: CHE 111.

CHE121 GENERAL CHEMISTRY I
3 Lecture 3 Lab 4 Credit Hour(s)
A study of the fundamental facts, laws, theories and concepts of chemistry. Major topics covered include: classification of matter, theory of atomic structure, bonding theory, molecular structure, periodic properties of the elements, stoichiometry, chemical equations, inorganic nomenclature, gas laws and kinetic molecular theory. Problem solving is emphasized. The laboratory stresses quantitative results. This course serves as an elective or science elective for liberal arts students. A scientific calculator is required.
Prerequisites: High school chemistry or CHE 111 and MAT 100 or its equivalent.

CHE122 GENERAL CHEMISTRY II
3 Lecture 3 Lab 4 Credit Hour(s)
A continuation of CHE 121. Major topics covered include: molecular geometry, equilibrium, kinetics, electrochemical principles, acid-base theory and its application. The laboratory includes a brief introduction to qualitative analysis. Other experiments stress quantitative results using the spectrophotometer and pH meter. A scientific calculator is required.
Prerequisite: CHE 121 with a grade of C or better.

CHE231 ORGANIC CHEMISTRY I
3 Lecture 3 Lab 4 Credit Hour(s)
A study of the structure, nomenclature, physical properties and reactivity of organic compounds. Reactions are studied from a mechanistic viewpoint. The laboratory introduces the theory and fundamental techniques of measuring refractive index, density, micro-boiling points, melting points, distillation, recrystallization, extraction gas chromatography and their utilization in synthesis. Students are encouraged to use the library as a resource.
Prerequisite: CHE 122.
CHE232 ORGANIC CHEMISTRY II  
3 Lecture 3 Lab 4 Credit Hour(s)  
A continuation of CHE 231. A continued study of the structure, nomenclature, physical properties and reactivity of organic compounds. Reaction mechanisms are emphasized as an aid in predicting the path and direction of reactions. The laboratory includes preparative and mechanistic experiments and modern techniques of spectrophotometry and chromatography. Students are introduced to the chemical literature and are required to use the literature in written reports.  
Prerequisite: CHE 231 with a grade of C or better.

CHE271 SPECIAL STUDY PROJECT I  
1 Lecture 0 Lab 1 Credit Hour(s)  
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience or other activities that advance the student’s knowledge and competence in the field of chemistry or related areas. The student’s time commitment to the project will be approximately 35-50 hours.

CHE272 SPECIAL STUDY PROJECT II  
2 Lecture 0 Lab 2 Credit Hour(s)  
Similar to CHE 271, except that the student’s time commitment to the project will be approximately 70-90 hours.

CHE273 SPECIAL STUDY PROJECT III  
3 Lecture 0 Lab 3 Credit Hour(s)  
Similar to CHE 271, except that the student’s time commitment to the project will be approximately 105-135 hours.

CHE907 MATERIALS CHEMISTRY  
3 Lecture 2 Lab 4 Credit Hour(s)  
This course will involve discussion of fundamental principles of materials and the underlying Chemistry. Included are chemical composition, crystal structure, and impact on materials properties, as well as analytical techniques and applications.  
Prerequisites: High-school chemistry or CHE 111, and MAT 100 or the equivalent.

COMPUTER INFORMATION SYSTEMS

CIS012 COURSE SPECIFIC STUDY SKILLS FOR CIS 112  
1 Lecture 0 Lab 1 Credit Hour(s)  
CIS 012 is a study skills course designed for those students who require support in CIS 112, Computer Programming I. The course will include work designed to assist the student with notetaking, exam preparation and test taking, to assist the student in developing the ability to evaluate problem statements, develop algorithms, design program structures, code program solutions, design flowcharts, and debug and present programs.  
NOTE: CIS 012 is a credit equivalent course. Equivalent credits do not satisfy degree requirements and are not calculated in a student’s grade point average, but they do incur tuition charges and they do count towards full-time/part-time status.

CIS100 CIS INTRODUCTORY SEMINAR  
1 Lecture 0 Lab 1 Credit Hour(s)  
Designed for students enrolled in CIS, this course will provide students with an opportunity to develop both personally and professionally. The course will provide information regarding effective time management, effective study techniques, utilization of college resources and establishing both short term and long term educational goals. The course will stress the need for integrity, self-discipline and respect for others as fundamental building blocks in career and life planning. The course will also explore various career paths in the rapidly evolving field of Information Science.

CIS107 CONDUCTING BUSINESS ON THE INTERNET  
3 Lecture 0 Lab 3 Credit Hour(s)  
This course will introduce the student to conducting business on the Internet. To remain competitive, many companies and entrepreneurs have established a presence on the Internet and are actively involved in conducting business on the net. The student will be exposed to the vast business potential of the net including creating effective web sites using HTML (Hypertext Markup Language), imaging and search engine optimization.

CIS108 CONDUCTING RESEARCH ON THE INTERNET  
3 Lecture 0 Lab 3 Credit Hour(s)  
This course will introduce the student to the Internet. Students will be provided with necessary skills to effectively explore the information highway in a disciplined and academically productive manner. Students will have the opportunity to conduct in-depth research using the many electronic information resources available in cyberspace. Students will design and develop a web site to report the results of their research.

CIS109 COMPUTER APPLICATIONS  
3 Lecture 0 Lab 3 Credit Hour(s)  
This course is an introductory course in basic computer orientation to hardware and implementation of software applications in Telecommunications. Students will use various software packages to create documents, spreadsheets, graphs, databases and presentations. The student will utilize this knowledge to solve problems and transfer information via electronic medium. Lectures, interactive learning and demonstrations will be employed. Laboratory exercises and presentations will be required.

CIS111 COMPUTER SYSTEMS AND APPLICATIONS  
3 Lecture 0 Lab 3 Credit Hour(s)  
Introduces the student to the basic terminology and concepts of computer information systems. Topics include: computer business applications, computer components, software design, operating systems, databases, data communications, computer ethics and management information systems. Practical hands-on experience will be provided using popular integrated microcomputer application software in database, spreadsheet and word processing management. No prior computer experience required.

CIS112 COMPUTER PROGRAMMING I  
4 Lecture 0 Lab 4 Credit Hour(s)  
A course designed to introduce methods of solving computer business-oriented problems. A high level programming language is used to learn arithmetic, relational and logical operations, structured programming techniques, table manipulation, I/O data formats and internal subroutines. Programming activities involve problem definition, analysis, solution and documentation. No prior programming experience required.

CIS113 VISUAL BASIC PROGRAMMING  
3 Lecture 0 Lab 3 Credit Hour(s)  
This course will introduce the student to computer programming. It will focus upon the necessary logic structures required for structured programming. In addition, it will provide the students with an opportunity to apply the logic structures using the Windows-based programming language Visual Basic, a powerful and versatile language. Students will complete a series of programming assignments in the course. No prior experience with programming is required.

CIS114 COMPUTER PROGRAMMING IN C  
3 Lecture 0 Lab 3 Credit Hour(s)  
This course will introduce the student to the fundamental constructs of the C language. The syntax of the language will be examined and various algorithms will be implemented using the language. The course will also explore the operating systems environment from an
CIS117 DATA COMMUNICATION CONCEPTS
3 Lecture 0 Lab 3 Credit Hour(s)
This course is designed to introduce the students to the concepts of data, voice and video communications. Topics include communication terminology, local and wide area networks, transmission media, data integrity and security, network management, maintenance of applications and networking operating systems. In addition, current policy issues involved with the communication industry will be examined.
Prerequisite: CIS 111 or concurrent enrollment, or permission of the instructor.

CIS120 COMPUTER BASED PUBLISHING
3 Lecture 0 Lab 3 Credit Hour(s)
This course will provide the student with the necessary skills to electronically publish material in a variety of mediums. In particular, the course will concentrate on desktop publishing and world wide web publishing. The students will be exposed to a variety of popular software packages such as Adobe Photoshop, Adobe InDesign, Adobe FLASH and Adobe Acrobat.
Prerequisite: CIS 111 or concurrent enrollment, or permission of the instructor.

CIS123 COMPUTER PROGRAMMING II
3 Lecture 0 Lab 3 Credit Hour(s)
A course designed to present intermediate features and interrelations of the curriculum's high-level programming language. Topics include advanced language specifications and syntax, input/output processing, storage allocation, data types and organizations, and subroutine linkage. Programming activities involve problem definition, analysis, solution and documentation.
Prerequisite: CIS 112 with a grade of C or better.

CIS124 COMPUTER OPERATING SYSTEMS
3 Lecture 0 Lab 3 Credit Hour(s)
A course designed to present intermediate features and interrelations of the curriculum's high-level programming language. Topics include advanced language specifications and syntax, input/output processing, storage allocation, data types and organizations, and subroutine linkage. Programming activities involve problem definition, analysis, solution and documentation.
Prerequisite: CIS112 or CIS113 or CPS141, with a grade of C or better.

CIS126 UNIX/LINUX
3 Lecture 0 Lab 3 Credit Hour(s)
This course will provide the student with an understanding of the functions of a LINUX based operating system. The LINUX/UNIX system will be utilized to provide the student with hands-on experience relating to the course concepts including basic UNIX commands, utilities, windowing systems, filters, shell programming, file systems, network communication, program execution and basic system programming.
Prerequisites: CIS 111 or concurrent enrollment. Programming experience advisable.

CIS140 HEALTH INFORMATION MANAGEMENT
3 Lecture 0 Lab 3 Credit Hour(s)
The course is organized around the HIPPA components of terminology, transaction framework, planning, privacy and security. It applies across a diversity of medical systems including call centers, nurse triage, financial, accounting, marketing, resources planning, imaging and claims clearinghouse systems.
Prerequisite: CIS 111.

CIS150 INFORMATION SECURITY MANAGEMENT
3 Lecture 0 Lab 3 Credit Hour(s)
This course examines he field of information security to prepare information systems students for their future roles as business decision-makers. It presents a balance of the managerial and the technical aspects of the discipline.
Prerequisite: CIS 111 with a grade of C or better.

CIS160 CAREER SEMINAR, CAREER EXPLORATION
2 Lecture 0 Lab 2 Credit Hour(s)
This seminar is designed for matriculated CIS students currently participating in an approved cooperative education work experience. The seminar will include discussion and evaluation of various work experiences, and development of knowledge, skills and attitudes which will help prepare students for successful careers in information systems.
Prerequisite: Permission of instructor required.

CIS161 SPRING CAREER SEMINAR, CAREER ADVANCEMENT
2 Lecture 0 Lab 2 Credit Hour(s)
This seminar is designed for matriculated CIS students currently participating in an approved cooperative education work experience. The seminar will involve discussing and evaluating various work experiences. Students will be provided with an opportunity for developing skills to be successful in their chosen career. The seminar will concentrate on the development of leadership skills, communication skills and influence skills in a business environment.
Prerequisite: Permission of instructor required.

CIS211 FILE ORGANIZATION
3 Lecture 0 Lab 3 Credit Hour(s)
A course designed to present data access and data storage concepts using a relational database platform. SQL (Structured Query Language) will be utilized in both interactive and embedded mode. Indexed access methods and current secondary storage hardware will also be covered in the course.
Prerequisite: CIS 123 with a grade of C or better.

CIS212 SYSTEMS ANALYSIS AND DESIGN
3 Lecture 0 Lab 3 Credit Hour(s)
The life cycle of the development of a computer-based CIS information processing application. Topics include management information systems, the systems study, charting and documentation, I/O design considerations, controls and audit trails, equipment and software selection, implementation and maintenance. A case study, which applies the course concepts, is currently being used.
Prerequisite: CIS 112 or CIS113 or CPS141, with a grade of C or better.

CIS213 DATA MANAGEMENT CONCEPTS
3 Lecture 0 Lab 3 Credit Hour(s)
This course is designed to introduce students to more advanced operations, applications and capabilities of microcomputers within a business environment. Topics include: hardware, operating systems, advanced database management, advanced spreadsheets, advanced word processing, presentation and management software, programming and application integration.
Prerequisite: CIS 111 with a grade of C or better or equivalent knowledge.

CIS214 C++ OBJECT ORIENTED PROGRAMMING
3 Lecture 0 Lab 3 Credit Hour(s)
This course will introduce the student to the fundamental constructs of the C++ language. The primary focus of the course will be to develop and utilize an object oriented approach to programming. Therefore, the constructs in C++, which relate to object oriented programming concepts, will be explored in depth. The course will include a large programming project.
Prerequisite: CIS 114.
CIS215 INTERNET PROGRAMMING USING JAVA
3 Lecture 0 Lab 3 Credit Hour(s)
This course will present the basic constructs of the JAVA programming language and the fundamental methods for Internet programming. In addition to providing the student with a knowledge of JAVA, the course will also include object oriented concepts as well as the basic concepts involved with CGI programming on the Internet. The student will produce JAVA script, JAVA applets and JAVA applications. Prerequisite: CIS 114 and knowledge of HTML programming. Familiarity with an object-oriented language such as C ++ would be beneficial.

CIS216 LAN I - WINDOWS SERVER
3 Lecture 0 Lab 3 Credit Hour(s)
This course will introduce the student to the concepts involved in designing, installing, optimizing and maintaining a Windows Server based local area network. The course will approach the subject matter from both a practical and a theoretical perspective. Prerequisite: CIS 111 or concurrent enrollment, or permission of the instructor.

CIS217 LAN II - ADVANCED SERVER
3 Lecture 0 Lab 3 Credit Hour(s)
This course will introduce the student to the advanced concepts involved in designing, installing, optimizing and maintaining a local area network. The course will primarily focus on the advanced server capabilities of a Windows server local area network. The course will approach the subject matter from both a practical and a theoretical perspective. Prerequisite: CIS216 or permission of the instructor.

CIS218 ROUTING AND SWITCHING TECHNOLOGY
3 Lecture 0 Lab 3 Credit Hour(s)
This course will provide the student with the opportunity to study routing and switching technologies in a CISCO based data communication environment. The student will be exposed to TCP/IP, router programming, firewalls and security, as well as computer network design. The material covered will be applied in a communication networking laboratory. Prerequisite: CIS 117 with a grade C or better.

CIS223 COMPUTER PROJECTS AND APPLICATIONS
3 Lecture 0 Lab 3 Credit Hour(s)
Students are provided with the opportunity to function in a realistic business environment. The course focuses on a case study that requires students to apply knowledge from previous computer information systems courses. The project includes the development of a real time software application using a combination of software technologies. A substantial amount of programming will be required in a high level computer language. The project development includes the analysis and design of a solution, the coding of the solution, testing, extensive documentation and concludes with a presentation of the system. Prerequisites: CIS 212, CIS 213 and programming experience in a high level computer language.

CIS226 ADVANCED UNIX/LINUX
3 Lecture 0 Lab 3 Credit Hour(s)
This course will provide the student with the opportunity to study the UNIX/LINUX operating systems in detail. Among the topics covered will be advanced scripting, networking, advanced editing, security, web servers and system administration. The course will also include a discussion of operating system design and the applicability of the design to the UNIX/LINUX environment. Prerequisites: CIS 126 with a grade of C or better and a programming course.

CIS227 ASSEMBLER LANGUAGE PROGRAMMING
3 Lecture 0 Lab 3 Credit Hour(s)
A course in IBM 390 Assembler Language designed to introduce students to data types, data structures, I/O processing, macro processing, dumps and debugging, internal and external subroutines and data manipulation. Prerequisite: CIS 112 with a grade of C or better or CPS 141 with a grade of C or better, or permission of the instructor.

CIS228 WEB SITE ADMINISTRATION
3 Lecture 0 Lab 3 Credit Hour(s)
This course will provide the student with an opportunity to learn the necessary skills required to administer a Web site. The course will include coverage of operating systems, firewalls, security, web hosting and TCP/IP. Client side software including JavaScript will be utilized as well as ASP.NET for server side software. Real time database access using Microsoft SQL. Server will be covered. Prerequisites: CIS 111 and either CIS 107 or CIS 108.

CIS233 ADVANCED VISUAL PROGRAMMING
3 Lecture 0 Lab 3 Credit Hour(s)
This course will cover the advanced features of the Visual Basic Programming language. In particular, the course topics will include object-oriented concepts, relational database programming, active server pages, Visual Basic for Applications, Active X programming and multi-dimensional array processing. The student will complete programming projects in each topical area. Prerequisite: CIS 113 with a grade of C or better.

CIS235 ADVANCED JAVA PROGRAMMING
3 Lecture 0 Lab 3 Credit Hour(s)
This course will present the advanced capabilities of the JAVA language and study, in some detail, the nuances of the language. As the JAVA technology continues to mature, it is expected that the subject matter of the course may vary somewhat from year to year. The broad areas to be covered include closing, multithreading, JDBC, server side programming, socket programming and JAVA beans. Prerequisite: CIS 215.

CIS271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student’s knowledge and competence in the field of computer information systems or related areas. The student’s time commitment to the project will be approximately 35-50 hours.

CIS272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to CIS 271, except that the student’s time commitment to the project will be approximately 70-90 hours.

CIS273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar the CIS 271, except that the student’s time commitment to the project will be approximately 105-135 hours.
CAREER AND LIFE PLANNING

CLP 101 CAREER EXPLORATION AND PLANNING
3 Lecture 0 Lab 3 Credit Hour(s)
This course is designed to assist students to better understand and achieve self-direction in choosing a career or a major in college. Emphasis is on self-assessment of interests, values, skills and abilities. Career information, work environment, transfer opportunities and the development of decision-making skills will also be explored. The theory and process of development and career choice will be examined. Discussion, individual and group exercises, computerized assessment and other activities will provide students with an in-depth career planning experience. A final project is required. This course is offered both in the regular class format or as independent study.

COMMUNITY MENTAL HEALTH

CMH 103 COMMUNITY MENTAL HEALTH PRACTICUM I
1 Lecture 4 Lab 2 Credit Hour(s)
Students will experience an extended placement at a mental health or social services agency. Emphasis will be placed on the organization of the agency and on services provided. Students are also required to attend a weekly seminar class, meet weekly with a field supervisor and complete log reports. Prerequisite: BHS 110.

CMH 104 COMMUNITY MENTAL HEALTH PRACTICUM II
1 Lecture 4 Lab 2 Credit Hour(s)
Students will experience an extended placement at a mental health or social services agency. Emphasis will be placed on understanding normal development and on communication skills. Students are also required to attend a weekly seminar class, meet weekly with a field supervisor and complete log reports. Prerequisites: PSY 102 and PSY 203.

CMH 203 COMMUNITY MENTAL HEALTH PRACTICUM III
1 Lecture 8 Lab 3 Credit Hour(s)
Students will experience an extended placement at a mental health or social services agency. Emphasis will be placed on understanding atypical development and on treatment interventions. Students are also required to attend a weekly seminar class, meet weekly with a field supervisor and complete log reports. Prerequisites: CHC 103 or CHC 104, PSY 201 and 202.

CMH 204 COMMUNITY MENTAL HEALTH PRACTICUM IV
1 Lecture 8 Lab 3 Credit Hour(s)
Students will experience an extended placement at a mental health or social services agency. Emphasis will be placed on understanding atypical development, developing treatment interventions and on special issues in the field of mental health. Students are also required to attend a weekly seminar class, meet weekly with a field supervisor and complete log reports. Prerequisite: CHC 103 or CHC 104, BHS 245, PSY 207.

CMH 271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student’s knowledge and competence in the field of community mental health or related areas. The student’s time commitment to the project will be approximately 35-50 hours.

CMH 272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to CMH 271, except that the student’s time commitment to the project will be approximately 70-90 hours.

CMH 273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to CMH 271, except that the student’s time commitment to the project will be approximately 105-135 hours.

CONSTRUCTION TECHNOLOGY

CONSTRUCTION TECHNOLOGY CAPSTONE PROJECT
1 Lecture 6 Lab 4 Credit Hour(s)
CNS 240 is a culmination of the Construction Technology student’s studies at the college. Students will work in groups with the Architectural Technology students to develop a project from project development through schematic design and design development through construction drawings. CNS students will be responsible for a partial set construction drawings of the same building and a building materials takeoff and cost estimates of the building. Both groups of students will prepare a booklet of product data sheets for their projects. Building types include small schools, apartment houses, office buildings, department stores, and dining halls. All of the drawings for this course will be prepared on the computer using the AutoCAD system. Prerequisite: ARC 205

COMMUNICATIONS MEDIA

COM 100 COMMUNICATIONS INTRODUCTORY SEMINAR
1 Lecture 0 Lab 1 Credit Hour(s)
This course is an overview of the communications program (philosophy, goals, achievements, and standards). It will explore communications and media arts fundamentals, planning essentials, career opportunities, curriculum management, current communications issues, trends and directions, and characteristics for success in the communications and media arts field.

COM 101 INTRODUCTION TO COMMUNICATIONS MEDIA
2 Lecture 2 Lab 3 Credit Hour(s)
An introductory course that familiarizes students with the theory and practice of media production. Students will work in the television studio and in audio booths to create both collaborative and individual projects.

COM 103 THE ART AND CRAFT OF EDITING
2 Lecture 2 Lab 3 Credit Hour(s)
This course is an introduction to the basic principles, aesthetics, and techniques of film and video editing. Students will work with a non-linear computer-based video editing program to create a variety of short projects that illustrate different editing techniques.

COM 110 BASIC VIDEO PRODUCTION
2 Lecture 2 Lab 3 Credit Hour(s)
An introduction to field video production whose primary objective is to familiarize students with the basic principles, theories and techniques on video editing. Students will construct storyboards, write scripts, direct shoots, and edit their own projects using equipment provided by the College. Prerequisites: COM 100, COM 101 with a grade of C or better, and COM 103 or permission of the instructor.

COM 120 INTRODUCTION TO MEDIA WRITING
3 Lecture 0 Lab 3 Credit Hour(s)
Com 120 is an introductory course that familiarizes students with the basic principles and techniques of writing for the media: including newspapers, film, TV news, sitcoms, episodic drama, public relations and the internet. Students will practice various forms of media script writing. Prerequisite: ENG 101.
COM140 MEDIA AND SOCIETY
3 Lecture 0 Lab 3 Credit Hour(s)
This course is designed to present students with a comprehensive history of world mass communications and media’s impact on society throughout the world. The course will present the impact of media technology on culture and how the structure and organization of the media industry influences content. How “new media” have changed the way we see the world, altered the way we get information, and colored the way other cultures view American society will also be explored.

COM210 VISUAL EFFECTS FOR THE MOVING IMAGE
3 Lecture 2 Lab 4 Credit Hour(s)
This course is an introduction to the theory and techniques of visual effects for moving images. Emphasis is placed on constructing visual stories. Basic principles and techniques of visual effects production, opening sequences and titles for film, television, video and video for the internet are explored. Using compositing programs, students are introduced to the creative process of developing digital visual effects from storyboard to final video.
Prerequisites: COM 103, COM 110 with a grade of C or better, COM 120.

COM211 DIGITAL FILMMAKING
3 Lecture 3 Lab 4 Credit Hour(s)
In this course in video production and visual effects, students collaborate to write a screenplay for a short digital film that will showcase their skills in video production, editing and digital effects. The course will focus on exercises designed to bring visual richness and conceptual depth to the student’s work. In addition to the collaborative assignment, students will complete a variety of individual assignments including: a term paper, an oral report and a DVD portfolio of work they completed in the COM Program.
Pre-requisite: COM 210 or permission of the instructor.

COM220 PERFORMING FOR THE MEDIA
2 Lecture 2 Lab 3 Credit Hour(s)
This course provides an opportunity to study the practical approaches to performance for the media. It is a study in contemporary performance with a basic and essential knowledge of on-camera acting for film and television, corporate presentations, reporting, as well as voice-over recording. There is also opportunity for self-directed learning with group performances in the television studio and audio production suites, as well as performing in student-directed video projects. The course places an emphasis on voice production and on-camera acting/performing techniques.
Prerequisite: COM 101 or SPE 101 or THE 109

COM221 MEDIA STRATEGIES FOR PUBLIC RELATIONS
3 Lecture 2 Lab 4 Credit Hour(s)
This advanced course introduces students to concepts and theories in public relations and its connective relationship to journalism. Students will begin applying some of the media skills they have developed in the Communications and Media Arts Program to support public relations efforts for publicizing events on campus. Lectures will focus on the relationship between journalism and public relations, public relations planning, media writing for public relations and journalism, standards and practices in the public relations industry and traditional media, persuasion theory, and the organization and structure of media networks and effective message distribution in the media, including the utilization of weblogs, YouTube, and other internet outlets.
Prerequisite: COM 120.

COM233 SOUND DESIGN AND TECHNOLOGY FOR MEDIA
3 Lecture 2 Lab 4 Credit Hour(s)
The course is a study of the science and art of sound in the context of media production. A strong theory component examines the behavior of sound, basic room acoustics, the design and use of microphones, recording technologies, and sound editing/production systems. Lab projects involve field sound effects recording, recording of dialogue and voice, and combining various sound elements to create sonic structures such as those used in film, television, radio and games.
Prerequisite: MAT109 or higher or Math A Regents exam with a minimum grade of 85. MAT110 or higher is strongly recommended for students planning to transfer to a four-year college.

COM234 BASIC MUSIC PRODUCTION
3 Lecture 3 Lab 4 Credit Hour(s)
The course covers the principles of studio and field music recording using stereo and multi-track techniques. It includes editing, mixing, recording to CD and the use of MIDI instruments. Note: This course covers some advanced technical concepts.
Pre-requisite: COM 233 or permission of instructor.

COM243 WORLD FILM
3 Lecture 1 Lab 3 Credit Hour(s)
This course offers an introduction to the history of film and will focus primarily on World Cinema: film from non-Western nations and films by non-traditional voices in the US and Europe. Lectures will relate significant political events and social issues to current and historical films. The objective of this course is to familiarize students with the history, institutions, economy, society and culture of other world civilizations through screening and discussing narrative films from these cultures.

COM244 SCREENWRITING
3 Lecture 1 Lab 3 Credit Hour(s)
An intermediate course introducing students to the theory and techniques of screenwriting with extensive lectures on how to construct a story. The course’s objective will be to familiarize students with the basic principles and techniques of writing fiction for film and television. Students begin to develop stories of their own which are discussed in class and acquire a basic understanding of how to write a screenplay.
Prerequisite: ENG 101 with a grade of C or better. Pre or Corequisite: ENG 102.

COM249 TELEVISION PRODUCTION / TELEVISION NEWS
3 Lecture 2 Lab 4 Credit Hour(s)
In this course students are introduced to concepts and techniques for multi-camera and single-camera television or television news production. Students work collaboratively in the television studio to create episodes for a television program, then break into small groups to shoot on location and produce either dramatic or non-fiction news-style projects. Students learn the elements of television production including: screenwriting, story boarding, casting, directing on-camera talent, camera angles, framing, lighting, and editing, composing music, adding sound effects and creating titles. They will be required to work on each other’s projects as production crew, so there will be additional time requirements outside of the scheduled classes.
Prerequisites: COM 110 and ART 110, or ART 112 or ART 150 or ART 157.

COM250 ADVANCED VIDEO PRODUCTION
3 Lecture 3 Lab 4 Credit Hour(s)
This course in video production and public relations emphasizes visual storytelling, client relations, active listening, problem solving and entrepreneurship. As part of this course, students meet with local non-profit organizations and design a video project to address a communication problem. Students work in small groups to script, shoot and edit these projects. Students will also complete a variety of individual assignments including a budget, a contract, a term paper, an oral report and a DVD portfolio of their work.
Prerequisites: COM 221 or COM 249.
COM261 COMMUNICATION INTERNSHIP
1 Lecture 8 Lab 3 Credit Hour(s)
An internship in the mass medium of the student’s choice that will provide practical experience. It will be completed under the direct supervision of a full-time employee. This may be done in any aspect of broadcasting: film, television, radio or video production, print, public relations, advertising, media sales or other related media industry.
Prerequisites: COM 110 and permission of the Program Chair.

