

# COURSE DESCRIPTIONS



# Course Descriptions

Credit bearing courses at Clinton Community College require college-level reading and writing skills. Therefore, to enroll in credit courses, a student must place into ENG 101 or successfully complete ENG 094. In addition, a student must successfully complete ENG 093 or have placement scores that indicate college-level reading skills except to enroll in ENG 101.

The course listings which follow include basic descriptions of courses offered by the College. Courses are listed alphabetically by department. Courses are numbered according to the subject area, rather than according to the level of the course. Descriptions are general in nature. Prerequisites define those courses which must be taken before enrolling in that course.

*\*NOTE: There is no guarantee of all classes being offered during the day or during every semester. Also, prerequisites and corequisites (in addition to those listed in this section of the catalog) may be required for some courses.*

## DIRECTORY OF CREDIT COURSES BY DISCIPLINE

### Arts

ART, MSM 239, MUS, THE

### Business Courses

ACC, BUS

### Computer Science Courses

CSC

### Criminal Justice Courses

CRI

### Electronics Technology

ETE

### English

ENG above 101

### Environmental Technology Courses

ENV above 101

### Health & Physical Education Courses

HPE

### Human Services Courses

HUS

### Humanities Courses

ART, COM (except COM 100), ENG above 102 (except ENG 235), ESL, FRE, GER, HIS 121, 122, 131 & 132, MSM 118, MSM 239, MUS, PHI, SPA, THE

### Industrial Technology Courses

INT

### Math Courses

MAT

### Nursing Courses

NUR

### Science Courses

BIO, CHE, ENV, GEL, MET, PHY, SCI

### Social Science Courses

ANT, ECO, GEO, HIS, MSM 118, PSC, PSY, SOC

### Wind Energy & Turbine Technology

WTT

## Accounting

### ACC 101 PRINCIPLES OF ACCOUNTING I

4 CREDITS

*Prerequisites: ENG 094 and MAT 100*

Introduces the basic principles of accounting theory and practice, emphasizing the sole-proprietorship form of business. Primary areas of study include the theory of debit and credit, accounts and special journals, the accounting cycle, notes and interest, accruals and deferrals, receivables, inventory, plant assets, and the preparation of financial statements.

### ACC 151 PRINCIPLES OF ACCOUNTING II

4 CREDITS

*Prerequisite: ACC 101*

Continues the study begun in ACC 101 of basic accounting fundamentals and principles. Introduction of partnership, corporate, and managerial accounting, stocks, bonds, budgets, investments in stocks and bonds, cash flow statement, and financial statement analysis.

### ACC 159 PAYROLL ACCOUNTING

3 CREDITS

The goals of this course are to develop an understanding of personnel and payroll records that provide information required by numerous laws. Payroll accounting systems using payroll registers, recording of accounting entries and payroll are presented relating to the payments of wages and salaries. A computerized payroll project is required.

### ACC 201 INTERMEDIATE ACCOUNTING

3 CREDITS

*Prerequisite: ACC 151*

Provides an intensive analytical study of the principles underlying the valuation of assets on the balance sheet. Publications of the professional accounting societies are used throughout the course.

### ACC 202 COST ACCOUNTING

3 CREDITS

*Prerequisite: ACC 151*

A study of cost accounting, embracing an inquiry into the methods of accounting for materials, labor and overhead in a manufacturing operation. Standard cost systems and managerial cost applications are also covered.

### ACC 251 FEDERAL INCOME TAX

3 CREDITS

*Prerequisite: ACC 101*

The more important provisions of Federal income tax and the interrelationships between income tax rules and accounting principles utilized in developing taxable income information are emphasized.

## **ACC 252 COMPUTER APPLICATIONS IN ACCOUNTING**

**3 CREDITS**

*Prerequisites: ACC 101 and CSC 102*

The course is designed to provide students with the necessary skills to analyze, process, and report accounting information by utilizing three (3) accounting methods: 1) manual accounting applications, 2) Microsoft Excel, and 3) computerized accounting software system (QuickBooks Pro). Through the use of a manual practice set students will be exposed to realistic documents and records, including multi-copy business forms, to enhance their learning experience and reinforce knowledge gained by students in ACC 101. Course will then provide hands-on experience in accounting uses of Microsoft Excel. This section includes using multiple sheets with Excel formulas, preparing professional quality financial reports, creating graphs to interpret results and using Excel functions to evaluate accounting data. The course will conclude by having students learn how to setup and maintain new company systems, manage chart of accounts and ledgers, analyze and enter transactions, generate financial reports, import/export data, manage files, and manage system security by using a computerized accounting software system.

## **ACC 285 TAX INTERNSHIP**

**3 CREDITS**

*Prerequisite: ACC251 (Federal Income Tax) or Permission of Professor.*

The goal of this internship is a supervised, on-the-job work experience related to the study of Federal Income Tax. Students must pass Federal Income Tax tests consisting of five parts (Ethics, Basic, Intermediate, Advanced, and Health Savings Accounts). Students are required to attend seminars (45 hours of class offered both online and live) **prior** to the official start of the spring semester. Students are required to submit certificates of Course Completion (Ethics, Basic, Intermediate, Advanced, and Health Savings Accounts) to the instructor. Students are also required to work no less than 90 hours preparing personal Federal and State income tax returns. Students will receive additional training from their Tax Counseling for the Elderly/Volunteer Income Tax Assistance (TCE/VITA) volunteer supervisors and will obtain practical experience relating to work place policies and procedures.

# Anthropology

## **ANT 101 CULTURAL ANTHROPOLOGY**

**3 CREDITS**

*Prerequisite: completion of ENG 094 or placement in ENG 101*

This course is a survey of man's cultural evolution from a hunting and gathering society to the modern industrial state. Kinship systems, social and political organizations, economic structures, religious beliefs and artistic achievements of non-western culture will be studied and compared to western culture.

# Art

## **ART 100 ART APPRECIATION**

**3 CREDITS**

*Prerequisite: ENG 094*

This lecture course examines the visual arts. Painting, drawing, printmaking, multimedia art, the crafts, architecture, and sculpture are examined and defined through an analysis of heritage, contemporary criticism, process, and product. Students learn the expressive and communicative language of aesthetic form (i.e. line, shape, color) and its integral relationship to content within a work of

art. The cultural use of artist materials and how artists create visual art using media will be explored. A survey of art of the world will study the impact of art on human history. The course includes lecture, text, and digital materials.

## **ART 101 INTRODUCTION TO DESIGN**

**3 CREDITS**

This course involves the exploration and uses of the elements and principles of design. Students will gain an understanding and develop a sensitivity to the fundamentals of design and composition by manipulation and creative solving of design problems. Through design problems (assignments – both in and outside of class), group viewings, lecture/demonstrations, students will learn the theory, history and purposes of design and its universal qualities and applications.

## **ART 103 INTRODUCTION TO DRAWING**

**3 CREDITS**

This studio course is an introduction to the applied art of drawing. Hands-on creative problem solving and strong work ethic are highly encouraged in a studio atmosphere. Through in depth projects and personalized demonstrations, students will gain greater insight, sensitivity, and understanding of how to create and finish a drawing as a work of art. The student will study techniques and media to sharpen visual/perceptual skills and, in turn, become more confident to pursue drawing as an artist.

## **ART 104 INTRODUCTION TO PAINTING**

**3 CREDITS**

This course is an introduction to the applied art of oil painting. Through in depth projects and personalized demonstrations, students will gain greater insight, sensitivity, and understanding of how to create and finish a