COM262 DOCUMENTARY PRODUCTION I
3 Lecture 3 Lab 4 Credit Hour(s)
In this course, students work collaboratively to develop documentary projects. Lectures will address advanced techniques in videography, lighting, logging tapes, editing, and production of graphics appropriate for documentary film. Students must have a B average or better to take this course.
Prerequisites: COM 110 and a GPA of 3.0 or above to register for this course.

COM263 DOCUMENTARY PRODUCTION II
3 Lecture 3 Lab 4 Credit Hour(s)
In this course, Documentary Journalism, students work collaboratively to complete a half-hour documentary which will air on Channel 42. This course provides an advanced learning experience, where students apply the skills they have gained in the COM Program in audio and video production, visual effects, broadcast journalism and public relations in the creation of one ambitious project. Lectures will focus on advanced techniques in production, direction, and production management for broadcast journalism.
Prerequisite: COM 262.

COM271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, or work experience in the field of communications media. The student’s time commitment to the project will be approximately 35-50 hours.
Prerequisite: CPS 142 with a grade of C or better.

COM272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to COM 271, except that the student’s time commitment to the project will be approximately 70-90 hours.

COM273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to COM 271, except that the student’s time commitment to the project will be approximately 105-135 hours.

COM280 OVERSEAS DOCUMENTARY PRODUCTION
2 Lecture 2 Lab 3 Credit Hour(s)
An introductory hands-on course whose primary objective is to familiarize students with the basic principles and techniques of overseas documentary production. Students will research the culture and location to be documented, develop skills on camera work, lighting, sound recording, write scripts, direct shoots, logging, post-produce a rough cut created from an editing decision list, create graphics and edit an on-line final half hour documentary. A 30 minute documentary of the overseas experience will be produced for broadcasting on channel 42. The documentary considered and international settings may vary from one offering to the next. Consult the master schedule of courses for details.
Prerequisite: Permission of the instructor.

COMPUTER SCIENCE

CPS100 INTRODUCTORY SEMINAR FOR CPS
1 Lecture 0 Lab 1 Credit Hour(s)
Designed specifically for first semester students in the CPS curriculum who are also enrolled in CPS 141 (Introduction to Computer Science and Programming), this course will provide a broad based introduction to the discipline of computer science. Some topics examined will be the history of computer science, computer ethics, and the exploration of some of the different educational and career paths in computer science. The course will also provide information on college study skills and the effective utilization of college resources.
Co-requisite: CPS 141.

CPS141 INTRODUCTION TO COMPUTER SCIENCE AND PROGRAMMING
4 Lecture 0 Lab 4 Credit Hour(s)
Primarily for students in the Computer Science Curriculum. This course introduces the fundamental concepts of programming from an object-oriented perspective. Topics include simple data types, control structures, basic input/output, arrays, strings, methods, classes, and objects. Problem solving techniques, algorithm design and implementation strategies are also covered. Students will be introduced to object-oriented techniques using the programming language Java. No prior programming experience is assumed.
Prerequisite: MAT 110 with a grade of C or better.

CPS142 ADVANCED PROGRAMMING TECHNIQUES
3 Lecture 0 Lab 3 Credit Hour(s)
This course continues the coverage of object-oriented programming with an emphasis on using object-oriented techniques to develop fundamental data structures. Topics presented include: principles of object-oriented programming (inheritance, polymorphisms and encapsulation); exception handling; stream I/O; data structures (arrays, linked lists, stacks, queues); recursion; searching and sorting algorithms; analysis of algorithms; developing and using generic classes and collections. GUI Applications are also covered.
Prerequisite: CPS 141 with a C or better.

CPS231 DATA STRUCTURES
3 Lecture 0 Lab 3 Credit Hour(s)
The major emphasis of this course is on the introduction, implementation and application of various data structures, including: stacks, queues, linked lists trees and graphs. Additional topics include analysis of algorithms, sorting and searching techniques and hashing. The programming language used is C++.
Prerequisite: CPS 142 with a grade of C or better.

CPS271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student's knowledge and competence in the field of computer science or related areas. The student's time commitment to the project will be approximately 35-50 hours.

CPS272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to CPS 271, except that the student's time commitment to the project will be approximately 70-90 hours.

CPS273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to CPS 271, except that the student's time commitment to the project will be approximately 105-135 hours.
CRJ100 CRIMINAL JUSTICE INTRODUCTORY SEMINAR
1 Lecture 0 Lab 1 Credit Hour(s)
A seminar designed to provide criminal justice students with the opportunity to learn and practice strategies that will enhance their ability to successfully complete their educational program in the field of criminal justice. Emphasis will be on identification and clarification of personal goals, career planning, curriculum planning and study techniques. It will also explore effective program management and maximum utilization of college resources.

CRJ101 INTRODUCTION TO SECURITY ADMINISTRATION
3 Lecture 0 Lab 3 Credit Hour(s)
A survey of the principles, methods and techniques of modern private security, including commercial, retail, residential, institutional, industrial settings, etc. An examination of methods of risk management and analysis; security surveys; legal powers and limitations. Prevention of loss from accidents, violence, criminal/civil offenses will be considered, as well as selected aspects of the Occupational Safety and Health Act. Proprietary policy, internal security and problems of civil liability will also be studied. This course meets and exceeds pre-assignment training required for security guards in NY State.

CRJ107 COMMUNICATION AND THE CRIMINAL JUSTICE
3 Lecture 0 Lab 3 Credit Hour(s)
An examination of criminal justice report writing as a process, with emphasis on blending information, form, and written and oral expression to develop a clear, concise and accurate account of an incident/case. Development of the field notebook in investigations, recording details of search, conducting and presentation of interviews/interrogations; recording of relevant facts and details for purposes of reference and accountability. The process of court presentation and an explanation of factual material will be discussed in the classroom setting. Preparation and presentation of courtroom testimony, and the interview and interrogation process will be considered. Oral presentations to a criminal justice audience will be practiced.

CRJ141 INTRODUCTION TO CRIMINAL JUSTICE
3 Lecture 0 Lab 3 Credit Hour(s)
A study of the history and philosophy of law and criminal justice and its evolution to modern times, including the development of organized law enforcement, corrections, criminal and civil law (e.g., Natural law, Common law, Substantive law, Statute law, etc.) The administration of justice is studied as a total system within American society.

CRJ201 CRIMINAL JUSTICE ORGANIZATION AND ADMINISTRATION
3 Lecture 0 Lab 3 Credit Hour(s)
A study of organizational principles and theory; applications to the law enforcement agency; motivation; productivity; psychological aspects of police management/supervision. Planning processes; decision-making; manpower deployment, patrol methodology, development of police/community relations. Recruitment selection and training. Prerequisite: CRJ 141 or permission of department head.

CRJ205 FORENSIC PHOTOGRAPHY
3 Lecture 0 Lab 3 Credit Hour(s)
An introduction to forensic photography. Fundamentals of the medium and practical applications of the elements involved will be taught including the use of equipment, Forensic Photoshop Theory and lighting. Consideration of protocol in court testimony; special requirements of crime and accident scenes; interview/interrogation, surveillance and video techniques will be covered, including a survey of case law.

CRJ206 CRIMINAL AND SCIENTIFIC INVESTIGATION
3 Lecture 0 Lab 3 Credit Hour(s)
A study of techniques and procedures utilized in criminal investigation; survey of instrumentation, identification/processing of trace evidence; use and acceptability of electronic surveillance; use of informants; role of expert witness; special problems in investigations (e.g., organized crime, narcotics traffic, etc.). Prerequisite: CRJ 141 or permission of department head.

CRJ261 WHITE COLLAR CRIME
3 Lecture 0 Lab 3 Credit Hour(s)
This course will explore both the substantive crimes of ‘white collar’ workers as well as investigative techniques related to these types of crime. The course will emphasize the key characteristics of economic/white collar crime, including the extent of seriousness, types of offenses and offenders, victim concerns and organized efforts to control and prevent these crimes. Case preparation for prosecution and presentation will engage the judicial process. Prerequisite: CRJ 141 or permission of department head.

CRJ265 FEDERAL, STATE, AND LOCAL LAWS
3 Lecture 0 Lab 3 Credit Hour(s)
A study of federal, state and local law that provides an understanding of the nature and scope of those statutes that law enforcement personnel are mandated to enforce. This will include not only crimes traditionally referred to as ‘street crime’, but also with equal emphasis on the nature, extent and enforcement of white collar crime. Prerequisite: CRJ 141 or permission of department head.

CRJ266 CONTEMPORARY PROBLEMS AND ISSUES IN CRIMINAL
3 Lecture 0 Lab 3 Credit Hour(s)
An examination of the significant problems and issues impacting the various elements of the criminal justice system. Included will be perspectives on cause and effect relationships, media influence, influence of socio-political structure/events, evolving trends and implications for the future. Prerequisites: CRJ 141 and a minimum of 9 additional credits of CRJ courses.

CRJ271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student's knowledge and competence in the field of criminal justice or related areas. The student's time commitment to the project will be approximately 35-50 hours.

CRJ272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to CRJ 271, except that the student's time commitment to the project will be approximately 70-90 hours.

CRJ273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to CRJ 271, except that the student's time commitment to the project will be approximately 105-135 hours.
COLLEGE SKILLS MATH

CSM090 BASIC QUANTITATIVE SKILLS
0 Lecture 2 Lab 1 Credit Hour(s)
Students work independently on a series of approximately 50 lessons using the Interactive ModuMath Arithmetic software in the Learning Center. Topics include whole number operations, fractions, decimals, percents, systems of measurement, geometric concepts and interpretation of charts and graphs. This course is intended for students in CAR, CHC, CMH, ECH and REC who need to meet the Quantitative Skills Requirement.
NOTE: CSM 090 is a credit equivalent course. Equivalent credits do not satisfy degree requirements and are not calculated in a student’s grade point average, but they do incur tuition charges and they do count towards full-time/part-time status.

CSM093 BASIC MATHEMATICAL SKILLS FOR NURSING
2 Lecture 0 Lab 2 Credit Hour(s)
A review of whole numbers, fractions, decimals, percents, ratios, Roman numerals, the metric and apothecary systems of measurement, and the conversions between them. Intended for Nursing students found to be in need of math remediation prior to enrollment into NUR 105. Students will also be required to complete CAI modules in the Learning Center at hours to be arranged (one to three additional hours per week).
NOTE: CSM 093 is a credit equivalent course. Equivalent credits do not satisfy degree requirements and are not calculated in a student’s grade point average, but they do incur tuition charges and they do count towards full-time/part-time status.

CSM094 BASIC MATH: PRE-ALGEBRA/BUSINESS SKILLS
3 Lecture 0 Lab 3 Credit Hour(s)
An intensive review of whole numbers, fractions, decimals, percents, ratios and proportions, signed numbers and elementary algebraic concepts. Intended for the student who will enroll in MAT 091 before proceeding with MAT 109, higher algebra or technical math. Students will also be required to complete CAI modules in the Learning Center at hours to be arranged (one to three additional hours per week).
NOTE: CSM 094 is a credit equivalent course. Equivalent credits do not satisfy degree requirements and are not calculated in a student’s grade point average, but they do incur tuition charges and they do count towards full-time/part-time status.

COLLEGE STUDY SKILLS

CSS071 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
CSS 071 is a basic learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on developmental programs in study skills, language, reading, computational and math skills, science and the research process. The student’s time commitment to the project will be approximately 35-50 hours.
NOTE: CSS 071 is a credit equivalent course. Equivalent credits do not satisfy degree requirements and are not calculated in a student’s grade point average, but they do incur tuition charges and they do count towards full-time/part-time status.

CSS072 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
This course is similar to CSS 071, except that the student’s time commitment to the project will be approximately 70-90 hours.
NOTE: CSS 072 is a credit equivalent course. Equivalent credits do not satisfy degree requirements and are not calculated in a student’s grade point average, but they do incur tuition charges and they do count towards full-time/part-time status.

CSS073 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
This course is similar to CSS 071, except that the student’s time commitment to the project will be approximately 105-135 hours.
NOTE: CSS 073 is a credit equivalent course. Equivalent credits do not satisfy degree requirements and are not calculated in a student’s grade point average, but they do incur tuition charges and they do count towards full-time/part-time status.

CSS085 COLLEGE STUDY SKILLS I
2 Lecture 0 Lab 2 Credit Hour(s)
This course prepares students for success in college. Course content focuses on building students’ strengths in employing effective study strategies and academic skills, developing self management skills and fostering critical thinking skills necessary to successfully complete college level courses. The course utilizes computer-assisted instruction to enhance students’ learning experience. In addition to class time, the course requires that students spend at least one-hour per week in a structured lab period in the Student Academic Success Center (H315).
Note: CSS085 is a credit equivalent course. Equivalent credits do not satisfy degree requirements and are not calculated in a student’s grade point average, but they do incur tuition charges and they do count towards full-time/part-time status.

CSS095 COLLEGE STUDY SKILLS II
3 Lecture 0 Lab 3 Credit Hour(s)
This course prepares students for success in college. Course content focuses on building students’ strengths in employing effective study strategies and academic skills, developing self management skills and fostering critical thinking skills necessary to successfully complete college level courses. This course deals directly with the content of a designated discipline course and encourages students to apply the skills gained to all college courses.
Note: CSS095 is a credit equivalent course. Equivalent credits do not satisfy degree requirements and are not calculated in a student’s grade point average, but they do incur tuition charges and they do count towards full-time/part-time status.

CSS097 ADVANCED STUDY SKILLS
2 Lecture 0 Lab 2 Credit Hour(s)
CSS 097 is an advanced college study skills course intended primarily for two groups of students; those needing some instruction in essential study skills but not as thorough or basic an approach as offered in CSS 095 and those having completed CSS 095 and desiring a second semester of study skills. The course will include practical work with note-taking, textbook mastery, library research, report writing, test-taking strategies and the development of vocabulary. When taught in the content-correlated mode, CSS 097 will deal directly with the content of a designated credit course, such as BHS 103, HIS 102, HIS 104, GOV 121, etc.
NOTE: CSS 097 is a credit equivalent course. Equivalent credits do not satisfy degree requirements and are not calculated in a student’s grade point average, but they do incur tuition charges and they do count towards full-time/part-time status.
DANCE

DAN 101 FOUNDATIONS OF DANCE
2 Lecture 2 Lab 3 Credit Hour(s)
An introduction to dance as an art form and its role in history and society. Classes include the fundamentals of movement, the elementary techniques of ballet, modern and jazz dance, and exploration of the elements of rhythm, dynamics and spatial awareness through simple composition and improvisational dance studies.

DAN 102 BALLET TECHNIQUE
0 Lecture 4 Lab 2 Credit Hour(s)
Course content includes the basic positions and adagio and allegro movements of classical ballet. Movement in ballet has a controlled yet graceful quality, which is acquired through repetition of standardized ballet technique. Throughout the course, the student is encouraged to experience and appreciate the art of ballet as a performing art.

DAN 104 MODERN DANCE TECHNIQUE
0 Lecture 4 Lab 2 Credit Hour(s)
This course consists of the technique, history and theory of modern dance. Emphasis is on conditioning the body, developing beginning modern dance skills and acquiring a basic movement vocabulary to promote creative exploration. Students may receive two (2) credits of Physical Education for this course.

DAN 106 JAZZ DANCE TECHNIQUE
0 Lecture 4 Lab 2 Credit Hour(s)
Course content includes the techniques, history and styles of jazz dance. Development of beginning skills in jazz dance technique with emphasis on body isolations and rhythmic phrasing. Students may receive two (2) credits of Physical Education for this course.

DAN 107 CREATIVE MOVEMENT
0 Lecture 2 Lab 1 Credit Hour(s)
Beginning dance and movement improvisation as a compositional and performing technique. Development of skill in improvising dance movement and structuring dance improvisations.

DAN 108 DANCE HISTORY
3 Lecture 0 Lab 3 Credit Hour(s)
The history of dance as a cultural medium with specific attention to the development of dance from prehistoric cultures to the evolution of dance in recent centuries, along with a study concerning theories of movement and influences of Oriental, Indian and African dance forms on Western Cultures.

DAN 146 PERFORMANCE AND APPLIED DANCE I
0 Lecture 2 Lab 1 Credit Hour(s)
This course emphasizes the development of dance performance skills. Within the structure of the course, the student is exposed to various performance techniques as well as learning specific choreography.

DAN 147 PERFORMANCE AND APPLIED DANCE II
0 Lecture 2 Lab 1 Credit Hour(s)
This course further emphasizes the development of dance performance skills. Within the structure of the course, the student is exposed to various performance techniques as well as learning specific choreography.

DAN 247 PERFORMANCE AND APPLIED DANCE IV
0 Lecture 2 Lab 1 Credit Hour(s)
This course further emphasizes the development of dance performance skills. Within the structure of the course, the student is exposed to various performance techniques and learns specific choreography.

DAN 271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student’s knowledge and competence in the field of dance or related areas. The student’s time commitment to the project will be approximately 35-50 hours.

DAN 272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to DAN 271, except that the student’s time commitment to the project will be approximately 70-90 hours.

DAN 273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to DAN 271, except that the student’s time commitment to the project will be approximately 105-135 hours.

EARLY CHILDHOOD

ECH 101 INTRODUCTION TO EARLY CHILDHOOD EDUCATION
3 Lecture 0 Lab 3 Credit Hour(s)
An introductory course focusing on the concepts and foundations of early childhood from infancy through grade two with special attention paid to the child from three to five years of age. Topics include: types of programs and differing philosophies, basics of child development, developmental and learning theory, the role of the teacher, observation, guidance, parent-teacher relationships, environment and curriculum basics. Pre or Co-requisite: ECH 102.

ECH 102 INTRODUCTORY SEMINAR PROGRAMS FOR YOUNG CHILDREN
0 Lecture 3 Lab 1 Credit Hour(s)
An orientation to the Early Childhood Program and the college community, followed by a study of programs for young children developed through observation in the DCC Laboratory Nursery School and a variety of public and private early childhood settings. Emphasis will be on observation and on components of programs for children birth through 8 years with emphasis on ages 2 through 6. Pre or Co-requisite: ECH 101.

ECH 107 PREPARING TO TEACH YOUNG CHILDREN
2 Lecture 0 Lab 2 Credit Hour(s)
The study of the skills and concepts needed to enter the classroom as a teacher of young children emphasizing the translation of theory into practice. Topics include: communicating with children and parents, groups and transition times, daily routine, guidance, developing a lesson plan, daily and weekly planning methods, health and safety, initial consideration of evaluation and portfolios as well as personal philosophy and professionalism. Note: This course must be taken with or prior to ECH 108. Prerequisites: ECH 101, ECH 102.

ECH 108 EARLY CHILDHOOD PRACTICUM I
1 Lecture 3 Lab 2 Credit Hour(s)
Students will experience an extended placement at an early childhood program in the community or at the Laboratory Nursery. Emphasis will be placed on becoming part of a team, assuming routine responsibilities in the classroom as well as specific planning
for activities. Students will also attend a weekly seminar class, meet at regularly scheduled conferences during the semester with a field supervisor and complete logs and written assignments as designated.

Notes: (1) Transportation to and from practicum sites is the responsibility of the student. (2) This course is the prerequisite of ECH 205/206 with a grade of ‘C’ or better. (3) Students must register for both a lecture and a lab.

Prerequisites: ECH 101, ECH 102.
Pre or Co-requisite: ECH 107.

ECH111 CURRICULUM ACTIVITIES FOR YOUNG CHILDREN
2 Lecture 0 Lab 2 Credit Hour(s)
Develops and fosters a creative approach to appropriate activities relative to the young child’s total development. A study of meanings and values, as well as the development of skills for practical application. Through play, art, music and rhythms, science and nature, social studies and related activity areas, the student is given the opportunity to explore the possibilities of varied teaching/learning media.

ECH120 INFANT AND TODDLER CURRICULUM
3 Lecture 0 Lab 3 Credit Hour(s)
This course will explore infant/toddler development, developmentally appropriate activities designed to promote physical, intellectual, social and emotional growth, curriculum development, teaching techniques and working with diverse infant and toddler families.

ECH121 INFANT/TODDLER CURRICULUM FIELDWORK
0 Lecture 3 Lab 1 Credit Hour(s)
This course is designed to compliment academic course content in ECH 120, Infant and Toddler Curriculum. Students will observe and interact with infants and toddlers. The placements will be made in settings for children ages six weeks through toddlerhood and arranged by the field supervisor assigned. Transportation to field sites is the responsibility of the student.
Pre or Co-requisite: ECH 120.

ECH131 IN-SERVICE PREPARATION FOR CHILD DEVELOPMENT
4 Lecture 6 Lab 6 Credit Hour(s)
This course will be based on the guidelines for NAEYC’s CDA credentialing program. This course, in conjunction with ECH 132, will result in the issuing of a statement of applied academic credit by DCC and will prepare the student for the CDA assessment process of the Council for Early Childhood Professional Recognition (part of NAEYC). The lecture portion of the course will include the study of: introduction to Early Childhood, how children learn and grow, safe and healthy environments, social emotional development, infant/toddler development and curriculum. Additionally, there will be a practicum component at the student’s current site of employment. Assignments and observation by field supervisors will support classroom topics.
Prerequisite: Permission of instructor and student must be employed in the field of early childhood.

ECH132 IN-SERVICE PREPARATION FOR CHILD DEVELOPMENT
4 Lecture 6 Lab 6 Credit Hour(s)
This course will be based on the guidelines for NAEYC’s CDA credentialing program. This course, in conjunction with ECH 131, will result in the issuing of a Statement of Applied Academic Credit by DCC and will prepare the student for the CDA assessment process given by the Council for Early Childhood Professional Recognition (part of NAEYC). The lecture portion of the course will include the study of: physical and intellectual growth, relationships with families, creativity and aesthetics, art and the young child, play and creativity, planning developmentally appropriate activities. Additionally, there will be a practicum component at the student’s current site of employment. Assignments and observation by field supervisors will support classroom topics.
Prerequisite: ECH 131.

ECH205 EARLY CHILDHOOD COMMUNITY PRACTICUM
1 Lecture 9 Lab 4 Credit Hour(s)
Students will experience an extended placement at an early childhood program in the community (two mornings per week). Emphasis will be placed on the workplace experience, including working with and relating to all members of staff, understanding the program in the context of the community it serves, working within any fiscal constraints of the program and respecting the educational philosophy of the program in which they are placed. Students will be required to execute learning experience presentations and will be exposed to practical experience in all aspects of program planning for young children. Students will also be required to attend a weekly seminar class, meet at regularly scheduled field supervisor conferences and complete written assignments as assigned.
Notes: (1) Either ECH 205 or ECH 206 must be taken as a corequisite of ECH 214. (2) Transportation to and from practicum sites is the responsibility of the student. (3) Students are required to submit a completed physical examination form within two weeks of the beginning of the semester. (4) Students must register for both a lecture and a lab.
Prerequisites: Successful completion of ECH 107 and completion of ECH 108 with a grade of C or better.

ECH206 EARLY CHILDHOOD LABORATORY NURSERY PRACTICUM
1 Lecture 9 Lab 4 Credit Hour(s)
Students will experience an extended placement at the DCC Laboratory Nursery. Emphasis will be placed on translating theory into practice through learning experience presentations, curriculum planning, and practical experience in all aspects of programming for young children under supervision of a master teacher. Students will also be required to attend a weekly seminar, a weekly staff meeting following the seminar, meet with the master teacher before and after each practicum session to prepare the classroom environment and discuss classroom issues. Students will complete logs and written assignments and tasks as designated.
Notes: (1) Either ECH 205 or ECH 206 must be taken as a corequisite of ECH 214. (2) Transportation to and from practicum sites is responsibility of the student. (3) Students are required to submit a completed physical examination form within two weeks of the beginning of the semester. (4) Students must register for both a lecture and a lab.
Prerequisites: Successful completion of ECH 107 and completion of ECH 108 with a grade of C or better.

ECH207 OBSERVATION & ASSESSMENT FIELDWORK
0 Lecture 3 Lab 1 Credit Hour(s)
This course constitutes the fieldwork portion of ECH 214. Observation and Assessment of Young Children for students seeking an A.S. degree in Early Childhood. Students, placed in pre-school through second grade classrooms, will develop competence in observing and assessing children’s development, and in classroom performance by participating in and early childhood classroom. Students will complete journals and written assignments and tasks as designated by the field supervisor. This course is for A.S. Students only.
Corequisite: ECH 214 or permission of instructor.
Notes: (1) Transportation to and from practicum sites is the responsibility of the student. (2) Students are required to submit a completed physical examination form within two (2) weeks of the beginning of the semester.

ECH212 LANGUAGE AND LITERATURE IN EARLY CHILDHOOD
3 Lecture 0 Lab 3 Credit Hour(s)
A survey and evaluation of literature for young children, including discussion of related topics and controversial issues. Focusing on children’s picture storybooks, students will evaluate text, illustration, relevance to child development and content as well as the development of language through literature, techniques for sharing literature, and major authors and illustrators.
Prerequisite: ENG 101.
ECONOMICS

ECO101 MICRO ECONOMICS
3 Lecture 0 Lab 3 Credit Hour(s)

ECO202 MACRO ECONOMICS
3 Lecture 0 Lab 3 Credit Hour(s)
A description of the essential features of the American economic system. The theory of the determination of the level of national income and applications to the problems of inflation, depression and economic growth. The role of monetary and fiscal institutions in implementing public economic growth. The role of the United States in the international economy.
Prerequisite: ECO 201.

ECO218 LABOR RELATIONS
3 Lecture 0 Lab 3 Credit Hour(s)
An introductory study of labor relations and labor’s role in the American economy. Topics include the labor force, labor-management legislation, history and structure of unions, collective bargaining, labor market economics, personnel practices and income security laws.

ECO221 AN INTRODUCTION TO THE FINANCIAL AND
3 Lecture 0 Lab 3 Credit Hour(s)
This course is intended to serve as an introduction to financial markets and the various securities and instruments traded on these markets. It is intended to be an introduction to the subject of investing for the individual investor.

ECO224 INTERNATIONAL ECONOMICS
3 Lecture 0 Lab 3 Credit Hour(s)
This course will provide students with a comprehensive exposition of the basic principles of international economics. The focus will be on the principle of comparative advantage and gains from trade, protectionism, the balance of payments, exchange rate determination, international capital markets and the international trade policy. The course will also address international economic problems and issues facing the United States and the world in the 21st century.
Note: It is recommended that students take ECO 201 and ECO 202 before taking ECO 224.

ECO271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student’s knowledge and competence in the field of early childhood or related areas. The student’s time commitment to the project will be approximately 35-50 hours.

ECO272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to ECO 271, except that the student’s time commitment to the project will be approximately 70-90 hours.

ECO273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to ECO 271, except that the student’s time commitment to the project will be approximately 105-135 hours.
ELECTRICAL ENGINEERING TECHNOLOGY

ELT105 DC CIRCUITS
2 Lecture 2 Lab 3 Credit Hour(s)
An introductory course employing applied mathematics for circuit analysis. The fundamental concepts of current, voltage and resistance are the major components of the course. Topics: resistive circuits, Ohm’s law, Kirchhoff’s laws, series circuits, parallel circuits, voltage divider, current divider, superposition, Thevenin Theorem, capacitance, inductance, RL and RC transient circuits, transient response.
Prerequisite: MAT 184 or concurrent enrollment therein.

ELT106 AC CIRCUITS
2 Lecture 2 Lab 3 Credit Hour(s)
A study of steady state response of circuits containing resistive, capacitive and inductive elements subject to sinusoidal excitation. Topics include sinusoidal characteristics, impedance, phasors, ac power, an introduction to 3-phase ac, single-source AC circuit analysis and resonance.
Prerequisites: ELT 105 and MAT 184, each with a grade of C or better.

ELT107 INTRODUCTION TO PROGRAMMING FOR AUTOMATION
2 Lecture 2 Lab 3 Credit Hour(s)
This course is a study of computer programming for both PC-based and microcontroller applications. Topics include common programming structures such as decisions, repetition, arrays and data files.
Co-requisite: ELT 105 or departmental permission.

ELT108 ELECTRONICS I
2 Lecture 2 Lab 3 Credit Hour(s)
This course is a study of active devices and their application in typical circuits. The devices studied are semiconductor diode, bipolar junction transistor and field effect transistor. Typical applications studied are rectifier power supplies and linear amplifiers.
Prerequisite: ELT 105 with a grade of C or better.
Co-requisite: ELT 106.

ELT115 DIGITAL FUNDAMENTALS
2 Lecture 2 Lab 3 Credit Hour(s)
An introductory course in the building, analysis, and testing of digital electronic circuits used in both computing and control system applications. Topics include binary numbers, binary codes, Boolean algebra, combinational logic, and sequential logic. Use of metering tools, such as the oscilloscope and trouble shooting skills are a priority throughout the course.
Prerequisite: MAT 100 with a grade of C or better or equivalent math proficiency.

ELT121 ELECTRONIC SYSTEMS FOR TELECOMMUNICATIONS I
2 Lecture 4 Lab 4 Credit Hour(s)
Students practice the analysis and application of advanced electronic circuits as applied to the telecommunications industry. Topics include frequency response of filters, op-amps, oscillators, amplitude modulation, noise and LC circuits. Troubleshooting and analysis by computer simulation software is stressed throughout.
Prerequisites: ENT 108 and PHY 141.
Corequisite: TEL 110.

ELT203 ELECTRIC POWER SYSTEMS
3 Lecture 0 Lab 3 Credit Hour(s)
A course in the transmission and distribution of electrical energy, with a concentration on the components of residential, commercial, and industrial scale electric power systems. Topics include three-phase delta and wye configurations, motor circuits, transformers, distribution and overcurrent protection equipment, and power systems studies.
Prerequisite: ELT 106

ELT211 SEMICONDUCTOR PROCESS TECHNOLOGY
2 Lecture 2 Lab 3 Credit Hour(s)
This course provides a detailed overview of semiconductor device fabrication. Topics include a review of semiconductor physics and device operations, device fabrication and various process modules. Process modules will focus on vacuum technology, silicon wafer, lithography, deposition, hot process, doping, etching and metallization. Challenges in process integration and device technology will also be discussed. Students are also required to participate in field trips.
Prerequisites: CHE 111 and ENT 102, or ELT 108

ELT213 ELECTROMECHANICAL DEVICES
2 Lecture 2 Lab 3 Credit Hour(s)
This course is a study of electro-mechanical devices, including motors, relays, mechanical gears and linkages, pneumatic components, robotics and an introduction to microsystems.
Prerequisite: ELT 106 or permission of department.

ELT216 AUTOMATION SYSTEMS
2 Lecture 2 Lab 3 Credit Hour(s)
A study of the computer-based control systems found in a wide variety of industry applications, including their use in manufacturing processes. The course will include review of control system components, including sensors and relay logic, leading up to a complete study of microprocessor-based control systems.
Prerequisite: ELT 213 with a grade of C or better.

ELT218 ELECTRONICS II
2 Lecture 3 Lab 3 Credit Hour(s)
This course is designed to train students in the analysis and application of advanced electronic circuits. Topics include the DC and AC performance constraints of electronic circuits and the implications of those constraints, frequency response and Bode plots, basic electronic circuits using the operational amplifier such as amplifier circuits and comparators, active filter circuits, and oscillator circuits. Practical applications are stressed throughout such as analog-to-digital conversion, digital-to-analog conversion, process control, and modulation. Students will construct, test and troubleshoot circuits, and analyze circuits by computer simulation.
Prerequisite: ELT 108.

ELT231 PHOTOVOLTAIC SYSTEMS
3 Lecture 0 Lab 3 Credit Hour(s)
An introduction to photovoltaic applications, design, and practices. Topics covered include photovoltaic industry history and trends, solar radiation, characteristics of solar cells and modules, system components, system sizing and design, economic analysis, electrical and mechanical integration, applicable building codes, regulations and safety, and utility interconnection.
Prerequisites: ELT 106 (AC Circuits) or PHY 152 (or equivalent) or permission of instructor.

ELT250 ELECTRONICS PROJECT LABORATORY
0 Lecture 3 Lab 1 Credit Hour(s)
A project-oriented course with design and analysis components. Students will propose and produce projects using a combination of theory from analog, digital and electro-mechanical. Students will use technology for computer simulation and generating schematics.
Prerequisites: ELT 218 with a grade of C or better and ELT 115.

ELT271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student’s knowledge and competence in the field of electrical technology and related areas. The student’s time commitment to the project will be approximately 35-50 hours.
EMERGENCY MEDICAL TECHNICIAN BASIC

EMB105 EMERGENCY MEDICAL TECHNICIAN - BASIC
4 Lecture 5 Lab 6 Credit Hour(s)
This course combines didactic, psychomotor lab and clinical observation to prepare students to provide emergency care to patients in the pre-hospital setting based on the scope of practice defined by the New York State Department of Health and U.S. Department of Transportation Emergency Medical Technician Basic (EMT-B) curriculum. Emphasis will be placed on the recognition and treatment of life threatening emergencies. Topics to include: Well Being for the EMT-B, Medical-Legal Issues, Airway Management, Cardiopulmonary Resuscitation, Patient Assessment, Medical Emergencies, Trauma, Infants and Children and Operations. Students who successfully complete this course will be eligible to take the New York State Department of Health EMTB Certification exam.
Prerequisites: Students must reach their eighteenth birthday by the last day of the month in which they are eligible to sit for the NYS certification examination.

ELECTROMECHANICAL SYSTEMS

EMS106 DIGITAL ELECTRONICS I
2 Lecture 4 Lab 4 Credit Hour(s)
This course will prepare students in digital with topics related to number systems and codes, logic functions and Boolean algebra. IC building blocks are used in applications ranging from gates to flip-flop, counters, registers and arithmetic circuits. Algebraic reduction and mapping are used to minimize Boolean expression and combinational logic circuits. Computer simulation of digital circuits will be used to verify actual hardware setups.
Prerequisites: MAT 128, CIS 109, ENT 108.
Corequisites: MAT 129, ENT 110.

EMS206 DIGITAL ELECTRONICS II
2 Lecture 4 Lab 4 Credit Hour(s)
This course is designed to train students in the organization, architecture and hardware aspects of digital computer systems. Topics include an introduction to microprocessors, types and characteristics of different chips, motherboards, bus structures, memory, I/O interface devices, disk drives, video displays and printers. Serial and parallel buses are discussed. Applications include the interfacing of peripherals, data communications between computers and a team project.
Prerequisite: MAT 129, CIS 109, ENT 110 or equivalent courses.

ENGLISH

ENG001 COURSE SPECIFIC STUDY SKILLS FOR ENG 101
1 Lecture 0 Lab 1 Credit Hour(s)
ENG 001 is a study skills course designed for those students who require support in ENG 101, Composition I. ENG 001 work includes practice in the skills necessary for reading non-fiction and for writing effective essays.
NOTE: ENG 001 is a credit equivalent course. Equivalent credits do not satisfy degree requirements and are not calculated in a student’s grade point average, but they do incur tuition charges and they do count towards full-time/part-time status.

ENG002 COURSE SPECIFIC STUDY SKILLS FOR ENG 102
1 Lecture 0 Lab 1 Credit Hour(s)
ENG 002 is a study skills course designed for those students who require support in ENG 102, Composition II. ENG 002 will include practice in the skills necessary for reading short stories, poetry, and drama and for writing effective analyses of these literary works.
NOTE: ENG 002 is a credit equivalent course. Equivalent credits do not satisfy degree requirements and are not calculated in a student’s grade point average, but they do incur tuition charges and they do count towards full-time/part-time status.

ENG091 FUNDAMENTALS OF GRAMMAR AND WRITING
3 Lecture 0 Lab 3 Credit Hour(s)
This course is designed to teach the rules of punctuation, mechanics, grammar, and sentence structure. Applying these principles, students will work to develop fluency and accuracy in writing sentences, paragraphs and short essays. This course is required of some students on the basis of a placement examination and open to other students who want a basic review course.
NOTE: ENG 091 is a credit equivalent course. Equivalent credits do not satisfy degree requirements and are not calculated in a student’s grade point average, but they do incur tuition charges and they do count towards full-time/part-time status.

ENG092 BASIC PATTERNS OF WRITING
3 Lecture 0 Lab 3 Credit Hour(s)
This course introduces students to college writing and reviews fundamental grammatical principles. Students begin to learn to formulate a thesis, use topic sentences, develop ideas, and organize supporting evidence in an essay. Grammar, punctuation, sentence structure, and clear language are heavily stressed. This course is required of some students on the basis of a placement examination and open to other students who want a review course. This course is also a requirement for those students receiving a grade of less than A in English 091, but is not required for students receiving a grade of A in ENG 091.
NOTE: ENG 092 is a credit equivalent course. Equivalent credits do not satisfy degree requirements and are not calculated in a student’s grade point average, but they do incur tuition charges and they do count towards full-time/part-time status.

ENG095 ENGLISH AS A SECOND LANGUAGE I
3 Lecture 0 Lab 3 Credit Hour(s)
A course for students whose first language is not English, who have at least an elementary spoken and written knowledge of English, and who need further work on speaking, understanding, reading and writing standard American English. Class sessions will be intensive practice in practical applications of the rules of grammar and in vocabulary building and in basic composition. Required of some students on the basis of placement examination and open only to them.
NOTE: The course is a prerequisite for ENG 096 and 101 for those students referred by the English faculty. ENG 095 is a credit equivalent course. Equivalent credits do not satisfy degree requirements and are not calculated in a student’s grade point average, but they do incur tuition charges and they do count towards full-time/part-time status.
ENG096 ENGLISH AS A SECOND LANGUAGE II
3 Lecture 0 Lab 3 Credit Hour(s)
The second semester of a two-semester sequence designed for students whose first language is not English and who require further work on writing and reading standard American English in order to be prepared for entrance into the regular composition sequence. Class sessions will concentrate on advanced grammar, reading comprehension, and basic composition, with supplemental work on speaking and listening skills. Completion of ENG 096 with a grade of C or better will allow students to enter ENG 101.
NOTE: ENG 096 is a credit equivalent course. Equivalent credits do not satisfy degree requirements and are not calculated in a student's grade point average, but they do incur tuition charges and they do count towards full-time/part-time status. Prerequisite: ENG 095 with a grade of P, or departmental approval based on placement test score.

ENG101 COMPOSITION I
3 Lecture 0 Lab 3 Credit Hour(s)
A continuation of ENG 101, with further study of the resources of the language through a critical analysis of imaginative forms of writing. Emphasis will be placed upon well organized written composition, factually supported conclusions and awareness of language variety. Effectiveness of expression and validity of judgment in the student's writing are stressed. Genre reading will include fiction, poetry and drama. Prerequisite: ENG 101 with a grade of C or better.

ENG102 COMPOSITION II
3 Lecture 0 Lab 3 Credit Hour(s)
A study of significant selections from the Middle Ages through the Age of Reason. The course includes poetry, drama, the essay and the novel. Such literary figures, as Chaucer, Milton, Donne and Pope will be studied. Prerequisite: ENG 102.

ENG201 ENGLISH LITERATURE: PRE-RENAISSANCE TO THE
3 Lecture 0 Lab 3 Credit Hour(s)
A survey course with selections from the works of such authors as Homer, Sappho, Theocritus, Aeschylus, Sophocles, Plato, Aristotle, Lucretius, Catullus, Vergil, Horace, Juvenal, Plautus and Seneca. The literary forms read include poetry, drama, satire, literary criticism and fiction. Prerequisite: ENG 102.

ENG202 ENGLISH LITERATURE: THE ROMANTIC POETS TO THE
3 Lecture 0 Lab 3 Credit Hour(s)
A study of significant selections from the Romantic Period to the present. Such figures as Wordsworth, Keats, Browning, Yeats and Eliot will be studied. Prerequisite: ENG 102.

ENG203 LITERATURE OF THE UNITED STATES: COLONIAL
3 Lecture 0 Lab 3 Credit Hour(s)
A study of significant selections from the Colonial Period to the Civil War, including poetry, essays, short stories and novels with emphasis on Hawthorne, Thoreau, Melville, Poe and Whitman. Prerequisite: ENG 102.

ENG204 LITERATURE OF THE UNITED STATES: CIVIL WAR TO
3 Lecture 0 Lab 3 Credit Hour(s)
A survey course with selections from the works of such authors as Twain and James as representatives of the Realistic Period, and extending to writers such as Hemingway, Faulkner and Eliot as representatives of the Modern Period. Prerequisite: ENG 102.

ENG205 EIGHTEENTH AND NINETEENTH CENTURY NOVEL
3 Lecture 0 Lab 3 Credit Hour(s)
The study and interpretation of representative novels in English and in translation through the nineteenth century. Prerequisite: ENG 102.

ENG206 TWENTIETH AND TWENTY-FIRST CENTURY NOVEL
3 Lecture 0 Lab 3 Credit Hour(s)
A course in which the student practices various forms of fiction writing. Direction in the assembling of fictional material and in the reading of fiction to gain an understanding of the creative process as it applies to writing. Prerequisite: ENG 102.

ENG207 DIRECTIONS IN WRITING: POETRY
3 Lecture 0 Lab 3 Credit Hour(s)
A course in which the student practices various forms of poetic composition. Direction in the assembling of poetic material and in the ordering of that material to achieve appropriate sounds and sense. Prerequisite: ENG 102.

ENG208 MODERN DRAMATIC LITERATURE: REALISM THROUGH
3 Lecture 0 Lab 3 Credit Hour(s)
A study of significant selections from the literature of the theatre in English and in translation from Ibsen to the present. Authors may include Chekhov, Shaw, Strindberg, Brecht, Miller, O'Neill, Beckett, O'Casey, Pinter and Stoppard. Prerequisite: ENG 102.

ENG209 WRITING OF FICTION
3 Lecture 0 Lab 3 Credit Hour(s)
A course in which the student practices various forms of fiction writing. Direction in the assembling of fictional material and in the reading of fiction to gain an understanding of the creative process as it applies to writing. Pre or Co-requisite: ENG 102 or permission of department.

ENG210 LESSON-plANNING IN ENGLISH
3 Lecture 0 Lab 3 Credit Hour(s)
A study of significant selections from the literature of the theatre in English and in translation from Ibsen to the present. Authors may include Chekhov, Shaw, Strindberg, Brecht, Miller, O'Neill, Beckett, O'Casey, Pinter and Stoppard. Prerequisite: ENG 102.

ENG211 NEWSWRITING, EDITING, AND PUBLICATION
3 Lecture 0 Lab 3 Credit Hour(s)
A study of significant selections from the works of such authors as Homer, Sappho, Theocritus, Aeschylus, Sophocles, Plato, Aristotle, Lucretius, Catullus, Vergil, Horace, Juvenal, Plautus and Seneca. The literary forms read include poetry, drama, satire, literary criticism and fiction. Prerequisite: ENG 102.

ENG212 GREEK AND ROMAN LITERATURE IN TRANSLATION
3 Lecture 0 Lab 3 Credit Hour(s)
A study of significant selections from the works of such authors as Homer, Sappho, Theocritus, Aeschylus, Sophocles, Plato, Aristotle, Lucretius, Catullus, Vergil, Horace, Juvenal, Plautus and Seneca. The literary forms read include poetry, drama, satire, literary criticism and fiction. Prerequisite: ENG 102.

ENG213 ASIAN LITERATURE IN TRANSLATION
3 Lecture 0 Lab 3 Credit Hour(s)
A study of significant selections from the works of such authors as Homer, Sappho, Theocritus, Aeschylus, Sophocles, Plato, Aristotle, Lucretius, Catullus, Vergil, Horace, Juvenal, Plautus and Seneca. The literary forms read include poetry, drama, satire, literary criticism and fiction. Prerequisite: ENG 102.
ENG214 DIRECTED WRITING OF CREATIVE NON-FICTION
3 Lecture 0 Lab 3 Credit Hour(s)
In creative non-fiction, the details of the content are true and accurate while the strategies of the form and style use the full range available to fiction, poetry and drama. In this course, the student will practice various forms of creative non-fiction, an inclusive term for writing of memoir; lyric and personal essay; plotted narrative; biography; cultural criticism and travel, science and nature writing. Students will be directed in their assembling of material-gathering notes, conducting interviews, research and in the reading of creative non-fiction (sometimes termed literary journalism, literary non-fiction, the literature of reality and the literature of fact) to gain an understanding of the creative process as it applies to writing.
Pre or Co-requisite: ENG 102 or permission of department.

ENG215 MODERN POETRY
3 Lecture 0 Lab 3 Credit Hour(s)
A study of selected modern poets chosen to illustrate the significance of various influences upon the contemporary poetic scene. A consideration of the techniques available to the modern poet and of the relation of the poem's meaning to its sound.
Prerequisite: ENG 102.

ENG216 THE SHORT STORY
3 Lecture 0 Lab 3 Credit Hour(s)
This course is a study of the development of the short story from its beginnings in the nineteenth century to the present day. The works of a number of authors are studied. Emphasis is placed on how contributions by these significant individual authors changed the focus and altered the purpose of the short story during its brief history.
Prerequisite: ENG 102.

ENG218 ADVANCED COMPOSITION/PEER TUTORING IN WRITING
3 Lecture 2 Lab 4 Credit Hour(s)
This course is designed for capable student writers who wish to improve their writing skills in advanced composition and to learn approaches to tutoring in order to assist other students who have writing concerns. In this course, students will study different approaches to composition and the various types of writing in the disciplines. They will write essays, journals, case studies and critiques of other students' writing. In evaluating their tutoring, they will use role playing and peer review. The instructor will supervise tutorial work regularly. Students will be required to work two hours per week in the Writing Center.
Note: Students must register for both a lecture and a lab.
Prerequisites: Completion of the composition series, ENG 101 and 102, with a grade average of B or better, and permission of instructor.

ENG221 RUSSIAN LITERATURE IN TRANSLATION
3 Lecture 0 Lab 3 Credit Hour(s)
A course exploring the literature of Russia, using major authors to reveal the intellectual, social and philosophical forces that helped mold 19th Century Czarist Russia, influenced the post-Czarist U.S.S.R. and modern Russia.
Prerequisite: ENG 102.

ENG222 WOMEN IN AMERICAN LITERATURE
3 Lecture 0 Lab 3 Credit Hour(s)
This course explores conscious and unconscious stereotypes of women in literature by men and women. Emphasis is placed on critical analysis of selected works from traditional and feminist points of view.
Prerequisite: ENG 102.

ENG223 THE LITERATURE OF CREATIVE NON-FICTION
3 Lecture 0 Lab 3 Credit Hour(s)
A study of selected works by significant African-American writers. The forms studied include the novel, the short story, drama, the autobiography and poetry.
Prerequisite: ENG 102.

ENG224 ISSUES/IDEAS IN CARIBBEAN LITERATURE
3 Lecture 0 Lab 3 Credit Hour(s)
This course introduces students to issues and ideas in Caribbean literature. Poetry, prose, short stories, plays and criticisms from English, Dutch, French and Spanish speaking islands will be discussed. Students will be introduced to ideas in magical realism, creolization, pastoralism and assimilation as they appear in the stories of the people. By using structural, feminist, reader response and new historicism analysis, students will discuss the presentation of the African diaspora.
Prerequisite: ENG 102.

ENG225 POPULAR CULTURE
3 Lecture 0 Lab 3 Credit Hour(s)
This course critically examines selected examples of popular culture and popular art including fiction, non-fiction, music and film. Emphasis is placed on how print and electronic media transmit and circulate popular culture.
Prerequisite: ENG 102.

ENG226 ISSUES/IDEAS IN CARIBBEAN LITERATURE
3 Lecture 0 Lab 3 Credit Hour(s)
A course in which the student examines the relationship between films and literature. Direction in the reading of literary works, the viewing of films based on these works, and the comparison and contrast of the two.
Prerequisite: ENG 102.

ENG227 LITERATURE OF THE HUDSON RIVER VALLEY
3 Lecture 0 Lab 3 Credit Hour(s)
The Hudson River Valley has produced a rich body of literature which includes poetry, non-fiction, short fiction and novels. Students will read selected works from this literature, including fiction by Cooper, Irving, T.C. Boyle, William Kennedy and non-fiction works by landscape painters, landscape artists, naturalists and travelers in the region.
Prerequisite: ENG 102.

ENG230 SHAKESPEARE
3 Lecture 0 Lab 3 Credit Hour(s)
A study of Shakespeare's drama and poetry. Readings include tragedies, histories, comedies, romances and sonnets. Shakespeare's work is examined both in relation to Elizabethan/Jacobean culture and history and as it has been received and understood through the present.
Prerequisite: ENG 102.

ENG231 THE LITERATURE OF CREATIVE NON-FICTION
3 Lecture 0 Lab 3 Credit Hour(s)
The literature of creative non-fiction is a course in which the student reads and evaluates a wide variety of writing forms and styles in the literature of fact. Creative non-fiction includes selections of literary diaries and journals, literary memoirs, personal essays, literary journalism, nature writing, literary travel writing, science essays and creative cultural criticism.
Prerequisite: ENG 102 or permission of the department.

ENG232 CONTEMPORARY LITERATURE OF THE UNITED STATES
3 Lecture 0 Lab 3 Credit Hour(s)
A study of American novels, poetry and short stories written from 1945 to present, chosen for both their literary excellence and their multi-cultural perspectives, including such writers as Morrison,
Mason, Silko, Roth, Cheever, Plath, O’Connor, Bellow, Rivera, Sonchez, Tan and Hong-Kingston.  
Prerequisite: ENG 102.

ENG264 CONTEMPORARY INTERNATIONAL LITERATURE  
3 Lecture 0 Lab 3 Credit Hour(s)  
Designed for Honors students, this course includes the works of significant contemporary international authors from countries such as those in Africa, Eastern Europe, the Middle East, the Far East and Latin America. The genres studied may include poetry, novel, short story, autobiography, memoirs and essays. Writing, discussion and independent research are emphasized.  
Prerequisites: ENG 101 and 102 or permission of the department.

ENG267 SELECTED GLOBAL LITERARY STUDIES  
3 Lecture 0 Lab 3 Credit Hour(s)  
This course deals with a selected literary question chosen for its significance, its potential for contributing to the intellectual development and literary understanding of the participants, and with geographic and/or cultural areas defined by the College as meeting its definition of ‘Global Perspective’.  
Prerequisite: ENG 102.

ENG268 LITERARY STUDIES I  
3 Lecture 0 Lab 3 Credit Hour(s)  
This course deals with a selected literary question chosen for its significance and its potential for contributing to the intellectual development and literary understanding of the participants. The topic will differ from the topic for ENG 269.  
Prerequisite: ENG 102.

ENG269 LITERARY STUDIES II  
3 Lecture 0 Lab 3 Credit Hour(s)  
This course deals with a selected literary question chosen for its significance and its potential for contributing to the intellectual development and literary understanding of the participants. The topic will differ from the topic for ENG 268.  
Prerequisite: ENG 102.

ENG271 SPECIAL STUDY PROJECT I  
1 Lecture 0 Lab 1 Credit Hour(s)  
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, travel, work experience or other activities that advance the student’s knowledge and competence in writing, literature, or related subjects. The student’s time commitment to the project will be approximately 35-50 hours.  
Prerequisite: ENG 102.

ENG272 SPECIAL STUDY PROJECT II  
2 Lecture 0 Lab 2 Credit Hour(s)  
Similar to ENG 271, except that the student’s time commitment to the project will be approximately 70-90 hours.  
Prerequisite: ENG 102.

ENG273 SPECIAL STUDY PROJECT III  
3 Lecture 0 Lab 3 Credit Hour(s)  
Similar to ENG 271, except that the student’s time commitment to the project will be approximately 105-135 hours.  
Prerequisite: ENG 102.

ENG280 OVERSEAS STUDY: CARIBBEAN LITERATURE  
3 Lecture 0 Lab 3 Credit Hour(s)  
This is a study-abroad course that takes students to a Caribbean island for ten days to study the culture. This includes a look at the religion, education, traditions, customs, politics, arts, entertainment and celebration. Students will read and critically analyze a novel, a play and poetry from this island and write a major paper synthesizing this material.  
Prerequisites: ENG 101 and ENG 102.

ENGINEERING

ENR100 ENGINEERING AND TECHNOLOGY INTRODUCTORY 1  
1 Lecture 0 Lab 1 Credit Hour(s)  
Designed for students in Engineering Science (ENR) and Electrical Technology (ELT) curricula, this course will focus on personal development and effective strategies for successful completion of the AS and AAS degrees. Personal educational goals and curriculum management, transfer and employment opportunities, technical reading and writing, math and computer skills, communication skills and using college resources will be among the topics examined in the seminar.  
Prerequisite: ENG 101.

ENR101 INTRODUCTION TO ENGINEERING  
1 Lecture 2 Lab 2 Credit Hour(s)  
An introduction to the field of engineering. Topics include exploring the various engineering disciplines, engineering analysis and design methods, engineering economics and statistics, engineering ethics, the impact of engineering on society, life long learning, and using engineering tools in practice. These concepts are emphasized and applied in hands on problem solving situations that require teamwork, research and documentation. Students will create a design for manufacturing prototype and deliver their design solution results through the engineering reporting process.  
Prerequisite: MAT 184.

ENR102 COMPUTER PROGRAMMING FOR ENGINEERS  
3 Lecture 1 Lab 3 Credit Hour(s)  
A course in computer programming using a high level programming language as a tool to solve engineering problems. Topics include programming structure, decisions, repetition, arrays, functions, data files, addresses and pointers and object oriented design.  
Prerequisites: MAT 185 or MAT 221 or MAT 222 or MAT 223 or MAT 224.

ENR106 STATISTICAL PROCESS CONTROL  
3 Lecture 0 Lab 3 Credit Hour(s)  
This course introduces the student to basic statistical tools for quality control and improvement. The course covers Statistical Process Control (SPC) in depth and contrasts SPC with Acceptance Sampling. The course also includes a discussion of process capability and an introduction to quality improvement through the statistical design of experiments. The current state of statistical software is established through demonstrations. This course may be offered off-campus and may be cross-registered with regional community colleges.  
Prerequisite: MAT 184 with a grade of C or better.

ENR201 INTRODUCTION TO ELECTRICAL CIRCUITS AND NETWORKS  
3 Lecture 2 Lab 4 Credit Hour(s)  
This course provides the student with the basic tools needed to analyze the circuits and systems he/she will encounter in electrical engineering. Topics include basic circuit concepts, Kirchhoff’s Laws, basic network topology, mesh analysis, nodal analysis, superposition, Thevenin’s Theorem, Norton’s Theorem, maximum power transfer, initial conditions, the classical solutions of first and second order differential equations, sinusoidal steady state analysis, Phasor concepts, impedance and admittance, effective values, phasor diagrams, AC power relationships, power factor, apparent and complex power, pf correction, and 3-phase circuits. Laboratory assignments will require students to analyze data using computer programming skills, use of the software package Multisim for circuit analysis, and practice writing both formal and informal reports.  
Prerequisite: Proficiency with computer software including word processing and spreadsheets.  
Corequisites: MAT 223 and PHY 152.
ENR204 MECHANICS OF MATERIALS
4 Lecture 0 Lab 4 Credit Hour(s)
A first engineering-level course in the mechanics of materials. The major emphasis is on how materials react in the elastic range of stress before permanent deformation takes place. Computer analysis is included where appropriate. Topics include the basic concepts of stress and strain, properties of various materials, working stress factors of safety; torsional and flexural stresses; analysis of beams and columns, combined stresses, and welded, bolted and riveted connections. Both English and SI units are used.
Prerequisite: ENR 208

ENR207 ENGINEERING MATERIALS SCIENCE
3 Lecture 3 Lab 4 Credit Hour(s)
This course is a study of the fundamental characteristics of solid materials and their applications in engineering. Included are crystalline and noncrystalline materials; metals, ceramics, polymers and composites. The course analyzes the mechanical, thermal, optical, electrical, magnetic and surface properties of various materials. A design project is required.
Prerequisites: CHE 121 and PHY 152 or permission of the instructor.

ENR208 ENGINEERING STATICS
3 Lecture 0 Lab 3 Credit Hour(s)
A study of static force systems. Vectorial and conventional techniques are used in problem solving. Topics included are: properties of force systems, free-body analysis, particles, rigid bodies, trusses, frames and machines, internal forces in structural members, properties of area and mass, and friction.
Prerequisites: PHY 151 and MAT 222.

ENR209 ENGINEERING DYNAMICS
3 Lecture 0 Lab 3 Credit Hour(s)
A study of dynamic force systems. Vectorial and conventional techniques are used in problem solving. Topics included are: properties of force systems, free-body analysis, particles, rigid bodies, properties of area and mass, kinematics, kinetics, energy methods and momentum methods.
Prerequisite: ENR 208 or departmental permission.

ENR215 SURVEYING I
2 Lecture 3 Lab 3 Credit Hour(s)
This course is an introduction to the field of surveying. Students will learn what surveying encompasses and what further course of study is required to become licensed as a Professional Land Surveyor. Students will learn how to use modern land surveying equipment such as automatic levels and total station theodolites. Students will learn how to integrate the use of field equipment into the production of topographic maps. During this entire process, students will be introduced to the standards of map making and the fundamentals of land surveying.
Prerequisite: MAT 131 with a grade C or better, or departmental permission. Students must have the ability to use a compass, protractor and engineer's scale.

ENR220 DIGITAL CIRCUIT DESIGN
2 Lecture 2 Lab 3 Credit Hour(s)
This course focuses on the design of digital electronic circuits used in both computing and control applications. Topics include Boolean algebra and reduction, Karnaugh mapping, design using FPGA CPLDs, arithmetic circuits and the ALU, multiplexing, memory and addressing, and processor clock cycle and instruction sets.
Prerequisite: EIT 115 with a grade of C or better.

ENR271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student's knowledge and competence in the field of engineering or related areas. The student's time commitment to the project will be approximately 35-50 hours.

ENR272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to ENR 271, except that the student's time commitment to the project will be approximately 70-90 hours.

ENR273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to ENR 271, except that the student's time commitment to the project will be approximately 105-135 hours.

ENGINEERING TECHNOLOGY

ENT108 DC AND AC CIRCUITS
3 Lecture 3 Lab 4 Credit Hour(s)
In this course, students learn to analyze DC and AC passive circuits using Ohm's Law, Kirchhoff's laws and Superposition. RC and RL circuits are analyzed for impedance and phase angles. Troubleshooting, analysis by computer simulation using simulation software and telecommunication applications are stressed throughout.
Prerequisites: MAT 129 and CIS 109.

ENT110 LINEAR ELECTRONICS I
2 Lecture 4 Lab 4 Credit Hour(s)
In this course, students are taught the characteristics of amplifiers using operational amplifiers with respect to amplification, dB, frequency response, and input and output impedance. Operational amplifier applications such as inverting and non-inverting amps, summing amps, averaging amps and comparators are introduced with emphasis on the uses of these devices in the telecom industry. Electro-optical devices, such as LEDs, laser diodes and photodiodes are studied and will include uses in the telecom industry. Diodes and transistors are conceptually introduced. Transformers are introduced in connection with power supplies. Diodes are applied as switches in linear and switching power supplies. The frequency response of passive networks and amplifiers is measured. Cutoff frequencies, rolloff, bandwidth, and magnitude and phase are discussed and visualized via Bode plots. Troubleshooting and analysis by computer simulation software is stressed throughout the course.
Prerequisites: ENT 108, PHY 131.

ENT131 TECHNICAL DRAWING
1 Lecture 1 Lab 1 Credit Hour(s)
This course provides an introduction to the field of engineering drawing and sketching. Topics include 3-dimensional sketching, orthographic projection, sectioning, isometric presentation, dimensioning and labeling. The student will be introduced to specifications, schematic drawings and the machine shop processes. Assignments will be completed using hand sketching and Computer Assisted Drafting.

ENT210 LINEAR ELECTRONICS II
2 Lecture 4 Lab 4 Credit Hour(s)
Students practice the analysis and application of advanced electronic circuits as applied to the telecommunications industry. Topics include frequency response of active filters, oscillators, amplitude modulation, frequency modulation, phase locked loops, pulse modulation concepts and introduction to television. Theoretical and hands-on troubleshooting of test circuits, and analysis by computer simulation is stressed throughout the course.
Prerequisite: ENT 110.
ENT271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student’s knowledge and competence in the field of engineering technologies or related areas. The student’s time commitment to the project will be approximately 35-50 hours.

ENT272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to ENT 271, except that the student’s time commitment to the project will be approximately 70-90 hours.

ENT273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to ENT 271, except that the student’s time commitment to the project will be approximately 105-135 hours.

EXERCISE, SCIENCE AND WELLNESS

ESW100 EXERCISE SCIENCE AND WELLNESS SEMINAR
1 Lecture 0 Lab 1 Credit Hour(s)
This course introduces students to the field of Exercise Science and Wellness and helps them in making decisions leading to success in a career in the field of Exercise Science and Wellness. It provides an overview of courses and training needed, preparing for certification exams, career opportunities and possible transfer options.

ESW101 INTRODUCTION TO EXERCISE SCIENCE
2 Lecture 0 Lab 2 Credit Hour(s)
This course is part of the A.S. degree in Exercise Science and Wellness. It will examine how the body functions under conditions of exercise stress. Students will study the practical implications of muscle function, cardio-respiratory function, training techniques and the effects of the environment.

ESW201 EXERCISE TESTING
2 Lecture 3 Lab 3 Credit Hour(s)
This course is designed for the A.S. degree in Exercise Science and Wellness. The student will learn to assess cardio-respiratory endurance, body fat, muscular strength, muscular endurance, flexibility, pulmonary function, and blood pressure, and to evaluate the results of such tests. Students will be instructed on how to perform a complete health history on a client, the legal issues they would be presented with, and how to interpret these results to the client. Prerequisite: ESW 101.

ESW202 EXERCISE PRESCRIPTION
2 Lecture 3 Lab 3 Credit Hour(s)
This course is designed for the A.S. degree in Exercise Science and Wellness. The student will increase his/her knowledge of the effects of exercise on special populations and learn to modify exercise based on age, gender and medical conditions such as coronary heart disease, diabetes, hypertension, asthma, obesity, pregnancy, arthritis and low back pain. Students will be trained to use equipment and to keep clients motivated. An additional lab hour will be devoted to a hands-on experience in our fitness center where students will apply coursework to assist clients. The course may include placement in a local fitness center. Prerequisite: ESW201.

ESW271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student’s knowledge and competence in the field of exercise science and wellness and related areas. The student’s time commitment to the project will be approximately 35-50 hours.

ESW272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to ESW 271 except that the student’s time commitment to the project will be approximately 70-90 hours.

ESW273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to ESW 271 except that the student’s time commitment to the project will be approximately 105-135 hours.

FIRE AND OCCUPATIONAL SAFETY

FIR100 FIRE SCIENCE INTRODUCTORY SEMINAR
1 Lecture 0 Lab 1 Credit Hour(s)
A seminar designed to provide students with the opportunity to learn and practice strategies that will enhance their ability to successfully complete their educational program in the field of Fire Science. Emphasis will be on identification and clarification of personal goals, career planning, curriculum planning and study techniques. It will also explore effective program management and maximum utilization of college resources as well as career opportunities in fire and safety.

FIR102 FUNDAMENTALS OF FIRE PROTECTION
3 Lecture 0 Lab 3 Credit Hour(s)
This course provides an overview of the philosophy and history of fire protection; fire loss analysis; organization and function of public and private fire protection services; laws and regulations affecting the fire service, nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems and introduction to fire strategy and tactics.

FIR104 FUNDAMENTALS OF FIRE PREVENTION
3 Lecture 0 Lab 3 Credit Hour(s)
A study of the history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use of fire codes, identification and abatement of fire hazards, fire prevention with built-in fire protection systems, fire investigation and life-safety education.

FIR110 FIRE BEHAVIOR AND COMBUSTION
3 Lecture 0 Lab 3 Credit Hour(s)
This course is a study of the behavior and dynamics of fire. Additional topics to include theories and fundamentals of pyrolysis, heat transfer, energy absorption and fire suppression.

FIR112 OCCUPATIONAL HEALTH AND SAFETY
3 Lecture 0 Lab 3 Credit Hour(s)
This course will provide the student with an understanding of the Occupational Safety and Health Administration (OSHA) and the national Fire Protection Association (NFPA). Topics to include OSHA regulations, citations, inspections and record keeping, safety programs, accident prevention and investigation, loss source analysis, hazard identification and control, worker’s compensation and risk management.

FIR114 BUILDING CONSTRUCTION FOR FIRE PROTECTION
3 Lecture 0 Lab 3 Credit Hour(s)
This course studies the components of building construction, design, the function and testing of building materials and building code compliance in designing and maintaining life safety. Prerequisites: FIR 102 and FIR 104.
FIR204 FIRE PROTECTION SYSTEMS
3 Lecture 0 Lab 3 Credit Hour(s)
An introduction to the features of design and operation of fire
detection and alarm systems, heat and smoke control systems,
special protection and sprinkler systems, water supply for fire
protection and portable fire extinguishers.
Prerequisites: FIR 102 and FIR 110.

FIR212 FIRE PROTECTION HYDRAULICS AND WATER SUPPLY
3 Lecture 0 Lab 3 Credit Hour(s)
This course provides the student with a foundation of theoretical
knowledge of water at rest and in motion. Principles of the use of
water in fire protection and hydraulic principles to analyze to solve
water supply problems.
Prerequisites: PHY 121 and FIR 110.

FIR214 LEGAL ASPECTS IN FIRE AND SAFETY
3 Lecture 0 Lab 3 Credit Hour(s)
The course examines the legislative and legal decisions relating to
personnel practices, employee safety and public protection.
Emphasizes the legal responsibilities, liabilities and authority of the
fire service practitioner.
Pre or Co-requisite: FIR 102.

FIR222 FIRE AND SAFETY ADMINISTRATION
3 Lecture 0 Lab 3 Credit Hour(s)
An overview of organizational and management practices in the fire
and safety fields. Emphasis is on supervision and leadership styles,
motivation, morale and organizational behavior.
Prerequisite: FIR 112 or FIR 114.

FIR224 STRATEGY AND TACTICS
3 Lecture 0 Lab 3 Credit Hour(s)
This course defines how strategy and tactics integrates with the
management of an incident, how the size up process coupled with
effective communications supports the overall goals and objectives.
Topics include size up, incident management system, safety,
communications and pre-incident planning.
Prerequisites: FIR 112 and FIR 114.

FIR226 FIRE INVESTIGATION
3 Lecture 0 Lab 3 Credit Hour(s)
An in depth study of fire, arson and explosion scenes. Emphasis will
be placed on the principles and techniques of scene preservation
and analysis, management of investigative functions, documentation
of the scene and determination of the cause and origin of fire.
Prerequisite: FIR 112.

FIR271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students
with the cooperation and approval of a faculty member. Proposed
study plans require departmental approval. Projects may be based
on reading, research, community service, work experience or other
activities that advance the student's knowledge and competence in
the field of biology or related areas. The student's time commitment
to the project will be approximately 35-50 hours.

FIR272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to FIR 271, except that the student's time commitment to the
project will be approximately 70-90 hours.

FIR273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to FIR 271, except that the student's time commitment to the
project will be approximately 105-135 hours.
FRE205 FRENCH CULTURE AND LANGUAGE II
3 Lecture 0 Lab 3 Credit Hour(s)
An intensive course, three hours per day, five days per week, to be offered in France or in a French-speaking country. The duration of the course is approximately six weeks. It includes guided excursions to areas of cultural interest. Students are housed with local families whenever possible. Participation subject to approval of the department.

FRE208 CULTURAL APPLICATIONS OF FOREIGN LANGUAGE 3
Lecture 0 Lab 3 Credit Hour(s)
A cultural project which offers students the opportunity to learn about language in a non-traditional set up, to be creative and innovative, to relate language to culture, and to test their skills in a communicative manner while rendering a service to the community. Since the course offering changes every year, students should inquire from the department as to what the focus is for that specific semester. Open to students of Spanish or Italian or French. Students to select one language.

Prerequisite: FRE 102 or 199 or permission of the instructor.

FRE271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, work experience, or other activities that advance the student's knowledge and competence in the French language. The student's time commitment to the project will be approximately 35-50 hours.

FRE272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to FRE 271, except that the student's time commitment to the project will be approximately 70-90 hours.

FRE273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to FRE 271, except that the student's time commitment to the project will be approximately 105-135 hours.

FRE301 ADVANCED FRENCH I
3 Lecture 0 Lab 3 Credit Hour(s)
Advanced French conversation and composition. Materials selected from current French newspapers and magazines as well as French and Francophone literature. Review of advanced French grammar. Prerequisite: Permission of department.

FRE302 ADVANCED FRENCH II
3 Lecture 0 Lab 3 Credit Hour(s)
Continuation of FRE 301. Advanced French conversation and composition. Materials selected from current French newspapers and magazines as well as French and Francophone literature. Review of advanced French grammar. Prerequisite: Permission of department.

GEOGRAPHY

GEO101 GEOGRAPHY OF EUROPE, THE MIDDLE EAST AND AMERICA
3 Lecture 0 Lab 3 Credit Hour(s)
A survey of the human, physical, and cultural factors which influence population, distribution, and economic and political activities in Europe, Russia, Sub-Saharan Africa, North Africa, and the Middle East. Special emphasis is placed on the environmental, demographic, and economic impact of globalization and climate change.

GEO102 GEOGRAPHY OF ASIA, THE PACIFIC, AND THE MIDDLE
3 Lecture 0 Lab 3 Credit Hour(s)
A regional survey of North America, the Pacific Rim, Middle

America, South America, South Asia, China and Southeast Asia. This course considers the cultural, physical, political, economic, urban, historical and human geography of these regions.

GEO271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student's knowledge and competence in the field of geography or related areas. The student's time commitment to the project will be approximately 35-50 hours.

GEO272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to GEO 271, except that the student's time commitment to the project will be approximately 70-90 hours.

GEO273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to GEO 271, except that the student's time commitment to the project will be approximately 105-135 hours.

GERMAN

GER101 ELEMENTARY GERMAN I
3 Lecture 1 Lab 3 Credit Hour(s)
Presentation of basic constructions and sentence patterns. Stress is on spoken German and imitation of overall structures in simple reading exercises. Grammar studied in the context of structural patterns. Writing exercises based on reading material. Supervised and independent language laboratory practice of speech patterns to provide a strong basis for good command of the language. Open only to students who have not studied German or who have permission of the department.

GER102 ELEMENTARY GERMAN II
3 Lecture 1 Lab 3 Credit Hour(s)
Continuation of GER 101. Intensive practice to develop skill in writing, reading, listening and speaking about realistic everyday situations. Original composition practice on given topics. Supervised and independent language laboratory practice.

Prerequisite: GER 101 or permission of the department.

GER201 INTERMEDIATE GERMAN I
3 Lecture 0 Lab 3 Credit Hour(s)
Study of more complicated structure based on selected reading from representative authors, modern and classical. Simple stories used as a basis for the study of German culture and conversational practice. Language laboratory work. Special arrangements made for students interested in reading scientific German.

Prerequisite: GER 102 or permission of the department.

GER202 INTERMEDIATE GERMAN II
3 Lecture 0 Lab 3 Credit Hour(s)
Continuation of GER 201. Language laboratory work.

Prerequisite: GER 201 or permission of the department.

GER271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, work experience, or other activities that advance the student's knowledge and competence in the German language. The student's time commitment to the project will be approximately 35-50 hours.
GER272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to GER 271, except that the student's time commitment to the project will be approximately 70-90 hours.

GER273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to GER 271, except that the student's time commitment to the project will be approximately 105-135 hours.

GER301 ADVANCED GERMAN I
3 Lecture 0 Lab 3 Credit Hour(s)
A study of selected classics and modern literary works. Advanced syntax, intensive practice in writing acceptable German. Creative expression in speaking and writing. Conversation practice. Prerequisite: GER 202 or permission of the department.

GER302 ADVANCED GERMAN II
3 Lecture 0 Lab 3 Credit Hour(s)
Continuation of GER 301. Advanced syntax and conversation. Language laboratory work. Prerequisite: GER 301 or permission of the department.

GEOLOGY

NOTE: Students should assume that all laboratory science courses (AST, BIO, CHE, GLG, MTH, PHS and PHY) will incorporate some level of math. There are no science courses designed to be 'math free'. The nature of the lab is to perform experiments and gather data that will test scientific theory. Working with data will require, at a minimum, some basic mathematics, including use of \((+, -, x)\) calculator. Therefore, even for science course with no stated math prerequisites, it will be expected that students have math competency at the level of MAT091 (Beginning Algebra) or its equivalent.

GLG121 PHYSICAL GEOLOGY
3 Lecture 2 Lab 4 Credit Hour(s)
An introduction to the fundamental principles that shape planet earth. Emphasis is placed on understanding the processes of weathering and erosion, the origin of earthquakes, the formation of mountains and volcanoes and the drifting of continents. Laboratory study of common minerals and rocks and features of topographic and geologic maps. Field trips to significant geological localities are an integral part of the laboratory program.

GLG124 THE EARTH THROUGH TIME
3 Lecture 2 Lab 4 Credit Hour(s)
The study of the origin and evolution of planet earth and its life through geological time. Special emphasis is placed on the development of North America, employing the newest concepts of plate tectonics and sea floor spreading. Laboratory study of fossils, geologic maps and structures. Field trips to significant geological localities are an integral part of the laboratory program.

GLG126 ENVIRONMENTAL GEOLOGY
3 Lecture 2 Lab 4 Credit Hour(s)
The study of local, regional and global perspectives of environmental geological issues while focusing on earth materials and processes. Emphasis will be placed on both hazardous natural earth processes and human related environmental problems and solutions. Topics such as earthquakes, volcanic activity, flooding, landslides, groundwater pollution, soil pollution and mineral resource issues will be investigated. Laboratory work will be supplemented by field trips.

GLG271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student's knowledge and competence in the field of geology or related areas. The student's time commitment to the project will be approximately 35-50 hours.

GLG272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to GLG 271, except that the student's time commitment to the project will be approximately 70-90 hours.

GLG273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to GLG 271, except that the student's time commitment to the project will be approximately 105-135 hours.

GLG291 FIELD GEOLOGY STUDY I
0 Lecture 3 Lab 1 Credit Hour(s)
An opportunity to learn about geological principles and processes through direct field study in a specific area or region. The student would be expected to do assigned readings in preparation for the trip and to attend one or more study sessions prior to their participation in the trip. At the end of the field study, the student will prepare and submit a field trip report. Students will be expected to bear certain costs for camping and travel. Each field study will have a specific title and description, depending on the area or region to be visited. The student's time commitment to the course will be approximately 35-50 hours. Prerequisite: GLG 121 or PHS 102 or permission of instructor.

GLG292 FIELD GEOLOGY STUDY II
1 Lecture 3 Lab 2 Credit Hour(s)
Similar to GLG 291, except that the student's time commitment to the course will be approximately 70-90 hours. Prerequisite: GLG 121 or PHS 102 or permission of instructor.

GLG293 FIELD GEOLOGY STUDY III
2 Lecture 3 Lab 3 Credit Hour(s)
Similar to GLG 291, except that the student's time commitment to the course will be approximately 105-135 hours. Prerequisite: GLG 121 or PHS 102 or permission of instructor.

GLG294 FIELD GEOLOGY STUDY IV
2 Lecture 6 Lab 4 Credit Hour(s)
Similar to GLG 291, except that the student's time commitment to the course will be approximately 120-140 hours. Prerequisite: GLG 121 or PHS 102 or permission of instructor.

GOVERNMENT

GOV121 THE AMERICAN NATIONAL EXPERIENCE
3 Lecture 0 Lab 3 Credit Hour(s)
A course dealing with the philosophy, structure, functions and processes of our national government. Topics include the methods of political and historical analysis, the machinery of government, the political process and political behavior. Historical events and personalities in American politics will be used to illustrate the issues and processes of American government. The course will fulfill the History, Government, Economics requirement for Liberal Arts and Humanities majors and may be designated as either a GOV or a HIS course depending on the needs of the student for transfer.

GOV151 INTRODUCTION TO LAW
3 Lecture 0 Lab 3 Credit Hour(s)
A general survey course in law with special emphasis given to administrative law and constitutional law. Students will gain insight into various subject areas of law, the courts and alternative dispute resolution.
GOV 220 THE WAR IN VIET NAM
3 Lecture 0 Lab 3 Credit Hour(s)
A study of the origins, nature and effects of warfare by using the War in Viet Nam as a case study. This course will survey America's involvement in Viet Nam during World War II, the post World War II years, through the Kennedy, Johnson and Nixon administrations, and will evaluate the consequences of the conflict at home and abroad. Various methodologies are used in the course in addition to the traditional lecture-discussion approach.

GOV 221 COMPARATIVE POLITICAL SYSTEMS
3 Lecture 0 Lab 3 Credit Hour(s)
The course is intended to give students a better understanding of politics in the United States by developing a broad comparative perspective on the practice of politics in the world today. The course will focus on comparisons among European parliamentary nations such as France or Britain and Russia, China and other less developed nations. Careful attention will be paid to the impact of government on individual freedom and economic well-being.

GOV 222 STATE AND LOCAL GOVERNMENT
3 Lecture 0 Lab 3 Credit Hour(s)
A detailed examination of the philosophy of state and local government in the American system. The structure, function and political processes of state, county, town, city and smaller units of government, with emphasis upon these units in New York State. This course also includes a study of the federal system and its relevance to the operation of these smaller units of government. (Where possible, the seminar method will be used.)

GOV 223 NATIONAL MODEL UNITED NATIONS I
4 Lecture 0 Lab 4 Credit Hour(s)
This course prepares students to participate in the National Model United Nations in New York, a five-day simulation of the UN and its various activities. Prior to the simulation, students prepare by doing extensive research on the country and on the issues before the committees which are assigned. In New York, students deliver speeches, negotiate with other delegates, write resolutions and prepare position papers. The course is designed to provide students with a hands-on experience.
Prerequisite: Permission of the instructor.

GOV 224 NATIONAL MODEL UNITED NATIONS II
4 Lecture 0 Lab 4 Credit Hour(s)
This course prepares students to participate in the National Model United Nations in New York, a five-day simulation of the U.N. and its various activities. Prior to the simulation, students prepare by doing extensive research on the country and on the issues before the committees which are assigned. In New York, students deliver speeches, negotiate with other delegates, write resolutions and prepare position papers. The course is designed to provide students with a hands-on experience.
Prerequisite: Permission of the instructor.

GOV 225 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student's knowledge and competence in the field of government or related areas. The student's time commitment to the project will be approximately 35-50 hours.

GOV 226 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to GOV 225, except that the student's time commitment to the project will be approximately 70-90 hours.

GOV 227 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to GOV 225, except that the student's time commitment to the project will be approximately 105-135 hours.

GOV 228 PUBLIC SERVICE INTERNSHIP I
0 Lecture 9 Lab 3 Credit Hour(s)
A community based internship in which students are placed in government offices or in non-profit agencies to gain hands-on experience in the public sector. Students will normally work under the direction of a field supervisor and an HGE faculty member. A minimum of 105 hours of work per semester and the permission of the HGE Department are required.
Prerequisites: Students must have completed GOV 121 plus an ECO course or another GOV course before taking GOV 228.

GOV 229 PUBLIC SERVICE INTERNSHIP II
0 Lecture 9 Lab 3 Credit Hour(s)
Similar to GOV 228, except that the student's time commitment to the project will be approximately 105-135 hours.

GOV 230 PUBLIC SERVICE INTERNSHIP III
0 Lecture 18 Lab 6 Credit Hour(s)
A community based internship in which students are placed in government offices or in non-profit agencies to gain hands-on experience in the public sector. Students will normally work under the direction of a field supervisor and an HGE faculty member. A minimum of 210 hours of work per semester and the permission of the HGE Department are required. Students must register for GOV 230 before they register for GOV 230.
Prerequisite: GOV 230.

GOV 231 PUBLIC SERVICE INTERNSHIP IV
0 Lecture 18 Lab 6 Credit Hour(s)
A community based internship in which students are placed in government offices or in non-profit agencies to gain hands-on experience in the public sector. Students will normally work under the direction of a field supervisor and an HGE faculty member. A minimum of 210 hours of work per semester and the permission of the HGE Department are required.
Prerequisite: GOV 231.

GOV 232 PUBLIC SERVICE INTERNSHIP V
0 Lecture 18 Lab 6 Credit Hour(s)
A community based internship in which students are placed in government offices or in non-profit agencies to gain hands-on experience in the public sector. Students will normally work under the direction of a field supervisor and an HGE faculty member. A minimum of 210 hours of work per semester and the permission of the HGE Department are required.
Prerequisite: GOV 232.
HEALTH EDUCATION

HED125 WOMEN'S HEALTH ISSUES
3 Lecture 0 Lab 3 Credit Hour(s)
This three-credit course will identify and explore current health issues that are of special interest or are unique to women. Topics will include emotional well being, stress management, health problems related to female anatomy and physiology, violence against women and issues of reproduction and childbearing.

HED134 FIRST AID, SAFETY, AND CPR
3 Lecture 0 Lab 3 Credit Hour(s)
This course incorporates the study and application of: Victim Assessment, Rescue Breathing, CPR and Choking Skills for Conscious and Unconscious victims of all ages; the study and awareness of current Safety Issues (Campus Safety, Fire Safety, Home Safety and Motor Vehicle Safety); and the study and practice of basic level victim assessment, prioritization and effective execution of First Aid Skills for immediate and temporary care. Those who quality will earn American Red Cross Certification and an Emergency Care and Safety Institute Course Completion Card.

HED201 STRESS MANAGEMENT
3 Lecture 0 Lab 3 Credit Hour(s)
In this course, each student will learn the causes and effects of stress, and the basic principles, theories and coping skills/strategies needed to effectively manage their personal stress. In addition, there will be opportunity for experiential learning with the use of self-analyses, cognitive strategies, relaxation techniques, and other class exercises and activities.

HED203 HEALTH AND AGING
3 Lecture 0 Lab 3 Credit Hour(s)
This course provides an overview of the physical changes that occur with aging and the benefits of a healthy lifestyle on the aging process. Emphasis is placed on healthy aging and maintaining a functional capacity and quality of life with age through engagement in regular exercise and other health promoting behaviors. The interplay between aging, physical health, longevity and health care is a major focus.

HED224 HUMAN SEXUALITY
3 Lecture 0 Lab 3 Credit Hour(s)
A study of physiological, psychological, sociological and gender issues related to sexuality. Topics include: perspectives in sexuality, human sexual expression, love, communication and relationships, human sexual response and dysfunction, sexual health; family planning; non-modal behaviors and sex and the law.

HED271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student’s knowledge and competence in the field of health education or related areas. The student’s time commitment to the project will be approximately 35-50 hours.

HED272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to HED 271, except that the student’s time commitment to the project will be approximately 70-90 hours.

HED273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to HED 271, except that the student’s time commitment to the project will be approximately 105-135 hours.

HISTORY

HIS004 COURSE SPECIFIC STUDY SKILLS FOR HIS 104
1 Lecture 0 Lab 1 Credit Hour(s)
HIS 004 is a course specific study skills course designed for those students who require support in HIS 104, (History of the United States II) taught by the instructor of HIS 104, which is taken concurrently. HIS 004 will include work with notetaking, effective reading of texts and supplementary materials, term paper research and organization, map skills and examination preparation, including essay writing and other specific strategies necessary to the successful study of history at the college level.
NOTE: HIS 004 is a credit equivalent course. Equivalent credits do not satisfy degree requirements and are not calculated in a student’s grade point average, but they do incur tuition charges and they do count towards full-time/part-time status.

HIS101 WESTERN CIVILIZATION: GREECE AND ROME TO 1700
3 Lecture 0 Lab 3 Credit Hour(s)
A survey of the major ideas and events which have shaped the values and institutions of the West from the classical period to approximately 1700. Topics include Classical Greece and Rome, Judaism and Early Christianity, the Byzantine, Islamic and Latin Christian Empires of the Early Middle Ages, Feudalism and the Latin Christian Church of the High Middle Ages, the Rise of National States, the Italian and Northern Renaissance and the Reformation.
HIS 101 and HIS 102 may be taken separately.

HIS102 WESTERN CIVILIZATION FROM 1700 TO THE PRESENT
3 Lecture 0 Lab 3 Credit Hour(s)
A survey of the major ideas and events which have shaped the values and institutions of the West from 1700 to the present. Topics include the Old Regime, the Enlightenment, the French Revolution, the Rise of Industrialism, Capitalism, Socialism, Imperialism, Nationalism, the Russian Revolution, the Growth of Communism and Fascism, World Wars I and II and the Cold War.
HIS 101 and HIS 102 may be taken separately.

HIS103 HISTORY OF THE UNITED STATES I
3 Lecture 0 Lab 3 Credit Hour(s)
The study of American history from the Colonial Era through the Civil War. A broad survey of the development of American democracy, with emphasis on the growth of institutions and ideals as they were brought from Europe and modified and developed here. Special attention is given to the development of the national Constitution.
HIS 103 and 104 may be taken separately.

HIS104 HISTORY OF THE UNITED STATES II
3 Lecture 0 Lab 3 Credit Hour(s)
The study of American political, social and intellectual development from 1865 to the present. Topics covered are Reconstruction, the industrial and transportation revolution, the labor movement, the crisis in agriculture, expansion and the new Manifest Destiny, the Progressive Movement, the Twenties, the Great War, the Great Depression and New Deal, the Second World War, the Cold War, the Civil Rights Movement, the Viet Nam War and the Protest Movements of the 1960's, and the Consolidation and Conservative Resurgence of the 1970's and 1980's.
HIS 103 and 104 may be taken separately.
HIS107 HISTORY OF WORLD CIVILIZATIONS BEFORE 1700
3 Lecture 0 Lab 3 Credit Hour(s)
A survey course of the major political, social and cultural
developments of the Latin American, Asian, African, European and
Middle Eastern civilizations. The course attempts to place historical
events, customs and cultures in a global context. The course surveys
the major ideas, religions and events that shaped the values of the
different world cultures and their institutions from the classical age
to 1700.

HIS108 HISTORY OF WORLD CIVILIZATIONS SINCE 1700
3 Lecture 0 Lab 3 Credit Hour(s)
A survey of the major political, social and cultural developments of
the Latin American, Asian, African, European and Middle Eastern
civilizations. The course attempts to place historical events, customs
and cultures in a global context. Part II surveys the major ideas and
events that shaped the values of the different world cultures and their
institutions from 1700 to the present.

HIS181 OVERSEAS STUDY: AMERICA’S MIRROR I
3 Lecture 0 Lab 3 Credit Hour(s)
A study of a selected country in order to understand the major
political, social and cultural developments of that country. The course
attempts to place historical events, customs and cultures in a context
whereby the student will be able to appreciate in depth the first-hand
observations they will be able to make in the selected country during
an intersession visit.

HIS182 OVERSEAS STUDY: AMERICA’S MIRROR II
3 Lecture 0 Lab 3 Credit Hour(s)
Students will visit a selected Latin American, Asian, African, European
or Middle Eastern country in order to survey the major political,
social and cultural developments of the host country. The course
attempts to place historical events, customs and cultures in a context
whereby the student discovers, through first-hand observation, the
ethnic, religious and national composition of the selected country.

HIS206 THE LATIN AMERICANS
3 Lecture 0 Lab 3 Credit Hour(s)
A study of the major social, economic, political, intellectual and
cultural developments in Latin American history. Students will
take a selected Latin American, Asian, African, European or
Middle Eastern country in order to survey the major political,
social and cultural developments of the host country. The course
attempts to place historical events, customs and cultures in a context
whereby the student discovers, through first-hand observation, the
ethnic, religious and national composition of the selected country.

HIS207 HISTORY OF RUSSIA AND THE SOVIET UNION
3 Lecture 0 Lab 3 Credit Hour(s)
A study of the historical events, social and economic changes,
and political developments from the rise of Muscovy to the present
day. This course examines Russia under the Czars, the origins and
upheaval of the revolutions of 1917 and the evolution of the Soviet
Union throughout the twentieth century.

HIS209 THE HISTORY OF THE AFRICAN AMERICAN
3 Lecture 0 Lab 3 Credit Hour(s)
This course examines the social, political, economic and cultural
history of people of African descent in the United States. Topics
covered will include: the ordeal of slavery, the era of Reconstruction,
the rise of segregation, the Great Migration, the Harlem
Renaissance, the development of Black Nationalism and the Civil
Rights Movement.

HIS210 THE HOLOCAUST IN HISTORY
3 Lecture 0 Lab 3 Credit Hour(s)
This course examines the political, social, economic, intellectual and
religious sources of the Holocaust, traces its course, and analyzes
the way in which it has been interpreted by different nations and
historians. Special attention is given to the history of European anti-
Semitism, the relationship among Nazi ideology, Hitler and the
Holocaust, stages of the ‘Final Solution’, Jewish resistance, behavior
of other nations and the meaning of the Holocaust for the present
and future.

HIS214 THE HISTORY OF WOMEN IN THE U.S.
3 Lecture 0 Lab 3 Credit Hour(s)
An examination of the social, economic and political roles of women
in the United States from colonial times to the present. Particular
emphasis will be given to the impact that race, class and ethnicity
have had on the experiences of women in this country.

HIS215 THE HISTORY OF THE CITY OF NEW YORK
3 Lecture 0 Lab 3 Credit Hour(s)
This course will focus on the cultural and intellectual history of the
United States from colonial times to the present. More than a litany
of events, customs and cultures in a context
by which the student will be able to appreciate in depth the first-hand
observations they will be able to make in the selected country during
an intersession visit.

HIS216 THE HISTORY OF DUTCHESS COUNTY
3 Lecture 0 Lab 3 Credit Hour(s)
An examination of the social, economic, cultural and
religious sources of the Holocaust, traces its course, and analyzes
the way in which it has been interpreted by different nations and
historians. Special attention is given to the history of European anti-
Semitism, the relationship among Nazi ideology, Hitler and the
Holocaust, stages of the ‘Final Solution’, Jewish resistance, behavior
of other nations and the meaning of the Holocaust for the present
and future.

HIS217 HISTORY OF CHINA
3 Lecture 0 Lab 3 Credit Hour(s)
The course presents a general survey of the major historical, social,
and cultural developments of China. The course begins with ancient
China and continues through the present day. Special emphasis is
given to the rise of modern China after the 15th century and places
Chinese development in a global context.

HIS220 THE WAR IN VIET NAM
3 Lecture 0 Lab 3 Credit Hour(s)
A study of the origins, nature and effects of warfare by using the
War in Viet Nam as a case study. This course will survey America’s
involvement in Viet Nam during World War II, the post World War II
years through the Kennedy, Johnson and Nixon administrations, and
will evaluate the consequences of the conflict at home and abroad.
Various methodologies are used in the course in addition to the
traditional lecture-discussion approach.

HIS225 HISTORY OF AMERICAN CULTURE AND IDEAS
3 Lecture 0 Lab 3 Credit Hour(s)
This course will focus on the cultural and intellectual history of the
United States from colonial times to the present. More than a litany
of thinkers and ideas, the course will explore the political and social
debates that gave those ideas meaning. It will present material
in discrete themes, such as the clash of religion and science;
urbanization and its anxieties; dissident voices and reform; race,
nationalism and imperialism; political theory and reform; alienation
and the intellectuals; the response to fascism and war; gender roles
and feminist thought; and the globalization of ideas.

HIS226 LABOR HISTORY
3 Lecture 0 Lab 3 Credit Hour(s)
In this course, students study the following key curriculum areas: Labor
History, Changes in Work and Technology, Corporate Structures and
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student’s knowledge and competence in the field of history or related areas. The student’s time commitment to the project will be approximately 35-50 hours.

HIS273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to HIS 271, except that the student’s time commitment to the project will be approximately 105-135 hours.

HUMAN SERVICES

HMS100 HUMAN SERVICES INTRODUCTORY SEMINAR
1 Lecture 0 Lab 1 Credit Hour(s)
This seminar is designed to provide Human Services students with an opportunity to learn and practice strategies that will enhance their ability to successfully complete their educational program in one of the Human Services fields. Emphasis will be on gaining an understanding of the many career paths available in the field as well as an exploration of personal goals, program philosophy and College resources.

HUMANITIES

HUM205 INTRODUCTION TO FILM APPRECIATION
3 Lecture 0 Lab 3 Credit Hour(s)
HUM 205 introduces the student to the aesthetics of film by surveying the fundamental aspects of film as an art form. The student will learn about film form; film techniques such as mise en scene, cinematography, editing and sound, film criticism and film history.

HUM271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, travel, work experience or other activities that advance the student’s knowledge and competence in writing, literature or related subjects. The student’s time commitment to the project will be approximately 35-50 hours.

HUM272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to HUM 271, except that the student’s time commitment to the project will be approximately 70-90 hours.

HUM273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to HUM 271, except that the student’s time commitment to the project will be approximately 105-135 hours.

ITALIAN

ITL101 ELEMENTARY ITALIAN I
3 Lecture 1 Lab 3 Credit Hour(s)
Emphasis on oral and aural training through conversation based on model sentences and word patterns commonly used in spoken language. Intensive drills and pattern practices are supplemented by independent practice outside of class. Tape recorders and other audio aids are used extensively. Open only to students who have not studied Italian previously. Native speakers should contact the Department to determine their level and what courses they may take for credit.

ITL102 ELEMENTARY ITALIAN II
3 Lecture 1 Lab 3 Credit Hour(s)
Italian 102 is a continuation of Italian 101 and thus continues the study of sounds, structure and grammatical concepts but with a growing emphasis on conversational ability. It is, ideally, the second step of a sequence, which would include Italian 101, 102, 201 and 202. An attempt is made to familiarize students with the three language skills: listening comprehension, speaking and writing. An hour a week of independent lab work, which involves listening to tapes, which accompany each lesson, is a requirement of the course and will help the student in the comprehension and speaking skills. Italian 102 would be appropriate for someone who has successfully completed Italian 101 or a student with two years of high school Italian. Native speakers should contact the Department to determine their level and what courses they may take for credit.

ITL199 ITALIAN REVIEW
3 Lecture 1 Lab 3 Credit Hour(s)
A course designed for students with some formal learning of the Italian language, such as one or more years of high school Italian and who do not feel ready for ITL 201 (Intermediate Italian). The course is a general review of basic Italian grammar and patterns of communication. The emphasis is on understanding and speaking Italian. Writing is used to consolidate learning. The content of both ITL 101 and ITL 102 is covered in one semester. Prerequisite: Permission of department.
ITAL901 ITALIAN LANGUAGE AND CULTURE ABROAD
3 Lecture 0 Lab 3 Credit Hour(s)
The course will provide students with a total linguistic immersion into Italian, between instructor and students, and first-hand experience of the linguistic similarities between Romance languages. Students will connect language and culture as they discover the arts, history, government and politics, as well as everyday life (cafés, markets, shops, entertainment, cuisine and current events). Students will get a sense of the European Union as they travel to three countries, and compare and contrast what they see, with the USA. Students’ portfolio will include research in the US, on-site documentation, journal entries, short papers and oral presentations. Students will select areas of interest to develop a portfolio, and revise with instructor all work done in the foreign language (journal, papers and presentations).

LIBERAL ARTS HUMANITIES

LAH100 LIBERAL ARTS/HUMANITIES INTRODUCTORY SEMINAR
1 Lecture 0 Lab 1 Credit Hour(s)
This course is an introduction to the Liberal Arts and Humanities. It is designed to assist students in developing skills appropriate for college freshman so that they will become more effective life-long learners. The course has a liberal arts component emphasizing the nature of a liberal arts education and its associated values, and a college component, which will aid the student in the continued development of essential skills for success in college.

LIBERAL ARTS MATH

LAM100 MATHEMATICS INTRODUCTORY SEMINAR
1 Lecture 0 Lab 1 Credit Hour(s)
This course will orient students matriculated in the LAM curriculum to the college and to the curriculum. Corequisite: This course is intended for LAM students enrolled in MAT 185, 215, 221, 222, 223 or 224. All other LAM students must take CLP 101.

LIBERAL ARTS TEACHING

LAT100 LIBERAL ARTS TEACHING INTRODUCTORY SEMINAR
1 Lecture 0 Lab 1 Credit Hour(s)
This course will focus on topics related to both success in college and preparing for a career in teaching at the elementary and/or secondary level.

LAT200 LEARNER DIVERSITY IN ELEMENTARY CLASSROOMS
3 Lecture 0 Lab 3 Credit Hour(s)
A foundation course highlighting the ecology of the contemporary elementary school classroom. The content focuses on learner diversity as related to language, gender, cultural, ethnic and learning differences. The role of community and family supports, as well as current legislation and mandates will be addressed. Observation and other relevant field experiences will be used to evaluate current educational practices. Prerequisite: LAT 100, BHS 207, PSY 203, or PSY 221.

LAT201 EDUCATIONAL SETTINGS: ADOLESCENT LEARNING
1 Lecture 0 Lab 1 Credit Hour(s)
A survey of the major methods of observing, recording and reporting learners’ behaviors for individuals planning to teach at the secondary level, grades 7-12. Observations and other relevant field experiences will be used for illustration and to practice skills. Pre or Corequisites: LAT 100, BHS 207 and PSY 204 or permission of the department head.
LIBERAL STUDIES

LSS100 HONORS INTRODUCTORY SEMINAR
1 Lecture 0 Lab 1 Credit Hour(s)
This course will introduce Honors students to all aspects of the Honors offerings and the college. Its focus will be on research and writing techniques in literature, social science and history. Special concerns of Honors students will be included.

LSS201 LIBERAL STUDIES SEMINAR
3 Lecture 0 Lab 3 Credit Hour(s)
This seminar culminates Honors courses by applying historical, sociological and literary analysis to a selected topic. Student independent research will be conducted and presented under careful supervision of one or more instructors. Prerequisite: Permission of Honors Coordinator.

MATHEMATICS

MAT091 BEGINNING ALGEBRA
3 Lecture 0 Lab 3 Credit Hour(s)
Beginning Algebra is intended for students who need a foundation in, or to review the general topics related to Algebra. Topics covered include operations with fractions, signed numbers, solving equations, factoring, linear equations and polynomials. A grade of C or better is required for entrance into MAT 100, 109, 118 or 131.
NOTE: MAT 091 is a credit equivalent course. Equivalent credits do not satisfy degree requirements and are not calculated in a student’s grade point average, but they do incur tuition charges and they do count towards full-time/part-time status. Compass Pre-Algebra score of at least 36 or Compass Algebra Score of at least 23.

MAT100 INTERMEDIATE ALGEBRA
3 Lecture 0 Lab 3 Credit Hour(s)
MAT 100 is intended for students who must bring their mathematics proficiency to the level necessary for entrance into MAT 110, 107 or 118. This course cannot be used to satisfy the mathematics requirement of the Associate in Art degree program. MAT 109 will fulfill the mathematics requirement for many students in Associate of Arts degree programs. Topics include: Functions, Linear Functions, Quadratic Functions, Exponential Functions, Combining Functions, Solving Equations, Systems of Linear Equations, Factoring and Graphing. A graphing calculator from the TI-83/84 family of calculators is required for this course. Prerequisite: Compass Algebra Score of at least 49 or Math A Regents within the last 2 years of at least 85 or MAT 091 with at least a C. 

MAT107 MATH FOR ELEMENTARY SCHOOL TEACHERS
3 Lecture 0 Lab 3 Credit Hour(s)
This course meets the Math requirement for students who are enrolled in the Liberal Arts and Sciences: Science, Elementary Education, PreK-6, A.S. degree program and who plan to transfer to SUNY New Paltz. The emphasis is on problem-solving as it relates to the number system. Probability and statistics are also introduced. Prerequisite: Compass Algebra score of at least 76 or Math A Regents within the last 2 years of at least 85 or MAT 100 with at least a C.

MAT109 SURVEY OF MATHEMATICS
3 Lecture 0 Lab 3 Credit Hour(s)
Satisfies the mathematics requirement of the Associate in Arts degree program in Humanities and Social Sciences. The historical and social implications of mathematics are developed, as well as mathematical methods. Topics include geometry, probability, statistics, algebras and modern mathematical systems. Use of a scientific calculator will be required. Prerequisite: Compass Algebra Score of at least 49 or Math A Regents within the last 2 years of at least 65 or MAT 091 with at least a C.

MAT110 COLLEGE ALGEBRA
3 Lecture 0 Lab 3 Credit Hour(s)
This course satisfies the SUNY General Education mathematics requirement and is the prerequisite of Business Calculus Math 125. Topics include a thorough review of rational expressions, factoring, exponents and radicals followed by techniques for solving equations and inequalities, graphing techniques and an introduction to exponential and logarithmic functions. A graphing calculator from the TI-83/84 family of calculators is required for this course. Not intended for science, technical or engineering students, or for students who intend to take MAT 185, 221, 222 or 223. This course is not intended for students who plan to take the engineering calculus sequence. Prerequisite: Compass Algebra Score of at least 76 or Math A Regents within the last 2 years of at least 85 or MAT 100 with at least a C or MAT 131 with at least a C.

MAT116 EXPLORING APPLICATIONS OF MATHEMATICS
3 Lecture 0 Lab 3 Credit Hour(s)
This course gives students the opportunity to explore mathematics through interesting, real life applications. Each semester students will select an area of study such as forensic science, the cellular phone industry, etc. Mathematics will be presented in class, as it is needed, within the context of the problem being explored. The emphasis of this course is on helping students get a better understanding of the links between mathematics and real life applications, as they strengthen their critical thinking and practical problem solving skills. Students will be required to do web research and will work collaboratively throughout the course. Prerequisite: Compass Algebra Score of at least 49 or Math A Regents within the last 2 years of at least 65 or MAT 091 with at least a C.

MAT117 GEOMETRY FOR ELEMENTARY SCHOOL TEACHERS
3 Lecture 0 Lab 3 Credit Hour(s)
This course is a second semester requirement for students in the elementary education programs (EDC and EDE). It emphasizes background information for the teaching of elementary school geometry. Topics include spacial visualization, measurement, coordinate geometry, similarity and congruence, and transformational geometry. Students learn mathematical theory and application, and experience the role of elementary school students through a variety of classroom activities and demonstrations. Prerequisite: MAT107 with a grade of C or better.

MAT118 ELEMENTARY STATISTICS
3 Lecture 0 Lab 3 Credit Hour(s)
Satisfies the mathematics requirement of the Associate in Arts degree program. Basic statistical procedures are developed. Topics include descriptive statistics, probability, probability distributions, hypothesis testing, confidence intervals, correlation and regression, contingency tables and nonparametric methods. Prerequisite: Compass Algebra Score of at least 49 or Math A Regents within the last 2 years of at least 75 or MAT 091 with at least a C.

MAT125 CALCULUS WITH BUSINESS APPLICATIONS
4 Lecture 0 Lab 4 Credit Hour(s)
A survey of the basic concepts and operations of calculus with business and management applications. Designed for students in the Business Administration Transfer program and should not be taken by mathematics and science majors. Students will use Microsoft Excel extensively throughout the course. No previous knowledge of Excel is required. Prerequisite: Compass College Algebra Score of at least 46 or Math B Regents within the last 2 years of at least 85 or MAT 110 with at least a C.
MAT128 TECHNICAL MATHEMATICS A
4 Lecture 0 Lab 4 Credit Hour(s)
This is the first course in a two-semester sequence of intermediate algebra and trigonometry with technical applications. Topics include operations in the real number system, functions and graphs, first-degree equations, lines and linear functions, systems of linear equations, right triangle trigonometry, geometry (perimeters, areas, volumes of common figures), rules of exponents, polynomial operations, factoring, operations on rational expressions, quadratic equations, and binary and hexadecimal notation. A calculator and a laptop computer will be used throughout.

MAT129 TECHNICAL MATHEMATICS B
4 Lecture 0 Lab 4 Credit Hour(s)
This is the second course in a two-semester sequence of intermediate algebra and trigonometry with technical applications. Topics include the operations of exponents and radicals, exponential and logarithmic functions and equations, trig functions of any angle, radians, sinusoidal functions and graphing, vectors, complex numbers and their applications, oblique triangles, inequalities, ratio and proportion, variation, introduction to statistics (optional) and an intuitive approach to calculus. The graphing calculator and laptop computer will be integrated throughout the course.

Prerequisite: MAT128.

MAT131 TECHNICAL MATHEMATICS I
3 Lecture 0 Lab 3 Credit Hour(s)
This course is required for students enrolled in ACR and CAD. It is also intended for students enrolled in ARC, who must bring their mathematics proficiency to the level necessary for entrance into MAT 132. Topics include: review of numerical computation, measurement conversions, algebraic operations, exponent rules, polynomial operations, factoring, operations on rational expressions, quadratic equations, right triangle trigonometry, geometry (perimeters, areas, volumes of common figures), rules of exponents, polynomial operations, factoring, operations on rational expressions, quadratic equations, and binary and hexadecimal notation. A calculator and a laptop computer will be used throughout the course.

Prerequisite: MAT Algebra Score of at least 49 or Math A Regents within the last 2 years of at least 75 or MAT 091 with at least a C.

MAT132 TECHNICAL MATHEMATICS II
3 Lecture 0 Lab 3 Credit Hour(s)
This course is designed primarily for students enrolled in ARC and CNS. Students enrolled in the above curricula may receive credit for MAT 132 or MAT 110, but not both. Topics include a review of right triangle trigonometry, law of sines and cosines, vectors, factoring, literal, fractional, and quadratic equations and applications. Use of a scientific calculator is required.

Prerequisite: Compass Algebra Score of at least 76 or Math A Regents within the last 2 years of at least 85 or MAT 131 with at least a C.

MAT184 ALGEBRA AND TRIG FOR PRECALCULUS
3 Lecture 0 Lab 3 Credit Hour(s)
Satisfies the mathematics requirement of the Associate in Arts degree program, and is intended to prepare students for MATB.Precalculus. Topics include equations and inequalities, graphing techniques, analysis of a variety of functions, and right triangle trigonometry including the Laws of Sines and Cosines.

Prerequisite: Compass Algebra Score of at least 76 or Math A Regents within the last 2 years of at least 85 or MAT 100 with at least a C or MAT 131 with at least a C.

MAT185 PRECALCULUS
4 Lecture 0 Lab 4 Credit Hour(s)
This course is intended primarily for students planning to take calculus. Topics include a review of the fundamental operations; inequalities; polynomials; algebraic, trigonometric, exponential, logarithmic, and inverse functions; modeling and data analysis. A graphing calculator from the TI-83/84 family of calculators is required for this course.

Prerequisite: Compass College Algebra Score of at least 46 or Math B Regents within the last 2 years of at least 65 or MAT 184 with at least a C or MAT 132 with at least a C or MAT 110 with at least an A.

MAT214 DISCRETE MATHEMATICS
3 Lecture 0 Lab 3 Credit Hour(s)
Intended primarily for students in the CPS or LAM curriculum. Topics include: Set Theory, Boolean Algebra, Methods of Proof, Counting Techniques, Functions and Relations, Graph Theory and Computer Applications.

Pre or Co-requisite: MAT 221.

MAT215 INTRODUCTION TO LINEAR ALGEBRA
3 Lecture 0 Lab 3 Credit Hour(s)
A basic introduction to linear algebra. Topics include vector spaces, systems of linear equations, matrices and determinants and linear transformations. Required for prospective mathematics majors.

Prerequisite: MAT 222 with a grade of C or better.

MAT217 INTRODUCTION TO PROOFS
3 Lecture 0 Lab 3 Credit Hour(s)
This course introduces the student majoring in Mathematics or Mathematics Education to the language and notation used in all upper level mathematics courses. Students will read, critique, develop and present proofs of statements about set theory, rational numbers, complex numbers and number theory. Methods include direct proof and proof by counterexample, proof by contradiction and proof by induction.

Prerequisite: MAT 221.

MAT221 ANALYTIC GEOMETRY AND CALCULUS I
4 Lecture 0 Lab 4 Credit Hour(s)
This course is the first of a three-semester sequence developing calculus for the student majoring in engineering, mathematics or the sciences. Topics include the derivative, limits, continuity, differentiability, the definite integral, the Fundamental Theorem of Calculus, techniques of differentiation (including for transcendental functions), applications of differentiation, mathematical modeling and computer applications. A graphing calculator from the TI83/84 family of calculators is required for this course.

Prerequisite: Compass Trigonometry Score of at least 46 or Math B Regents within the last 2 years of at least 65 and 1 year of high school Precalculus with a grade of at least C or MAT 185 with a grade of at least C or permission of the instructor.

MAT222 ANALYTIC GEOMETRY AND CALCULUS II
4 Lecture 0 Lab 4 Credit Hour(s)
This course is the second of a three-semester sequence developing calculus for the student majoring in engineering, mathematics or the sciences. Topics include The Fundamental Theorem, constructing antiderivatives, definite and indefinite integrals, techniques of integration, improper integrals, applications of integration (including probability distribution functions), differential equations (first and second order linear, separation of variables, numerical approximations, systems, and applications to growth and decay and oscillations), Taylor and other series, mathematical modeling and computer applications. A graphing calculator from the TI83/84 family of calculators is required for this course.

Prerequisite: MAT 221 with a grade of C or better, or permission of the department.

MAT223 ANALYTIC GEOMETRY AND CALCULUS III
4 Lecture 0 Lab 4 Credit Hour(s)
A continuation of MAT 222. Topics include vectors in the plane, solid analytic geometry, functions of several variables, partial differentiation, multiple integration, line integrals and vector fields, Green's Theorem, Stokes' Theorem, applications. A graphing calculator from the TI-83/84 family of calculators is required for
this course.
Prerequisite: MAT 222 with a grade of C or better or advanced placement with the permission of the department.

MAT224 DIFFERENTIAL EQUATIONS
4 Lecture 0 Lab 4 Credit Hour(s)
An introductory course in differential equations for students in mathematics, engineering and sciences. Topics include the theory, solution and estimation of differential equations of the first and second order, Laplace transforms, systems of differential equations, power series and an introduction to Fourier series and partial differential equations.
Prerequisite: MAT 223 with a grade of C or better.

MAT271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student’s knowledge and competence in the field of mathematics or related areas. The student’s time commitment to the project will be approximately 35-50 hours.

MAT272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to MAT 271, except that the student’s time commitment to the project will be approximately 70-90 hours.

MAT273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to MAT 271, except that the student’s time commitment to the project will be approximately 105-135 hours.

MEDICAL LABORATORY TECHNOLOGY

NOTE: Students should assume that all laboratory science courses (AST, BIO, CHE, GLG, MLT, PHS and PHY) will incorporate some level of math. There are no science courses designed to be ‘math free’. The nature of the lab is to perform experiments and gather data that will test scientific theory. Working with data will require, at a minimum, some basic mathematics, including use of (+, -, x) calculator. Therefore, even for science course with no stated math prerequisites, it will be expected that students have math competency at the level of MAT091 (Beginning Algebra) or its equivalent.

MLT005 COURSE SPECIFIC STUDY SKILLS FOR MLT 105
1 Lecture 0 Lab 1 Credit Hour(s)
A study skills course designed specifically for MLT 105 students. Course will present systematic study strategies with guided practice to enable students to master study skills techniques.
Co-requisite: MLT105

MLT101 CLINICAL MICROBIOLOGY
3 Lecture 3 Lab 4 Credit Hour(s)
A study of the principles of pathogenic microbes, their isolation and identification, and antibiotic sensitivity testing. Emphasis will be placed on procedures and techniques currently in use in medical laboratories. A study of serological procedures and interpretations will be included. Emphasis will be on performance of procedures and interpretation of results as they relate to disease conditions.
Note: Course may be repeated one time.
Prerequisite: MLT 105 with a grade of C or better.

MLT105 CLINICAL HEMATOLOGY
3 Lecture 3 Lab 4 Credit Hour(s)
A study of standard tests and techniques presently performed in the clinical laboratory. Course will include emphasis on blood counts, coagulation procedures, hemoglobin, hematocrit, differential smear evaluations, sedimentation rates, indices, platelet and reticulocyte counts. Methods of blood collection, including phlebotomy and capillary puncture techniques, will be taught. Also included is the study of the origin and development of blood, human blood in normal and disease states, blood hemostasis and coagulation deficiencies.
Note: Course may be repeated one time.
Prerequisite: ENG 092 and MAT 091 with a grade of C or better or eligibility to enroll in ENG 101 and MAT 100 as determined by placement testing results. Grade of C or better required to continue to MLT 101 and MLT 106.

MLT106 IMMUNOHEMATOLOGY/SEROLOGY
2 Lecture 3 Lab 3 Credit Hour(s)
A study of the immunological makeup of the human body. Emphasis will be on the immune process, blood banking, blood components, preparation and administration of blood components, the genetics of blood group inheritance and serological testing.
Note: Course may be repeated one time.
Prerequisite: MLT 105 with a grade of C or better and concurrent enrollment in MLT 202.

MLT202 PARASITOLOGY/BODY FLUIDS
2 Lecture 3 Lab 3 Credit Hour(s)
Protozoans and helminthes that infect or infest humans will be studied, including the organism’s life cycle, morphology and transmission. Host response and pathology will also be covered. Practical classes on recognition of parasites in stool samples, blood, tissues and free living states are required. Special emphasis is placed upon those aspects of the life cycle that are useful for clinical diagnosis. Body fluids including amniotic, synovial, cerebrospinal and semen will also be studied.
Note: Course may be repeated one time.
Prerequisite: MLT 101 with a grade of C or better and concurrent enrollment in MLT 106.

MLT203 CLINICAL CHEMISTRY I
3 Lecture 3 Lab 4 Credit Hour(s)
A study of the basic concepts fundamental to the study of the chemical constituents of the human body. Emphasis will be placed on analytical procedures, interpretation of results, normal values, instrumentation, laboratory mathematics, and theory and application of clinical chemistry procedures. Analysis of urine carbohydrates, lipids, proteins and liver function tests will be covered.
Note: Course may be repeated one time.
Prerequisite: CHE 121 with a grade of C or better and MAT 118.

MLT204 CLINICAL CHEMISTRY II
2 Lecture 3 Lab 3 Credit Hour(s)
A continuation of Clinical Chemistry I with emphasis on the more involved and intricate biochemical testing procedures. The study of lipids, acid-base balance, electrolytes, hormones, therapeutic drugs, toxicology, cerebrospinal fluid, and special chemistry will be covered.
Prerequisite: MLT203 with a grade C or better.

MLT207 EXTERNSHIP I
0 Lecture 16 Lab 4 Credit Hour(s)
Resident internship in an approved laboratory where didactics and actual job performance are integrated in a clinical work-study setting. Students will rotate through each department.
Note: Course may be repeated one time.
Prerequisites: MLT 106 and MLT 202 with a grade of C or better and concurrent enrollment in MLT 204.

MLT208 EXTERNSHIP II
0 Lecture 16 Lab 4 Credit Hour(s)
A continuation of MLT 207 with continuing rotation through various
MUS101 MUSIC APPRECIATION
3 Lecture 0 Lab 3 Credit Hour(s)
This course is designed for both musicians and non-musicians. It develops a basic music theory vocabulary to engage in a historical overview of musical styles. Recorded and visual materials are utilized in studying the elements, forms and styles of music, with the aim of stimulating a discriminating understanding and enjoyment.

MUS104 INTRODUCTION TO MUSIC THEORY
3 Lecture 0 Lab 3 Credit Hour(s)
This course is designed for both musicians and non-musicians. It is a preparatory course for students with little or no prior training in music theory. Introduction to Music Theory provides a solid foundation in the rudiments of music notation and aural awareness including pitch, accidentals, rhythm, clefs, major and minor scales, and key signatures. The Circle of Fifths, triad types, simple and compound meters and intervals are also presented. Elementary ear training exercises are incorporated.

MUS113 AURAL SKILLS I
0 Lecture 2 Lab 1 Credit Hour(s)
This course is designed for musicians and requires prior knowledge and ability to read music. It focuses on the acquisition of ear-training skills beginning with scales, triads, and simple intervals, both melodic and harmonic. Extensive rhythmic drills in simple and compound meters are employed. Sight singing exercises proceed from stepwise movement to wider intervals using moveable ‘do’ solfège syllables. Conducting patterns are taught and used for sight singing. Melodic dictation is introduced. Concurrent enrollment in MUS115 is recommended.

MUS114 AURAL SKILLS II
0 Lecture 2 Lab 1 Credit Hour(s)
This course is a continuation of Aural Skills I. Aural Skills II increases a student’s musical cognition and awareness by focusing on melodic and rhythmic dictation. Harmonic dictation is introduced. Aural analysis and dictation proceed from simple to more complex melodies. Sight-singing and rhythm drills include alto and tenor clef exercises.
Prerequisite: MUS 113

MUS115 THEORY I
3 Lecture 0 Lab 3 Credit Hour(s)
This course is designed for musicians and requires prior knowledge and ability to read music. Topics include notation, pitch, meter, rhythm, scales, key signatures, intervals and their inversions, triads and their inversions, figured-bass, diatonic triads, Roman Numerals, melodic analysis, simple keyboard harmony, and cadences. Concurrent enrollment in MUS113 is recommended.

MUS116 THEORY II
3 Lecture 0 Lab 3 Credit Hour(s)
This course is a study of four-part chorale harmonization including chords in inversion, the musical phrase and period, repetition and sequence, C Clefs and transposing instruments, nonharmonic tones including suspensions, seventh chords and their upper extensions, figured-bass, secondary dominant chords, keyboard harmony, and pop symbols.
Prerequisite: MUS115

MUS121 CHORUS I
0 Lecture 2 Lab 1 Credit Hour(s)
This course involves ensemble singing through study and performance of choral music in a variety of musical styles. It includes public concerts which provide students with an opportunity to perform choral music they have mastered in class.

MUS122 CHORUS II
0 Lecture 2 Lab 1 Credit Hour(s)
This course involves ensemble singing through the study and performance of choral music in a variety of musical styles. It includes public concerts which provide students with an opportunity to perform choral music they have mastered in class.

MUS131 JAZZ ENSEMBLE I
0 Lecture 2 Lab 1 Credit Hour(s)
This course is designed for musicians and requires prior knowledge and ability to read music. This is a jazz performance ensemble open to students playing saxophone, trumpet, trombone, piano, guitar, bass, drums, or percussion. There is at least one scheduled public concert per semester. Concurrent enrollment in MUS 135 is recommended

MUS132 JAZZ ENSEMBLE II
0 Lecture 2 Lab 1 Credit Hour(s)
This course is designed for musicians and requires prior knowledge and ability to read music. This is a jazz performance ensemble open to students playing saxophone, trumpet, trombone, piano, guitar, bass, drums, or percussion. There is at least one scheduled public concert per semester. Concurrent enrollment in MUS 135 is recommended.

MUS135 JAZZ: ITS HISTORY AND INFLUENCE
3 Lecture 0 Lab 3 Credit Hour(s)
This course is designed for both musicians and non-musicians. It develops a basic music theory vocabulary to engage in a historical overview of jazz. Recorded and visual materials are utilized in
studying the elements, forms and styles of music with the aim of stimulating a discriminating understanding and enjoyment.

MUS136 ORCHESTRA I
0 Lecture 2 Lab 1 Credit Hour(s)
This course is designed for musicians and requires prior knowledge and ability to read music. This is an orchestral music performance ensemble open to students playing flute, oboe, clarinet, bassoon, horn, trumpet, trombone, tuba, violin, viola, cello, double bass, or percussion. There is at least one scheduled public concert per semester. Students are expected to supply their own instruments.

MUS137 ORCHESTRA II
0 Lecture 2 Lab 1 Credit Hour(s)
This course is designed for musicians and requires prior knowledge and ability to read music. This is an orchestral music performance ensemble open to students playing flute, oboe, clarinet, bassoon, horn, trumpet, trombone, tuba, violin, viola, cello, double bass, or percussion. There is at least one scheduled public concert per semester. Students are expected to supply their own instruments.

MUS141 PIANO I
0 Lecture 2 Lab 1 Credit Hour(s)
This course provides the student with lessons in basic piano techniques and beginning piano literature in a variety of styles. There are sections for group lessons with regularly scheduled class times, as well as sections for individual lessons with times determined after meeting with the Department Supervisor of Music and requiring additional fees to be paid by the student directly to the private instructor.

MUS142 PIANO II
0 Lecture 2 Lab 1 Credit Hour(s)
This course provides the student with lessons in basic piano techniques and beginning piano literature in a variety of styles. There are sections for group lessons with regularly scheduled class times, as well as sections for individual lessons with times determined after meeting with the Department Supervisor of Music and requiring additional fees to be paid by the student directly to the private instructor.

MUS143 GUITAR CONSORT I
0 Lecture 2 Lab 1 Credit Hour(s)
This course focuses on guitar ensemble performance, awareness of music for guitar, and performance practices associated with various styles of guitar music. There is one scheduled concert, and additional concert performance opportunities may also be offered. An acoustic guitar is necessary to participate in this ensemble.

MUS144 GUITAR CONSORT II
0 Lecture 2 Lab 1 Credit Hour(s)
This course focuses on guitar ensemble performance, awareness of music for guitar, and performance practices associated with various styles of guitar music. There is one scheduled concert, and additional concert performance opportunities may also be offered. An acoustic guitar is necessary to participate in this ensemble.

MUS151 CHAMBER CHOIR I
0 Lecture 2 Lab 1 Credit Hour(s)
In this course students will study and perform a cappella and accompanied choral literature written for the small choral ensemble. Students will focus on mastery of ensemble singing through study and performance of choral music in a variety of musical styles. The course includes public concerts which provide students with an opportunity to perform the music they have studied in class. Co-requisites: MUS121 or MUS221.

MUS152 CHAMBER CHOIR II
0 Lecture 2 Lab 1 Credit Hour(s)
In this course students will study and perform a cappella and accompanied choral literature written for the small choral ensemble. Students will focus on mastery of ensemble singing through study and performance of choral music in a variety of musical styles. The course includes public concerts which provide students with an opportunity to perform the music they have studied in class. Co-requisites: MUS122 or MUS222.

MUS162 PERFORMANCE AND APPLIED MUSIC II
0 Lecture 2 Lab 1 Credit Hour(s)
This course provides basic instrumental or vocal techniques and beginning literature in a variety of styles from classical to jazz to modern. Performance and applied students are assigned to private instructors by the Music Coordinator. Students must pay instructors directly for their lessons. An agreement between the student and the instructor regarding the cost of the lessons and the schedule of payments will be determined during the first lesson of the semester.

MUS146 ORCHESTRA I
0 Lecture 2 Lab 1 Credit Hour(s)
This course is designed for musicians and requires prior knowledge and ability to read music. This is an orchestral music performance ensemble open to students playing flute, oboe, clarinet, bassoon, horn, trumpet, trombone, tuba, violin, viola, cello, double bass, or percussion. There is at least one scheduled public concert per semester. Students are expected to supply their own instruments.

MUS147 ORCHESTRA II
0 Lecture 2 Lab 1 Credit Hour(s)
This course is designed for musicians and requires prior knowledge and ability to read music. This is an orchestral music performance ensemble open to students playing flute, oboe, clarinet, bassoon, horn, trumpet, trombone, tuba, violin, viola, cello, double bass, or percussion. There is at least one scheduled public concert per semester. Students are expected to supply their own instruments.

MUS161 PERFORMANCE AND APPLIED MUSIC I
0 Lecture 2 Lab 1 Credit Hour(s)
This course provides basic instrumental or vocal techniques and beginning literature in a variety of styles from classical to jazz to modern. Performance and applied students are assigned to private instructors by the Music Coordinator. Students must pay instructors directly for their lessons. An agreement between the student and the instructor regarding the cost of the lessons and the schedule of payments will be determined during the first lesson of the semester.

MUS201 HISTORY OF MUSIC I
3 Lecture 0 Lab 3 Credit Hour(s)
This course is designed for musicians and requires prior knowledge and ability to read music. The place of music in Western civilization as studied in representative works of each period is examined. It is a comprehensive chronological study of the periods and schools of vocal and instrumental music, sacred and secular, and a study of the beginnings of Western musical thought in ancient Greece to the end of the Baroque era in 1750.

MUS202 HISTORY OF MUSIC II
3 Lecture 0 Lab 3 Credit Hour(s)
A continuation of MUS 201, this course covers music history from 1750 to the present. Developments, trends, and styles in instrumental and vocal genres of representative composers of the classic, romantic, impressionist, and modern periods are studied and compared. Prerequisite: MUS201.

MUS205 VOCAL REPERTOIRE I
0 Lecture 2 Lab 1 Credit Hour(s)
This course provides a laboratory environment for the aspiring musical theater student to enhance his/her vocal skills and overall stage presentation through the study of selected repertoire from the musical theater genre. Songs from different periods of musical theater will be studied to familiarize the student with the wide variety of repertoire in the genre. Classroom performance of the repertoire is required. A public concert may be scheduled at the end of the semester. Note: Enrollment in MUS 121 is strongly encouraged. Pre or Co-requisite: MUS 113.

MUS206 VOCAL REPERTOIRE II
0 Lecture 2 Lab 1 Credit Hour(s)
This course is a continuation of Vocal Repertoire I. It will provide a more advanced laboratory environment for the aspiring musical theater students to enhance his/her vocal skills and overall stage presentation through the study of selected repertoire from the musical
This is a jazz performance ensemble open to students playing saxophone, trumpet, trombone, piano, guitar, bass, drums, or percussion. There is at least one scheduled public concert per semester. Concurrent enrollment in MUS 135 is recommended.
Prerequisite: MUS131 or MUS132.

MUS232 JAZZ ENSEMBLE IV
0 Lecture 2 Lab 1 Credit Hour(s)
This is a jazz performance ensemble open to students playing saxophone, trumpet, trombone, piano, guitar, bass, drums, or percussion. There is at least one scheduled public concert per semester. Concurrent enrollment in MUS 135 is recommended.
Prerequisite: MUS131 or MUS132.

MUS236 ORCHESTRA III
0 Lecture 2 Lab 1 Credit Hour(s)
This is an orchestral music performance ensemble open to students playing flute, oboe, clarinet, bassoon, horn, trumpet, trombone, tuba, violin, viola, cello, double bass, or percussion. There is at least one scheduled public concert per semester. Students are expected to supply their own instruments.
Prerequisite: MUS136 or MUS137.

MUS237 ORCHESTRA IV
0 Lecture 2 Lab 1 Credit Hour(s)
This is an orchestral music performance ensemble open to students playing flute, oboe, clarinet, bassoon, horn, trumpet, trombone, tuba, violin, viola, cello, double bass, or percussion. There is at least one scheduled public concert per semester. Students are expected to supply their own instruments.
Prerequisite: MUS136 or MUS137.

MUS241 PIANO III
0 Lecture 2 Lab 1 Credit Hour(s)
This course continues the instruction of piano techniques and literature in a variety of styles. There are sections for group lessons with regularly scheduled class times, as well as sections for individual lessons with times determined after meeting with the Department Supervisor of Music and requiring additional fees to be paid by the student directly to the private instructor.
Prerequisite: MUS141 or MUS142

MUS242 PIANO IV
0 Lecture 2 Lab 1 Credit Hour(s)
This course continues the instruction of piano techniques and literature in a variety of styles. There are sections for group lessons with regularly scheduled class times, as well as sections for individual lessons with times determined after meeting with the Department Supervisor of Music and requiring additional fees to be paid by the student directly to the private instructor.
Prerequisite: MUS141 or MUS142

MUS243 GUITAR CONSORT III
0 Lecture 2 Lab 1 Credit Hour(s)
This course focuses on advanced guitar ensemble performance, awareness of music for guitar, and performance practices associated with various styles of guitar music. There is one scheduled concert, and additional concert performance opportunities may also be offered. An acoustic guitar is necessary to participate in this ensemble.
Prerequisite: MUS143 or MUS144

MUS244 GUITAR CONSORT IV
0 Lecture 2 Lab 1 Credit Hour(s)
This course focuses on advanced guitar ensemble performance, awareness of music for guitar, and performance practices associated with various styles of guitar music. There is one scheduled concert, and additional concert performance opportunities may also be offered. An acoustic guitar is necessary to participate in this ensemble.
Prerequisite: MUS143 or MUS144
MUS251 CHAMBER CHOIR III
0 Lecture 2 Lab 1 Credit Hour(s)
This is second year advanced study and performance of a cappella and accompanied choral literature for the small choral ensemble. Students learn ensemble singing through study and performance of choral music in a variety of musical styles. The course includes several public concerts which provide students with an opportunity to perform choral music they have mastered in class.
Prerequisite: MUS 151 or MUS 152, and concurrent enrollment in MUS 221.

MUS252 CHAMBER CHOIR IV
0 Lecture 2 Lab 1 Credit Hour(s)
This is second year advanced study and performance of a cappella and accompanied choral literature for the small choral ensemble. Students learn ensemble singing through study and performance of choral music in a variety of musical styles. The course includes several public concerts which provide students with an opportunity to perform choral music they have mastered in class.
Prerequisite: MUS151 or MUS152, and concurrent enrollment in MUS 222.

MUS261 PERFORMANCE AND APPLIED MUSIC III
0 Lecture 2 Lab 1 Credit Hour(s)
This course is a continuation of instrumental or vocal techniques and intermediate level literature in a variety of styles from classical to jazz to modern. At the discretion of the instructor, the student may perform in a final concert. Performance and applied students are assigned to private instructors by the Department Supervisor of Music. Students must pay instructors directly for their lessons. An agreement between the student and the instructor regarding the cost of the lessons and the schedule of payments will be determined during the first lesson of the semester.
Prerequisite: MUS161 or MUS162

MUS262 PERFORMANCE AND APPLIED MUSIC IV
0 Lecture 2 Lab 1 Credit Hour(s)
This course is a continuation of instrumental or vocal techniques and intermediate level literature in a variety of styles from classical to jazz to modern. At the discretion of the instructor, the student may perform in a final concert. Performance and applied students are assigned to private instructors by the Music Coordinator. Students must pay instructors directly for their lessons. An agreement between the student and the instructor regarding the cost of the lessons and the schedule of payments will be determined during the first lesson of the semester.
Prerequisite: MUS 161 or MUS 162.

MUS271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student's knowledge and competence in the field of music or other related areas. The student's time commitment to the project will be approximately 35-50 hours.

MUS272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to MUS 271, except that the student's time commitment to the project will be approximately 70-90 hours.

MUS273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to MUS 271, except that the student's time commitment to the project will be approximately 105-135 hours.

MUS251 CHAMBER CHOIR III
0 Lecture 2 Lab 1 Credit Hour(s)
This is second year advanced study and performance of a cappella and accompanied choral literature for the small choral ensemble. Students learn ensemble singing through study and performance of choral music in a variety of musical styles. The course includes several public concerts which provide students with an opportunity to perform choral music they have mastered in class.
Prerequisite: MUS 151 or MUS 152, and concurrent enrollment in MUS 221.

MUS252 CHAMBER CHOIR IV
0 Lecture 2 Lab 1 Credit Hour(s)
This is second year advanced study and performance of a cappella and accompanied choral literature for the small choral ensemble. Students learn ensemble singing through study and performance of choral music in a variety of musical styles. The course includes several public concerts which provide students with an opportunity to perform choral music they have mastered in class.
Prerequisite: MUS151 or MUS152, and concurrent enrollment in MUS 222.

MUS261 PERFORMANCE AND APPLIED MUSIC III
0 Lecture 2 Lab 1 Credit Hour(s)
This course is a continuation of instrumental or vocal techniques and intermediate level literature in a variety of styles from classical to jazz to modern. At the discretion of the instructor, the student may perform in a final concert. Performance and applied students are assigned to private instructors by the Department Supervisor of Music. Students must pay instructors directly for their lessons. An agreement between the student and the instructor regarding the cost of the lessons and the schedule of payments will be determined during the first lesson of the semester.
Prerequisite: MUS161 or MUS162

MUS262 PERFORMANCE AND APPLIED MUSIC IV
0 Lecture 2 Lab 1 Credit Hour(s)
This course is a continuation of instrumental or vocal techniques and intermediate level literature in a variety of styles from classical to jazz to modern. At the discretion of the instructor, the student may perform in a final concert. Performance and applied students are assigned to private instructors by the Music Coordinator. Students must pay instructors directly for their lessons. An agreement between the student and the instructor regarding the cost of the lessons and the schedule of payments will be determined during the first lesson of the semester.
Prerequisite: MUS 161 or MUS 162.

MUS271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student's knowledge and competence in the field of music or other related areas. The student's time commitment to the project will be approximately 35-50 hours.

MUS272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to MUS 271, except that the student's time commitment to the project will be approximately 70-90 hours.

MUS273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to MUS 271, except that the student's time commitment to the project will be approximately 105-135 hours.

NURSING

NUR090 NYS COALITION LPN TO RN TRANSITION COURSE
3 Lecture 0 Lab 3 Credit Hour(s)
The New York State Coalition LPN to RN Transition course is designed to validate prior learning, and update /enhance the student's knowledge. This course facilitates transition from the role of Practical Nurse to that of a student preparing for the role of Registered Nurse. Nursing process is used as the framework for critical thinking and problem solving. Students holding and/or eligible to hold a current registration in a United States Jurisdiction may take this non-credit course. The amount of work required is equivalent to a course bearing 3 credits. For progression into a Registered Nurse program, the student must hold a current LPN registration in a US Jurisdiction and meet the specific requirements of the institution and/or program to which s/he is applying. Completion of this course does not imply acceptance into the DCC nursing program. This course may not be repeated.
Prerequisites and/or corequisites: Requirements for enrollment include eligibility for licensure as a licensed practical nurse in a United States Jurisdiction. Students wishing to enter the DCC nursing program must follow the matriculation and prerequisite requirements for the LPN to RN program as outlined in the Guide for Pre-Nursing students. Permission of the Registrar Counselor is required to take this course.
Note: NUR090 is a credit equivalent course. Equivalent credits do not satisfy degree requirements and are not calculated in a student's grade point average, but they do incur tuition charges and they do count towards full-time/part-time status.

NUR100 NURSING INTRODUCTORY SEMINAR
1 Lecture 0 Lab 1 Credit Hour(s)
This course is designed for students entering the nursing program to introduce the nursing curriculum, the profession of nursing and the college environment. Content will include: overview of the nursing profession, the nursing curriculum, clinical experiences, study skills, college resources, stress reduction, time management, career planning and transfer options.

NUR105 NURSING SCIENCE I
3 Lecture 8 Lab 6 Credit Hour(s)
This foundation course introduces the organizing framework for the nursing curriculum. The framework consists of human needs, stress/ adaptation, developmental stages, the health/illness continuum, the nursing process, and the National League of Nursing Core Components and their competencies expected of graduates of associate degree nursing programs. Psychomotor and cognitive skills basic to the practice of professional nursing are included in the college laboratory. Clinical experiences occur in long-term care facilities. A minimum grade of C is required to advance to NUR 112. A student may attempt the course two times depending on re-entry rubric score.
Prerequisites: Satisfactory score on Math placement test or passing grade in CSM 093 or a college level math course; eligibility to enroll in ENG 101 as determined by placement testing results; BIO 131 or concurrent enrollment.
Corequisite: NUR 107.

NUR107 SURVEY OF PROFESSIONAL NURSING
1 Lecture 0 Lab 1 Credit Hour(s)
This course promotes the effective integration into the profession of nursing. The student will explore the following issues and aspects: historical overview of modern nursing, professionalization of the student nurse, overview of the contemporary health care delivery system, ethical and legal issues of professional nursing practice, values clarification and the nursing process for clinical decision making. A minimal grade of C is required to advance to NUR 112. A student may attempt the course two times.
Corequisite: NUR 107.
NUR111 COMPUTERS IN NURSING
2 Lecture 2 Lab 3 Credit Hour(s)
This course is designed to develop an understanding of the concepts relevant to the use of information technology in the health care delivery system. It will explore the application of computer systems as a tool for problem solving, decision-making and information management as it relates to nursing services. A student may attempt the course two times.

NUR120 LPN TO RN BRIDGE
2 Lecture 0 Lab 2 Credit Hour(s)
The course prepares the LPN student for the DCC nursing curriculum and entry into NUR 213 or NUR 215. The course uses the organizing framework of the nursing program in the nursing management of patients with medical/surgical conditions. A minimal grade of C is required to continue to NUR 213 or NUR 215. The course may not be repeated.
Prerequisites and/or co-requisites: Satisfactory completion of the New York State Coalition LPN to RN Transition Course. C grade or better in BIO 131; concurrent enrollment in NUR 120 and BIO132. Students must follow the prerequisite requirements for the LPN to RN program as outlined in the Guide for Pre-Nursing students. Permission of the Registrar Counselor is required to take this course.

NUR204 PROFESSIONAL ISSUES IN NURSING
1 Lecture 0 Lab 1 Credit Hour(s)
The course discusses issues that are relevant to the health delivery system and the role of the associate degree nurse. An overview of the Nurse Practice Act prepares the student to understand the dilemmas facing the delivery of contemporary nursing. Students are guided for applying for the RN licensure examination. A minimal grade of C is required to complete this course. This course may not be repeated.
Prerequisites: C grade or better in NUR 213, NUR 215.

NUR213 NURSING SCIENCE III
5 Lecture 8 Lab 8 Credit Hour(s)
This course focuses upon the utilization of the nursing process to promote adaptation of pathophysiologic aspects specific to adults and children experiencing accidental trauma, surgical interventions, burns, musculoskeletal trauma, gynecological, biliary and eye diseases. Complex cognitive and psychomotor skills, necessary for the practice of professional nursing, are included in the college laboratory. Students care for patients in a variety of settings. This course may not be repeated.
Prerequisites: C grade or better in BIO 132 and C or better in NUR 112; concurrent enrollment in BIO 212 and NUR 215.

PARALEGAL

PAL100 PARALEGAL INTRODUCTORY SEMINAR
1 Lecture 0 Lab 1 Credit Hour(s)
This course is designed to provide paralegal students with an opportunity to learn and practice strategies essential for successful completion of their educational program. Such strategies are often also of value in the paralegal profession. Focus will be on familiarity with college and paralegal resources, knowledge of college policies and procedures, effective paralegal curriculum management, and development of academic and professional success skills. In addition, the course will discuss the requirements of becoming a New York notary public and the functions that a notary will commonly perform.

PAL110 FUNDAMENTALS OF PARALEGALISM
3 Lecture 0 Lab 3 Credit Hour(s)
This course will provide students with an overview of the role of paralegals in the legal system. Topics to be examined include: employment specialties, professional development, law office operations, client relations, legal interviewing and professional ethics. Upon completion of this course, students should be better able to determine if they wish to continue their education in the paralegal field.
PAL120 LEGAL RESEARCH
3 Lecture 0 Lab 3 Credit Hour(s)
An introduction to legal research sources and methods, and the drafting of legal memoranda based upon such research. Students will be trained to effectively and efficiently find legal principles and authorities from primary and secondary sources of law using both text and computerized resources. Both Federal and New York State applications will be addressed.

PAL210 FAMILY LAW
3 Lecture 0 Lab 3 Credit Hour(s)
A study of the law of domestic relations of New York, focusing on the substantive law of marriage, separation, divorce, annulment and family obligations. Attention is also given to procedural laws concerning Family Court proceedings and the drafting of documents related to family law practice.
Prerequisites: PAL 110 and PAL 120.

PAL220 WILLS, TRUSTS AND ESTATES
3 Lecture 0 Lab 3 Credit Hour(s)
This course is a study of the legal aspects of preparing valid wills and probating the deceased's estate. In addition, procedures of estate administration without a will, estate settlement, discharge of fiduciary duties, taxation, trust creation and administration will be addressed. The function of the paralegal in this area of law will serve as the basis for topic coverage.
Prerequisites: PAL 110 and PAL 120.

PAL230 LAW OF BUSINESS ORGANIZATIONS
3 Lecture 0 Lab 3 Credit Hour(s)
A study of sole proprietorships, partnerships, limited liability companies and corporations, focusing on the applicable legal principles and preparation of documents relating to the organization and operation of each. The function of the paralegal in this area of law will serve as the basis for topic coverage.
Prerequisites: PAL 110 and PAL 120.

PAL240 CIVIL LITIGATION
3 Lecture 0 Lab 3 Credit Hour(s)
This course focuses on fundamental principles and procedures of the civil litigation process. Upon completion, students will be familiar with the pretrial, trial and post-trial stages of litigation, including rules of procedure and the paralegal's role in case preparation, discovery and the drafting of pleadings, motions and other documents.
Prerequisites: PAL 110 and PAL 120.

PAL250 REAL PROPERTY LAW
3 Lecture 0 Lab 3 Credit Hour(s)
This course focuses on the law of real estate with an in-depth survey of the common types of property ownership and conveyances. Relevant documents, including contracts of sale, mortgages, deeds and leases are examined. The role of the paralegal in helping to facilitate various real estate transactions is stressed.
Prerequisites: PAL 110 and PAL 120.

PAL271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student's knowledge and competence in the field of paralegal or related areas. The student's time commitment to the project will be approximately 35-50 hours.

PAL272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to PAL 271 except that the student's time commitment to the project will be approximately 70-90 hours.

PAL273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to PAL 271 except that the student's time commitment to the project will be approximately 105-135 hours.

PAL290 PARALEGAL INTERNSHIP
1 Lecture 8 Lab 3 Credit Hour(s)
This non-required course provides paralegal students with an opportunity to gain work experience in a law office or other related legal work environment. Course requirements include a minimum of 120 hours during the semester in a supervised setting requiring the completion of a variety of activities assigned to a paralegal. The course also requires participation in regularly scheduled seminars with the instructor and the completion of regular internship reports.
Prerequisites: Matriculation in the Paralegal AAS Degree program, PAL 100, PAL 110, PAL 120, 9 credit hours of other PAL courses, and permission of department.

PARAMEDIC

PAR100 PARAMEDIC INTRODUCTORY SEMINAR
1 Lecture 1 Lab 1 Credit Hour(s)
This course is designed to introduce the paramedic student to the EMT-Paramedic Curriculum. Topics include: Orientation to the Curriculum, College Survival Skills, Roles and Responsibilities of the Paramedic, Medical/Legal Issues, The Well Being of the Paramedic, Illness and Injury Prevention, Ethics, and Therapeutic Communications. The laboratory section allows for hands-on supervised practice of the topics covered.

PAR101 ADVANCED AIRWAY MANAGEMENT
2 Lecture 2 Lab 1 Credit Hour(s)
This lab course is designed to review basic life support airway assessment and management techniques, and develop mastery in the ability to establish and maintain a patient airway, deliver oxygen and ventilate a patient utilizing advanced airway techniques. The focus of this course is on the complex cognitive and psychomotor skills necessary for assessing and managing airway compromise. Student will be introduced to out of hospital pharmacological intervention and surgical airway access in the critical patient.
Prerequisite: EMB 105 with a grade of C or better.
Pre or Co-requisite: BIO 115.

PAR102 PATHOPHYSIOLOGY AND LIFE SPAN DEVELOPMENT
3 Lecture 0 Lab 3 Credit Hour(s)
This is an introductory course in pathophysiology as it relates to out of hospital medicine. This course focuses on human responses to illness expressed at the physiologic, pathophysiologic, experiential and behavioral levels. Human responses are examined in terms of assessments appropriate to selected problems, rationale for paramedic and medical interventions, and therapeutic effectiveness. Topics include: General Principles of Pathophysiology and Life Span Development.
Prerequisite: BIO 115 with a grade of C or better.

PAR106 PHARMACOLOGY AND IV THERAPY
2 Lecture 2 Lab 3 Credit Hour(s)
This course is designed to introduce the paramedic student to the categories of pharmacological agents and the application of pharmacological concepts to clinical paramedic practice. Emphasis will be placed on understanding physiological drug actions. Topics include: pharmacology and medication administration. The lab section covers psychomotor skills of medication administration. Skills include phlebotomy, intramuscular and subcutaneous injections,
intravenous cannulation, intravenous drug administration, inhalation administration, endotracheal drug administration and sublingual drug administration.

Prerequisite: BIO 115 with a grade of C or better.

Pre or Co-requisite: PAR 101.

PAR107 EMS OPERATIONS
2 Lecture 0 Lab 2 Credit Hour(s)
This course is designed to expose the paramedic student to various field operations procedures. Topics include: medical incident command, rescue awareness and operations, hazardous materials awareness and operations, crime scene awareness.

PAR120 CLINICAL I
0 Lecture 8 Lab 2 Credit Hour(s)
This clinical course is designed to accompany the Pathophysiology and Pharmacology and Advanced Airway Courses. Clinical rotations focus on the development of triage skills, recognition of disease pathology and progression, intravenous therapy, blood drawing and medication administration skills.

Pre or Co-Requisites: EMB105, PAR106 with a grade of ‘C’ or better.

PAR201 TRAUMA
2 Lecture 2 Lab 3 Credit Hour(s)
This course introduces the paramedic student to specific pathophysiology, assessment and management techniques for trauma patients. Topics include mechanism of injury, hemorrhage and shock, soft tissue trauma, burns, head and facial trauma, spinal trauma, thoracic trauma, abdominal trauma, musculoskeletal trauma and special considerations. The lab section teaches psychomotor skills of the management of the trauma patient. Skills include, trauma patient assessment, airway management of the trauma patient.

Prerequisites: PAR101, PAR102, and PAR106 with a grade of C or better.

PAR203 CARDIOLOGY AND PULMONOLOGY
3 Lecture 2 Lab 4 Credit Hour(s)
This course covers the specific pathophysiology, assessment and management of the respiratory and cardiac systems. Psychomotor skills included are cardiac monitoring, defibrillation, cardioversion, transthoracic pacing, cardiac emergency management and cardiac arrest management.

Prerequisites: PAR 106 and PAR 102 with a grade of C or better.

PAR205 MEDICAL EMERGENCIES I
4 Lecture 0 Lab 4 Credit Hour(s)
This course covers specific pathophysiology, assessment, and management techniques for common medical conditions encountered in the field. Topics include: Neurology, gastroenterology, urology, endocrinology, toxicology, allergies and anaphylaxis, hematology, infectious and communicable diseases. Special patients and circumstances are also addressed; acute interventions in the home care patient, abuse and assault, behavioral and psychiatric disorders, environmental conditions and the challenged patient.

Prerequisites: PAR 102 and PAR 106 with a grade of C or better.

PAR206 PATIENT ASSESSMENT
2 Lecture 2 Lab 3 Credit Hour(s)
This course is designed to integrate the technique of patient assessment from initial assessment through treatment modalities. Topics include: history taking techniques of physical examination, scene size-up, initial assessment history and physical exam ongoing assessment, communications and documentation. The lab section teaches psychomotor skills of patient assessment, advanced airway, management of ventilation.

Prerequisites: PAR 101, PAR 203, PAR 205 all with a grade of C or better. Pre or Co-requisites: PAR 209.

PAR209 MEDICAL EMERGENCIES II
2 Lecture 2 Lab 3 Credit Hour(s)
This course focuses on the pathophysiology, assessment techniques and treatment modalities for illness and injury in the area of gynecology, obstetrics, neonates, pediatricians and geriatrics. Complex cognitive theory and psychomotor skills that are necessary for the practice of professional out of hospital emergency care are covered in the lecture and lab component of this course.

Prerequisite: PAR 203 with a grade of C or better.

PAR220 CLINICAL II
0 Lecture 8 Lab 2 Credit Hour(s)
This clinical course is designed to follow the Advanced Airway Management course (PAR 101) and accompany the Cardiology and Respiratory (PAR 203), Trauma (PAR 201), and Medical Emergencies I (PAR 209) courses. Clinical rotations focus on the development of psychomotor skills and integrative skills.

Prerequisites: PAR 120 with a grade of ‘C’ or better.

Co-requisites: PAR 201, PAR 203, PAR 205.

PAR230 CLINICAL III
0 Lecture 8 Lab 2 Credit Hour(s)
This clinical course is designed to accompany or follow the Medical Emergencies II course. Clinical rotations focus on treatment of special patient populations and special clinical situations and reinforcement of previous clinical lessons learned.

Prerequisite: PAR 220.

Pre or Co-requisite: PAR203, PAR 204 and PAR 209.

PAR240 SUMMATIVE EVALUATION
0 Lecture 16 Lab 4 Credit Hour(s)
This summative evaluation determines if the student is competent to serve as an entry-level clinician. Field rotations place the student in the role of team leader for all calls and expect them to integrate history taking, physical exam and cognitive knowledge into the total management of the patient. Comprehensive examinations evaluate the candidate’s knowledge base and psychomotor skills.

Pre or Co-requisite: PAR 230.

PAR271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience or other activities that advance the student’s knowledge and competence in the field of paramedic or related areas. The student’s time commitment to the project will be approximately 35-50 hours.

PAR272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to PAR 271 except that the student’s time commitment to the project will be approximately 70-90 hours.

PAR273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to PAR 271 except that the student’s time commitment to the project will be approximately 105-135 hours.
PHLEBOTOMY

PDC101 BASIC CONCEPTS OF PHLEBOTOMY
3 Lecture 2 Lab 4 Credit Hour(s)
A study of the basic concepts of phlebotomy and of the responsibilities of the phlebotomist. The course will cover such topics as job responsibilities, organizational structure of a laboratory, basic understanding of major body systems, collection equipment, blood collection procedures, infection control, safety, specimen transport and processing, quality control and professionalism.

PDC102 PHLEBOTOMY INTERNSHIP
2 Lecture 8 Lab 4 Credit Hour(s)
Clinical internship in a health care institution where knowledge and skills and actual job performance are integrated in a clinical program.
Prerequisite: PDC 101 with a grade of C or better.

PDC271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student’s knowledge and competence in the field of phlebotomy or related areas. The student’s time commitment to the project will be approximately 35-50 hours.

PDC272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to PDC 271, except that the student’s time commitment to the project will be approximately 70-90 hours.

PDC273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to PDC 271, except that the student’s time commitment to the project will be approximately 105-135 hours.

PHYSICAL EDUCATION

PED101 SELF-DEFENSE
0 Lecture 2 Lab 1 Credit Hour(s)
Practical self-defense training offers students an opportunity to learn methods of protection from assault and, where necessary, how to control an attacker. Participants will be taught the practical aspect of self-defense and how to relate their training to an actual attack.

PED106 WEIGHT TRAINING
0 Lecture 2 Lab 1 Credit Hour(s)
This course is for men and women. It is designed to give the student fundamental skills of weight training. Emphasis is placed on proper form and technique using a variety of strength training equipment. Exercise using aerobic equipment will also be introduced.

PED111 STEP AEROBICS
0 Lecture 2 Lab 1 Credit Hour(s)
Step aerobics is a popular form of aerobic exercise that makes use of the step prop to condition cardiovascular and musculoskeletal systems. Basic stepping routines are choreographed to music following safe cadence and movement guidelines. Students of all fitness levels can achieve an efficient and enjoyable aerobic workout.

PED113 INTRODUCTION TO THE MARTIAL ARTS
0 Lecture 2 Lab 1 Credit Hour(s)
This course will introduce to the student the Korean Martial Art of Tae Kwon Do. Students will learn blocks, kicks, first techniques, combination moves and human anatomy that will assist in self-defense, build stamina, instill confidence and help in decision making. Primarily for beginners, this course can act as a refresher to experienced martial artist, also. Historical guidelines will be included.

PED114 STRETCH AND TONE
0 Lecture 2 Lab 1 Credit Hour(s)
Stretch and Tone is a physical fitness course designed to develop muscular endurance and flexibility. Weights and other types of resistive equipment are used to develop fitness. An emphasis is also placed on the use of stretch and relaxation techniques in the management of stress.

PED115 PIATES BASICS
0 Lecture 2 Lab 1 Credit Hour(s)
Through lecture, demonstration and actual practice, students will learn basic Pilates movement principles and concepts, the importance of functional strength and flexibility, anatomy and kinesiology and breathing technique. Basic Pilates mat work will be supplemented by the use of additional equipment to enhance the development of balance, skill and core strength.

PED116 YOGA
0 Lecture 2 Lab 1 Credit Hour(s)
Yoga is an applied science of the mind and body. The primary emphasis of the course will be on general well-being. Students will be exposed to various forms of yoga and will learn gentle stretches, postures designed to keep the body fit, spiritual philosophy, breathing practices, relaxation and meditation.

PED117 WALKING FOR FITNESS
0 Lecture 2 Lab 1 Credit Hour(s)
Walking is a popular exercise activity that can accommodate a variety of fitness levels. Students will learn about walking as a means of improving health and cardiorespiratory endurance. Proper walking technique as well as race walking and interval programs are incorporated to provide a comprehensive overview of various walking program modalities. Field trips will be incorporated as a means of exploring various walking trails within the Hudson Valley.

PED120 BADMINTON
0 Lecture 2 Lab 1 Credit Hour(s)
This course is designed to improve basic badminton skills including clear, drive, drop shot, smash and various serves and returns of serves, and to increase the knowledge and ability of how to effectively implement these skills in singles and doubles play.

PED127 BASEBALL
0 Lecture 2 Lab 1 Credit Hour(s)
Baseball emphasizes skills of batting, throwing, defensive and offensive strategies, fielding and the use of signals. A viewing appreciation for the national pastime and how to keep score are important aspects of this activity.

PED130 BOWLING
0 Lecture 2 Lab 1 Credit Hour(s)
This course is designed to introduce students to the game of bowling for recreation, leisure and competition. Necessary fundamentals for building skill foundations are an integral part of this course. The mathematics of bowling are discussed, and the social, physical, mental and recreational values are included.

PED131 GOLF
0 Lecture 2 Lab 1 Credit Hour(s)
Theory and philosophy of the game. This includes techniques of the golf swing, the construction of equipment, grip, stance and address. Rules, etiquette and scoring are covered.
PED145 LOW-IMPACT AEROBIC DANCE
0 Lecture 2 Lab 1 Credit Hour(s)
Low impact aerobic dance is a physical fitness program that offers effective conditioning of muscles, heart, lungs and blood vessels by requiring that the body be strengthened through healthy use. This course consists of simple dances choreographed with the nondancer in mind. It provides the student with an enjoyable way to attain a lifetime of physical fitness.

PED197 FENCING
0 Lecture 2 Lab 1 Credit Hour(s)
The historic art of fencing. Offense and defense with the foil, sabre and epee are taught. Romantic air of Cyrano, Zorro and other great duelers lend to the thrill of learning these skills. Competition, scoring and safety are covered.

PED199 VARSITY SPORTS
0 Lecture 2 Lab 1 Credit Hour(s)
A student successfully completing a season of participation on an intercollegiate varsity athletic team may be granted one credit of PED. Students will be required to attend all practices and games. Students who serve as team managers can also earn a PED 199 credit. Responsibilities may consist of maintaining team statistics, recordkeeping for games, timekeeper, videotaping and clinician assistant. Registration will be processed through the Athletic Department.

PED202 FITNESS TRAINING PRACTICUM
2 Lecture 3 Lab 3 Credit Hour(s)
A special learning experience for students interested in a comprehensive study of fitness programming. Under the supervision of a faculty member, students act as trainers in the DCC Fitness Center. Study will include safe and effective operation of strength and aerobic exercise equipment, fitness training principles, and the development of individual fitness programs. There are three lab hours to be arranged by the student in addition to the two scheduled lecture hours.

PED204 GROUP EXERCISE LEADERSHIP
2 Lecture 3 Lab 3 Credit Hour(s)
This course involves theory as well as practical application via an internship experience teaching group exercise classes at local fitness centers and on campus under the supervision of faculty and fitness center directors. The course will prepare students for national group exercise leader fitness certification examinations. This course requires two scheduled lecture hours, two scheduled lab hours and one hour instructing at a local fitness center.

PED271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student’s knowledge and competence in the field of physical education or related areas. The student’s time commitment to the project will be approximately 35-50 hours.

PED272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to PED 271, except that the student’s time commitment to the project will be approximately 70-90 hours.

PED273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to PED 271, except that the student’s time commitment to the project will be approximately 105-135 hours.

PED299 VARSITY SPORTS II
0 Lecture 2 Lab 1 Credit Hour(s)
A student successfully completing a second season of participation on an intercollegiate varsity athletic team or a season in a different varsity sport may be granted one credit of PED. Students will be required to attend all practices and games. In addition, the student will prepare a resume detailing academic and athletic accomplishments to be implemented for potential transfer options and/or career explorations. The students will also arrange a six-hour practicum through the athletic department to provide instructional assistance at respective youth programs. This will include participants serving in a managerial capacity. Registration is processed through the Athletic Director. Pre or Co-requisite: PED 199.

PERFORMING ARTS

PFA100 PERFORMING ARTS: INTRODUCTORY SEMINAR
1 Lecture 0 Lab 1 Credit Hour(s)
This course introduces students to the field of performing arts and helps guide them in making decisions leading to success in performing art studies and to a career in the performing arts. It provides an overview of courses and training needed, preparing for auditions, career opportunities and possible transfer options. In addition, there will be specific units on various study and rehearsal skills, which lead to success in college and in the performing arts.

PHILOLOGY

PHI107 INTRODUCTION TO THE ART OF REASONING
3 Lecture 0 Lab 3 Credit Hour(s)
This course is concerned with techniques for identifying an argument, its components and suppositions, and for evaluating all these elements. Besides the analysis of arguments, topics will include deductive and inductive forms, rational decision-making and recognition of informal fallacies. Emphasis will be on heightening the student’s ability to convey ideas concisely, to formulate arguments clearly and to appraise them critically.

PHI201 PHILOSOPHY: THE PRIMARY ISSUES
3 Lecture 0 Lab 3 Credit Hour(s)
This course involves a survey of representative problems in some of the major areas of philosophy, and the positions of different schools of philosophic thought on these problems. Topics considered include free will, the problem of religious belief, knowledge and truth, the problem of the self, morality, reality and being, and the problem of the external world.

PHI203 MAJOR RELIGIONS OF THE WORLD
3 Lecture 0 Lab 3 Credit Hour(s)
An exploration of the cultural expressions and spiritual values of the world’s great religions. The course aims at extending and deepening the student’s awareness of the doctrine, mythology, symbolism and ritual at the heart of each religion. Among those religions studied will be Hinduism, Buddhism, Taoism, Confucianism, Judaism, Christianity and Islam.

PHI205 ETHICAL THEORY AND CONTEMPORARY ISSUES
3 Lecture 0 Lab 3 Credit Hour(s)
This course is designed to introduce students to the study of ethics and the nature of morality. A wide range of ethical issues is considered, including moral relativism, the principle of utility, duty-based ethics and natural law theory. Additionally, the course will focus on problems of applied morality, examining and discussing alternative positions on such issues as abortion, euthanasia, capital punishment, economic justice, etc.
PHI271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student's knowledge and competence in the field of philosophy or related areas. The student's time commitment to the project will be approximately 35-50 hours.

PHI272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to PHI 271, except that the student's time commitment to the project will be approximately 70-90 hours.

PHI273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to PHI 271, except that the student's time commitment to the project will be approximately 105-135 hours.

PHYSICAL SCIENCE

NOTE: Students should assume that all laboratory science courses (AST, BIO, CHE, GLG, MIT, PHS and PHY) will incorporate some level of math. There are no science courses designed to be 'math free'. The nature of the lab is to perform experiments and gather data that will test scientific theory. Working with data will require, at a minimum, some basic mathematics, including use of (+, -, x) calculator. Therefore, even for science course with no stated math prerequisites, it will be expected that students have math competency at the level of MAT091 (Beginning Algebra) or its equivalent.

PHS101 THE PHYSICAL WORLD
3 Lecture 2 Lab 4 Credit Hour(s)
An introductory science course designed to introduce the student to the physical principles that govern the operation of machines that they encounter in their everyday lives. Topics include the metric system, simple machines, work, energy, states of matter, fluids, buoyancy, pressure, heat, nuclear energy, waves, light, color, sound, electricity, magnetism and computers. Laboratory experiments illustrate both the concepts studied and the general techniques of structured experimentation. An electronic calculator is required (functions needed +, -, x).

PHS102 EARTH SCIENCE
3 Lecture 2 Lab 4 Credit Hour(s)
A first course for students interested in planet earth. Topics to be considered include the earth's place in the universe, earth's materials and processes and earth's weather systems. Particular emphasis is placed on the individual's relationship to the planet. Discussions of earth's resources, waste disposal and geologic hazards such as earthquakes will be included. Laboratory work is supplemented by field trips.

PHS103 PHYSICAL SCIENCE AND THE ENVIRONMENT
3 Lecture 2 Lab 4 Credit Hour(s)
This course provides a local, regional and global perspective of major environmental issues. Topics such as population growth, food production, energy use, pollution, global warming and other technology are studied at the intro level. Field Labs constitute a major portion of the laboratory work.

PHS107 ENERGY AND THE ENVIRONMENT
3 Lecture 2 Lab 4 Credit Hour(s)
This course examines how man has met his energy needs in the past through the exploitation of the earth's natural resources and what alternative resources we may use in the future. We will examine modern methods of energy production, including exploration, mining, production, refining, distribution and environmental impact. Specific topics will include wood, coal, oil, natural gas, hydroelectric, nuclear fission, nuclear fusion, solar, wind, geothermal, biomass, ocean thermal energy conversion, conservation and environmental pollution.

PHS111 WEATHER AND CLIMATE
3 Lecture 2 Lab 4 Credit Hour(s)
An introductory study of energy, temperature, moisture, precipitation and winds which combine to create our weather. Topics include the causes of the seasons, forms of moisture in the atmosphere, atmospheric stability, cloud development, precipitation processes, pressure differences that create the winds, storm systems, thunderstorms, hurricanes, tornados and the world climate. Labs include reading weather maps, making weather measurements, cloud development, drawing weather maps and climate studies.

PHS112 WATER RESOURCE ISSUES
3 Lecture 2 Lab 4 Credit Hour(s)
Substantial water resources are required by our growing global population. Water is used for drinking, recreation, generating electricity and by industry; it also flushes our toilets and is easily contaminated by landfills, salt and other human sources. Water is also an essential part of natural ecosystems. Students explore these multiple water demands and the challenges created by conflicting resource requirements. Case studies include investigation of the Everglades, the Mississippi River flood in 1993 and the Exxon Valdez oil spill. Labs include field trips and in-class exercises; students are introduced to the water cycle, the basic chemistry and physics of water, and the use of maps in water resource investigations.

PHS114 CULINARY CHEMISTRY
3 Lecture 2 Lab 4 Credit Hour(s)
A study of the application of basic scientific concepts to cooking and food science. Nutritional properties of foods, food preparation, food preservation, and social and economic issues surrounding food will be examined. Scientific topics to be studied include: fundamentals of food chemistry; molecular structure, interactions and reactions; biochemistry; energy content; mixtures and phase changes; application of concepts to common cooking processes and recipes. This course may be used in place of CHE 111 as preparation for CHE 121. A scientific calculator is required.

PHS271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student's knowledge and competence in the field of the physical sciences or related areas. The student's time commitment to the project will be approximately 35-50 hours.

PHS272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to PHS 271, except that the student's time commitment to the project will be approximately 70-90 hours.

PHS273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to PHS 271, except that the student's time commitment to the project will be approximately 105-135 hours.
PHYSICS

NOTE: Students should assume that all laboratory science courses (AST, BIO, CHE, GLG, MLT, PHS and PHY) will incorporate some level of math. There are no science courses designed to be 'math free'. The nature of the lab is to perform experiments and gather data that will test scientific theory. Working with data will require, at a minimum, some basic mathematics, including use of (+, -, x) calculator. Therefore, even for science course with no stated math prerequisites, it will be expected that students have math competency at the level of MAT091 (Beginning Algebra) or its equivalent.

PHY121 GENERAL PHYSICS I
3 Lecture 3 Lab 4 Credit Hour(s)
A general college physics course covering principles of mechanics, including kinematics, Newton’s laws, conservation of energy and momentum, rotational motion, simple harmonic motion and fluid statics. Three lecture hours plus weekly three-hour laboratory
Prerequisite: Math B Regents exam with a minimum grade of 65 or MAT 184 or MAT132.

PHY122 GENERAL PHYSICS II
3 Lecture 3 Lab 4 Credit Hour(s)
A continuation of PHY 121, including heat, electricity and magnetism, waves and optics, and modern physics. Three lecture hours plus weekly three-hour laboratory.
Prerequisite: PHY 121 or ENT 103 with a grade of C or better.

PHY141 PHYSICS FOR TELECOMMUNICATIONS
3 Lecture 2 Lab 4 Credit Hour(s)
This course is designed to introduce students to the physical laws and principles inherent in the study of mechanics, wave mechanics, light and optics, electricity and magnetism, and modern physics. There will be an emphasis placed on the following topics: vibrations and waves, electricity and magnetism, and wave optics. Dimensional analysis and problem solving will be stressed.
Prerequisite: MAT 129.

PHY151 ENGINEERING PHYSICS I
3 Lecture 3 Lab 4 Credit Hour(s)
This is the first semester of a four-semester sequence. This course gives students who plan to major in either physics or engineering a fundamental understanding of physical concepts and their applications. The laboratory is designed to teach basic experimental techniques and to verify physical concepts. PHY 151 is primarily concerned with mechanics, including basic vector operations, kinematics, Newton’s laws, work, energy, conservation laws and harmonic motion. Students must register for both a lecture and a lab.
Prerequisites: MAT 221 with a C or better and either PHY 121 or one year of high school physics with a grade of 85 or better.

PHY152 ENGINEERING PHYSICS II
3 Lecture 3 Lab 4 Credit Hour(s)
PHY152 is the second semester of physics in the calculus-based physics sequence. This course gives students who plan to major in either physics or engineering a fundamental understanding of electric and magnetic principles with applications to simple circuits.
Prerequisite: PHY 151 with a grade of C or better and MAT 222 with a C or better.

PHY251 ENGINEERING PHYSICS III
3 Lecture 3 Lab 4 Credit Hour(s)
Fluids, wave motion, sound, thermodynamics, kinetic theory of gases and optics are studied.
Prerequisites: MAT 223 or concurrent enrollment therein, and PHY 152 with a grade of C or better.

PHY271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student’s knowledge and competence in the field of physics or related areas. The student’s time commitment to the project will be approximately 35-50 hours.

PHY272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to PHY 271, except that the student’s time commitment to the project will be approximately 70-90 hours.

PHY273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to PHY 271, except that the student’s time commitment to the project will be approximately 105-135 hours.

PSYCHOLOGY

PSY102 INTERVIEWING AND COUNSELING SKILLS
3 Lecture 0 Lab 3 Credit Hour(s)
A study of basic helping, counseling and crisis intervention skills with an emphasis on facilitating client growth and interpersonal effectiveness.

PSY111 PSYCHOLOGICAL PRINCIPLES I
3 Lecture 0 Lab 3 Credit Hour(s)
Emphasis in this course is on the major aspects of human behavior and its adaptation to the environment. Topics include learning, motivation, emotional behavior, maturation, personality, behavior disorders and therapies.

PSY112 PSYCHOLOGICAL PRINCIPLES II
3 Lecture 0 Lab 3 Credit Hour(s)
Physiological factors in human behavior are emphasized. Topics include nervous system, perception, sensation, language, thinking and problem solving, creativity, states of consciousness, statistical and scientific methodology.

PSY134 GROUP DYNAMICS
3 Lecture 0 Lab 3 Credit Hour(s)
A study of the factors involved in group interaction, including cohesion and conflict, communication systems, role functions within groups, individual sensitivity and self-awareness. The student learns about him or herself by interacting with others in small-groups, analyzing the dynamics of his or her group.

PSY201 ABNORMAL PSYCHOLOGY
3 Lecture 0 Lab 3 Credit Hour(s)
Emphasis is on developing a conceptual basis that incorporates the various influencing factors, as well as descriptions and effects of behavioral disorders. The currently used system of classification provides a holistic orientation to the field.
Prerequisite: PSY 111 or permission of department head.

PSY202 THERAPEUTIC INTERVENTION SKILLS
3 Lecture 0 Lab 3 Credit Hour(s)
The study of the principles of learning and behavior change and an overview of therapeutic treatment strategies in current use. Practical applications both in various treatment settings and in everyday life are an integral part of this course.
Prerequisite: PSY 111 or permission of department head.
PSY203 DEVELOPMENTAL PSYCHOLOGY
3 Lecture 0 Lab 3 Credit Hour(s)
A systematic examination of the patterns of human development from conception through senescence. Typical behavior changes in the principal life stages are examined in depth with emphasis on the use of theories as tools for understanding.
Prerequisite: PSY 111 or permission of department head.

PSY204 ADOLESCENT PSYCHOLOGY
3 Lecture 0 Lab 3 Credit Hour(s)
A study of the developmental tasks facing adolescents in contemporary American society. Such issues as personal identity, independence and moral development are considered in relation to sex differences, family structure and factors of social and cultural diversity.
Prerequisite: PSY 111 or permission of department head.

PSY206 SOCIAL PSYCHOLOGY
3 Lecture 0 Lab 3 Credit Hour(s)
The scientific study of social influences on human behavior. Course material emphasizes both the interpersonal and experimental perspectives. Topics include: Social influence, attitudes, group behavior, social perception, social cognition, social exchange, interpersonal attraction, etc.
Prerequisite: BHS 103 or PSY 111.

PSY207 CREATIVE ARTS THERAPY
3 Lecture 0 Lab 3 Credit Hour(s)
An overview of creative arts as they are utilized in client assessment and treatment as well as applications of these creative arts to student development and self-awareness.
Prerequisites: BHS 110, PSY 102, PSY 202, PSY 203 and PSY 235 or PSY 201.

PSY209 PSYCHOBIOLOGY
3 Lecture 0 Lab 3 Credit Hour(s)
Psychobiology approaches psychological questions by seeking explanations based upon the biological functions of the organism’s nervous system, endocrine glands and genes. Topics include memory, vision and pain.
Prerequisite: PSY 111 or permission of the department head.

PSY210 PSYCHOLOGY OF GENDER
3 Lecture 0 Lab 3 Credit Hour(s)
A study of psychological assumptions about the female and male personality and how these hypotheses are being questioned by recent experimental studies. Psycho-social influences on the developing psyche and behavior patterns of women and men will be investigated, as well as sex differences and the interaction of the individual with the environment. Emphasis will focus on attitude formation, gender role learning, self-image, needs, values, fears and aspirations.
Prerequisite: PSY 111 or permission of department head.

PSY221 CHILD AND ADOLESCENT DEVELOPMENT
3 Lecture 0 Lab 3 Credit Hour(s)
This is a general education course in behavioral sciences, presenting basic theories of child behavior and development (including cognitive development, social development, and physical development) from the prenatal period through middle childhood. The class is designed to present both theoretical and practical aspects of child development from psychological and developmental viewpoints. Developmental psychology is a science with a large and rich research base. Accordingly, the course will use this research to understand development. While each individual has a unique pattern of growth and development, overall, human development is orderly and predictable and therefore capable of being understood through scientific principles and methodology.
Prerequisite: PSY 111 or permission of the department head.

PSY231 TOPICS IN PSYCHOLOGY I
1 Lecture 0 Lab 1 Credit Hour(s)
This course is designed to explore a specific topic area in Psychology in greater depth than would occur in an introductory level offering. The topics will vary and may be drawn from any of the various, applied sub-fields of Psychology. The class room instruction will amount to a period of five weeks of the semester, or its equivalent in formal lecture/discussion.

PSY232 TOPICS IN PSYCHOLOGY II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to PSY 231, except that the instructional time will take place over a period of ten weeks of the semester, or its equivalent in formal lecture/discussion.

PSY233 TOPICS IN PSYCHOLOGY III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to PSY 231, except that the instructional time will take place for the entire 15 weeks of the semester, or its equivalent in formal lecture/discussion.

PSY235 THE PSYCHOLOGY OF EXCEPTIONALITY
3 Lecture 0 Lab 3 Credit Hour(s)
An overview of exceptionality in childhood including both behavior disordered and gifted children with emphasis on characteristics of and ways to interact with each. Other topics include mental retardation, various mental disorders and learning disabilities.
Prerequisite: PSY 111 or permission of the department head.

PSY251 TOPICS IN PSYCHOLOGY I
1 Lecture 0 Lab 1 Credit Hour(s)
This course is designed to explore a specific topic area in Psychology in greater depth than would occur in an introductory level offering. The topics will vary and may be drawn from any of the various, applied sub-fields of Psychology. The class room instruction will amount to a period of five weeks of the semester, or its equivalent in formal lecture/discussion.

PSY252 TOPICS IN PSYCHOLOGY II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to PSY 251, except that the instructional time will take place over a period of ten weeks of the semester, or its equivalent in formal lecture/discussion.

PSY253 TOPICS IN PSYCHOLOGY III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to PSY 251, except that the instructional time will take place for the entire 15 weeks of the semester, or its equivalent in formal lecture/discussion.

PSY271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Prior to registration for any special study course, the approval of the Department Head must be obtained. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student’s knowledge and competence in the field of psychology or related areas. The student’s time commitment to the project will be approximately 35-50 hours.

PSY272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to PSY 271, except that the student’s time commitment to the project will be approximately 70-90 hours.
PSY273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to PSY 271, except that the student’s time commitment to the project will be approximately 105-135 hours.

READING

REA091 STRATEGIES FOR COLLEGE READING
2 Lecture 0 Lab 2 Credit Hour(s)
Integrated language activities are designed to serve as a complementary component of the instruction given in REA 100. NOTE: REA 091 is a credit equivalent course. Equivalent credits do not satisfy degree requirements and are not calculated in a student’s grade point average, but they do incur tuition charges and they do count towards full-time/part-time status.

REA100 APPLIED READING STRATEGIES
1 Lecture 0 Lab 1 Credit Hour(s)
A course designed to improve general reading effectiveness and to emphasize the necessary skills for college reading. Topics include: comprehension on literal, inferential and critical levels and improvement of vocabulary through use of contextual clues. Each student must demonstrate application of the three levels of comprehension to a lengthy reading selection (novel).

REA103 ACADEMIC READING
3 Lecture 0 Lab 3 Credit Hour(s)
A course designed to improve content area reading and analytical skills necessary in any college discipline. (English: 101, 102, 103; Social Sciences: BHS 103, PSY 111; History: HIS 102; Health/Science: BIO 101; Business: BUS 102, CIS 111, etc.) Students master reading strategies using sample materials from content textbooks and relate those techniques to current course work. Other strategies include notetaking, test preparation, memory improvement, vocabulary and concept building. Critical thinking and analytical skills are applied to non-fiction and fiction selections.

REA105 EFFECTIVE READING
3 Lecture 0 Lab 3 Credit Hour(s)
A course designed to increase comprehension, analytical skills and reading speed for the average to above average reader. Speed techniques are designed to increase students’ ability to read faster and comprehend more effectively. Analytical skills are developed through reading, writing and thinking activities, which are applied to non-fiction and fiction selections including a novel.

SCIENCE

SCI100 SCIENCE INTRODUCTORY SEMINAR
1 Lecture 1 Lab 1 Credit Hour(s)
This course is designed to orient the student to the Liberal Arts and Science: Science (LAX) curriculum and prepare the student for his/her science course work. The student will be introduced to the information gathering process and its tools. The scientific paper and the laboratory report will be stressed. Topics will be selected by section from biology, chemistry, physics, earth science and environmental science.

SPANISH

SPA101 ELEMENTARY SPANISH I
3 Lecture 1 Lab 3 Credit Hour(s)
An introduction to the sounds and grammatical concepts of Spanish. A course intended to be, ideally, the first step in sequence, which will include SPA 101, 102, 201 and 202. An attempt is made to familiarize students in the three language skills: listening comprehension, speaking and writing. An hour a week of supervised computer lab work, which involves working on web based programs that accompany each lesson, is a requirement of the course and will help the student in their comprehension and speaking skills. The course is designed for the beginner - one with no previous study of Spanish.

SPA102 ELEMENTARY SPANISH II
3 Lecture 1 Lab 3 Credit Hour(s)
SPA 102 is a continuation of Spanish 101, and thus continues the study of the sounds, structure and grammatical concepts, but with a growing emphasis on conversational ability. It is, ideally, the second step of a sequence which would include Spanish 101, 102, 201 and 202. An attempt is made to familiarize students in the three language skills: listening comprehension, speaking and writing. An hour a week of supervised computer lab work, which involves working on web based programs that accompany each lesson, is a requirement of the course and will help the student in their comprehension and speaking skills. An hour per week of in-class lab work is required. Spanish 102 would be appropriate for someone who has successfully completed SPA 101, or a student with two years of high school Spanish.

SPA201 INTERMEDIATE SPANISH I
3 Lecture 0 Lab 3 Credit Hour(s)
A thorough review of Spanish grammar plus intensive reading and discussion of several short stories. Several poems are also read and discussed as well as assorted articles of current political, cultural or literary significance. Students with two years or more of high school Spanish and native speakers should take the Spanish Placement Test to determine their level and the courses they may take for credit.

SPA202 INTERMEDIATE SPANISH II
3 Lecture 0 Lab 3 Credit Hour(s)
A continuation of the work begun in Spanish 201: a thorough review of Spanish grammar plus intensive reading and discussion of several short stories. Several poems are also read and discussed as well as assorted articles of current political, cultural or literary significance. A student with a mastery of material covered in Spanish 101, 102 and 201 would be eligible for this course. Native speakers should take the Spanish Placement Test to determine their level and the courses they may take for credit.

SPA204 SPANISH CULTURE AND LANGUAGE I
3 Lecture 0 Lab 3 Credit Hour(s)
An intensive course, three hours per day, five days per week, to be offered in Spain or a Spanish-speaking country. The duration of the course is approximately six weeks. It includes guided excursions to areas of cultural interest. Students are housed with local families whenever possible. Participation subject to approval by the department.

SPA205 SPANISH CULTURE & LANGUAGE II
3 Lecture 0 Lab 3 Credit Hour(s)
An intensive course, three hours per day, five days per week, to be offered in Spain or a Spanish-speaking country. The duration of the course is approximately six weeks. It includes guided excursions to areas of cultural interest. Students are housed with local families whenever possible. Participation subject to approval by the department.
SPA208 CULTURAL APPLICATIONS OF FOREIGN LANGUAGE
3 Lecture 0 Lab 3 Credit Hour(s)
A cultural project which offers students the opportunity to learn about
language in a non-traditional set up, to be creative and innovative, to
relate language to culture, and to test their skills in a communicative
manner while rendering a service to the community. Since the
course offering changes every year, students should inquire from the
department as to what the focus is for that specific semester. Open to
students of Spanish, Italian or French. Students select one language.
Prerequisite: SPA 102 or 199 or permission of instructor.

SPA271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with
the cooperation and approval of a faculty member. Proposed study
plans require departmental approval. Projects may be based on
reading, research, work experience, or other activities that advance
the student's knowledge and competence in the Spanish language.
The student's time commitment to the project will be approximately
35-50 hours.

SPA272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to SPA 271, except that the student's time commitment to the
project will be approximately 70-90 hours.

SPA273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to SPA 271, except that the student's time commitment to the
project will be approximately 105-135 hours.

SPA301 ADVANCED SPANISH I
3 Lecture 0 Lab 3 Credit Hour(s)
Readings from classical and modern authors are used as a basis for
conversational practice and study of Spanish and Latin American
civilization. Creative expression in writing and imitation of complicated
patterns of structure. Independent language laboratory work.
Prerequisite: SPA 202. Native speakers should take the Spanish
Placement Test to determine their level and the courses they may
take for credit.

SPA302 ADVANCED SPANISH II
3 Lecture 0 Lab 3 Credit Hour(s)
Continuation of SPA 301. Advanced syntax and creative expression
in writing. Conversation practice. Language laboratory work.
Prerequisite: SPA 301. Native speakers should take the Spanish
Placement Test to determine their level and the courses they may
take for credit.

SPA320 SPANISH COMPOSITION AND CONVERSATION
3 Lecture 0 Lab 3 Credit Hour(s)
A selection of literary, cultural and journalistic readings will serve as
the basis for conversational practice and study of Spanish and Latin
American civilization, as well as engaging students in creative self-
expression. Students will be exposed to a variety of narrative styles,
voices, registers and genres as well as the linguistic intricacies of
foreign language study such as false cognates, Anglicisms, idiomatic
expressions and other vocabulary topics.
Prerequisite: Score of 600 or higher on Spanish Placement Test and
permission of the instructor.

SPA903 WORKPLACE SPANISH-HERITAGE SPEAKERS
3 Lecture 0 Lab 3 Credit Hour(s)
This course is a course designed to encourage native and near
native speakers of Spanish to build on the Spanish language they
already possess and enable them to develop these skills and thereby
tap a potential (dual language capability) which will provide them
with a competitive edge in the job market. This course is especially
designed for people who plan or hope to use formal, as well as an
informal, exposure to the Spanish language (past or present) and
who are interested in developing their language skills.
Prerequisite: Score 600 in the Spanish placement test (only for non-
heritage speakers).

SPEECH

SPE100 FOUNDATIONS OF COMMUNICATION
3 Lecture 0 Lab 3 Credit Hour(s)
This course is designed to develop students' knowledge and skills
pertaining to the fundamental theories, concepts, vocabulary, and
practices related to the discipline of communication. Topic areas the
course addresses include the process of communication, as well as
verbal, nonverbal, listening, interpersonal, small group, intercultural,
organizational, public and mediated forms of communication.

SPE101 PUBLIC SPEAKING
3 Lecture 0 Lab 3 Credit Hour(s)
This course is devoted to the study of oral communication as it relates
to the speaker, her/his purpose, subject, outline, presentational aids,
delivery and audience. The first part of the course emphasizes the
theory of public speaking, while the latter part is concerned with the
analysis, preparation and performance in the areas of informative,
demonstrative, persuasive and occasional speaking.

SPE102 ORAL INTERPRETATION OF LITERATURE
3 Lecture 0 Lab 3 Credit Hour(s)
This course explores basic techniques of reading aloud and the
selection, analysis, and performance of prose, poetry, children's
literature from various cultures, drama, and documentary. Emphasis
is on the general improvement of oral performance skills.

SPE111 TAKING THE TERROR OUT OF PERFORMANCE
1 Lecture 0 Lab 1 Credit Hour(s)
This course is designed for those who would like to reduce their fear
of speaking or performing in front of an audience. Students explore
the origin and extent of their anxiety and learn practical methods for
dealing with all types of performance apprehension.

SPE115 EFFECTIVE LISTENING
1 Lecture 0 Lab 1 Credit Hour(s)
In this course students will develop an awareness of the process
and role of listening in oral communication. In addition, students
will develop skills related to analyzing and improving therapeutic,
critical, and appreciative listening.

SPE116 INTERVIEWING TO GET THE JOB
1 Lecture 0 Lab 1 Credit Hour(s)
This course provides straightforward, practical advice on developing
communication skills needed to effectively prepare for and perform
during a job interview. Students will benefit from role-play interviews
using the most-often-asked questions by interviewers.

SPE201 PERSUASION: ARGUMENT AND EMOTION
3 Lecture 0 Lab 3 Credit Hour(s)
This is a course devoted to the theory and practice of persuasive
techniques in oral communication. Special emphasis is on the role of
evidence, logic, fallacies, emotions, style, organization and delivery
in oral persuasive communication.
Prerequisite: SPE 101 or permission of the instructor.

SPE210 DYNAMICS OF DISCUSSION
3 Lecture 0 Lab 3 Credit Hour(s)
This course introduces students to the topic and study of
communicating in small groups with an emphasis on the principles
and techniques of discussion, and on the development of effective
participation by group members in small groups at school, at
home, and in the workplace. Specifically, they will study methods
for how to be successful leaders in small groups, manage meetings

effectively, manage group conflicts, organize group activity to address problems in the home and workplace, and how to identify, analyze, and address problems in group dynamics.

**SPE211 COMMUNICATION THEORY**
3 Lecture 0 Lab 3 Credit Hour(s)
This course is a non-performance study of communication designed to build upon students’ initial encounters with communication topics in prerequisite courses, and facilitate their ability to apply basic concepts, vocabulary, theories, and empirical knowledge relevant to the study and practice of communication. Students will engage in an in-depth study of theories pertaining to attitude and behavioral change in relation to specific language and nonverbal practices as they apply to areas such as politics, propaganda, mass media, and interpersonal relations.

**SPE212 VOICE AND ARTICULATION**
3 Lecture 0 Lab 3 Credit Hour(s)
The course explores the human vocal mechanism and articulators with special emphasis on practical application. Students will participate in exercise to obtain proper breathing, vocal quality, volume, consonant/vowel/diphthong articulation, pitch, rate, and duration. They will also perform dramatic readings and other oral presentations concentrating on vocal performance.

**SPE219 INTERCULTURAL COMMUNICATION**
3 Lecture 0 Lab 3 Credit Hour(s)
This course will explore the methods by which people of various races, cultures, genders, religions, socio-economic backgrounds and sexual orientations communicate verbally and non-verbally. Students will develop the skills necessary to build and maintain positive communication across cultures. Students will focus on similarities and differences in communication behaviors, and they will explore how perceptions, language usage, nonverbal style, thinking modes and values influence communication between individuals of different cultures. By the end of the course, students will more fully understand their own cultures, as well as intercultural communication in their community, place of employment, country, world and in the media.

**SPE271 SPECIAL STUDY PROJECT I**
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, travel, work experience, or other activities that advance the student's knowledge and competence in oral communication, theatre or related subjects. The student's time commitment to the project will be approximately 35-50 hours.

**SPE272 SPECIAL STUDY PROJECT II**
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to SPE 271, except that the student's time commitment to the project will be approximately 70-90 hours.

**SPE273 SPECIAL STUDY PROJECT III**
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to SPE 271, except that the student's time commitment to the project will be approximately 105-135 hours.

**TELECOMMUNICATIONS**

**TEL110 APPLIED TELECOMMUNICATIONS I**
3 Lecture 2 Lab 4 Credit Hour(s)
This course is designed to train students in the organization, architecture, setup, maintenance, hardware and software aspects of local area networks. Topics include: introduction to networks, types and characteristics of different network architectures and network topologies, intra and inter-network devices, network operating systems, peer-to-peer and client/server environments, LAN setup and maintenance, network printing, internal web server. A hands-on approach will be taken, with team projects throughout.
Prerequisite: ENT 108.
Co-requisite: ELT 221.

**TEL210 APPLIED TELECOMMUNICATIONS II**
3 Lecture 2 Lab 4 Credit Hour(s)
This course will cover basics of Voice over Internet Protocol (VoIP) systems. Topics include: an overview of TCP/IP networks with a focus on VoIP, introduction to VoIP, Quality of Service (QoS), VoIP system components, VoIP protocols and VoIP protocol analysis, VoIP architecture and VoIP codecs. A hands-on approach will be taken, with team projects throughout.
Prerequisite: TEL 110 and EMS 206.
Co-requisite: ELT 221.

**TEL211 APPLIED TELECOMMUNICATIONS III**
3 Lecture 2 Lab 4 Credit Hour(s)
This course covers the organization, architecture, setup, hardware and software aspects of networked video delivery systems. Topics include: video transport, compression, packet transport, multicasting, content ownership and security, transport security, IPTV/IP video to the home, video file transfer, VPN’s and home-office video links. A hands-on approach will be taken, with team projects throughout.
Prerequisite: TEL 210.

**TEL212 APPLIED TELECOMMUNICATIONS IV**
3 Lecture 2 Lab 4 Credit Hour(s)
A survey of current and emerging technologies in telecommunications will be presented. Lectures, interactive learning, demonstrations and hands-on work will be employed.
Prerequisite: TEL 211.

**TEL271 SPECIAL STUDY PROJECT I**
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, travel, work experience, or other activities that advance the student's knowledge and competence in oral communication, theatre or related subjects. The student's time commitment to the project will be approximately 35-50 hours.

**TEL272 SPECIAL STUDY PROJECT II**
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to TEL 271, except that student's time commitment to the project will be approximately 70-90 hours.

**TEL273 SPECIAL STUDY PROJECT III**
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to TEL 271, except that the student's time commitment to the project will be 105-135 hours.
THE105 INTRODUCTION TO THE THEATER
2 Lecture 2 Lab 3 Credit Hour(s)
The elements of theater are examined with the objective of
understanding the forms and practices of modern theater and
their historical evolution. Concepts from lecture material are put to
practical use in laboratory exercises.

THE106 PLAY PRODUCTION
2 Lecture 2 Lab 3 Credit Hour(s)
This course encompasses the techniques of theatrical play production
in various genres. Topics include the selection of plays, casting,
writing, directing, producing, acting, costuming, and scene design,
including the application of these techniques to various media and
special-purpose presentations.

THE109 ACTING I
2 Lecture 2 Lab 3 Credit Hour(s)
This course introduces the student to the basic skills of acting; the
development of imagination, self-awareness, body control and
voice; the techniques of stage movement; textual analysis; creation
of character; rehearsal; the application of these skills to various media
and special-purpose presentation.

THE110 HOW TO AUDITION
1 Lecture 0 Lab 1 Credit Hour(s)
This course develops the basic skills needed to complete a successful
audition. Topics covered include: interviews, professional pictures
and resumes, audition monologues, finding an agent or manager
and cold readings.
Pre or Co-requisite: THE 109 or permission of instructor.

THE120 PERFORMING SKILLS FOR THE CLASSROOM
3 Lecture 0 Lab 3 Credit Hour(s)
This theatre course empowers the education student with various
theatrical performance skills to captivate students and creatively
convey information. Lessons involve the use of physical and vocal
animation and enthusiasm, humor, imaginative use of space,
storytelling, role-playing, props, suspense and surprise.
Note: This course is intended for students preparing to be teachers.

THE161 THEATER PRACTICUM I
2 Lecture 2 Lab 3 Credit Hour(s)
This course will enable the students to put theory into practice by
experiencing first-hand the creation of a live performance of a
professional play from start to finish. This includes securing the rights
to a play, pre-production meetings, casting, acting, stage managing
and creating sets, lights, costumes, sound, props, multimedia,
makeup, publicity and programs. The course will culminate in a
series of public performances.
Pre or Co-requisite: THE 105 or permission of instructor.

THE205 PLAY DIRECTING
2 Lecture 2 Lab 3 Credit Hour(s)
Students will experience first-hand the theater director’s role including
his/her relation to the play, script, character analysis, the elements
drama, use of dialogue, dramatic devices, blocking and staging,
casting, rehearsals and production. Also explored will be the director’s
relationship to the producer, as well as the technical aspects of the
production – lights, set, sound, costumes, props and multimedia.
Prerequisite: THE 105.

THE209 ACTING II
2 Lecture 2 Lab 3 Credit Hour(s)
This course further develops the basic skills of acting that were
introduced in Acting I. These skills include the development of
imagination, emotional recall, sense memory, listening, body control,
voice, improvisation, stage movement, textual analysis, creation
of character, action and objective, and especially Scene
Study, including the application of these skills to various media.
Prerequisite: THE 109 or instructor permission.

THE220 PERFORMING FOR THE MEDIA
2 Lecture 2 Lab 3 Credit Hour(s)
This course provides an opportunity to study the practical approaches
to performance for the media. It is a study in contemporary
performance with a basic and essential knowledge of on-camera
acting for film and television, corporate presentations, reporting, as
well as voice-over recording. There will also be some opportunity
for self-directed learning with group performances in the television
studio and audio production suites, as well as performing in student-
directed video projects. The course places an emphasis on voice
production and on-camera acting/performing techniques.
Prerequisite: COM 101 or SPE 101 or THE 109.

THE261 THEATER PRACTICUM II
2 Lecture 2 Lab 3 Credit Hour(s)
This course is an opportunity for the advanced performing arts student
to take a leadership role in the creation of a live performance of a
professional play from start to finish. This includes securing the rights
to a play, pre-production meetings, casting, acting, stage managing,
creating sets, lights, costumes, sound, props, multimedia, makeup,
publicity and programs. The course will culminate in a series of
public performances.
Prerequisite: THE 161.

THE271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students
with the cooperation and approval of a faculty member. Proposed
study plans require departmental approval. Projects may be based
on reading, research, travel, work experience, or other activities
that advance the student's knowledge and competence in oral
communication, theatre or related subjects. The student's time
commitment to the project will be approximately 35-50 hours.

THE272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to THE 271, except that student's time commitment to the
project will be approximately 70-90 hours.

THE273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to THE 271, except that student's time commitment to the
project will be approximately 105-135 hours.
WELLNESS AND FITNESS EDUCATION

WFE101 LIFETIME WELLNESS AND FITNESS
2 Lecture 2 Lab 3 Credit Hour(s)
This course will provide students with the necessary knowledge to make well informed decisions about lifetime wellness, fitness activities and behavior modifications. Students will learn concepts in the various components of fitness, diet and weight control, and stress management with an emphasis on health risk reduction and improving their quality of life. Through lecture/laboratory presentations, assessments and computer technology, students will apply learned concepts to the design of individualized fitness and wellness programs. In the process, students will also have the opportunity to explore and experience options in ‘fitness for life’ activities.

WFE102 LIFETIME WELLNESS AND FITNESS LECTURE
2 Lecture 0 Lab 2 Credit Hour(s)
This is the lecture portion only of WFE 101. Credit for this course will be given to students who pass a proficiency test. Knowledge in this course includes the ability to make educated decisions about lifetime wellness and fitness activities. Topics covered include concepts in cardiovascular and other components of fitness; diet and weight control; and stress management with an emphasis on health risk reduction and improving the quality of one’s life. Education in protective behaviors will go beyond risk reduction for chronic and degenerative diseases to include abusive behaviors and sexually transmitted infections.

WFE103 LIFETIME WELLNESS AND FITNESS LAB
0 Lecture 2 Lab 1 Credit Hour(s)
This is the lab portion only of WFE 101. This course will be only for students who have proficiency credit for WFE 102. This course will provide students with the necessary knowledge to make educated decisions about lifetime wellness and fitness activities. Using laboratory assessments and computer technology, students will be tested on concepts in cardiovascular and other components of fitness; diet and weight control; and stress management with an emphasis on health risk reduction and improving their quality of life. Students will apply learned concepts to the design of individualized fitness and nutritional programs. In the process, students will also have the opportunity to explore and experience options in ‘fitness for Life’ activities as well as to evaluate commercial fitness devices and fitness centers. Adaptive students will be accommodated and are required to contact the individual instructor before class begins.

WFE271 SPECIAL STUDY PROJECT I
1 Lecture 0 Lab 1 Credit Hour(s)
A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student’s knowledge and competence in the field of wellness or fitness education, or related areas. The student’s time commitment to the project will be approximately 35-50 hours.

WFE272 SPECIAL STUDY PROJECT II
2 Lecture 0 Lab 2 Credit Hour(s)
Similar to WFE 271 except that the student’s time commitment to the project will be approximately 70-90 hours.

WFE273 SPECIAL STUDY PROJECT III
3 Lecture 0 Lab 3 Credit Hour(s)
Similar to WFE 271 except that the student’s time commitment to the project will be approximately 105-135 hours.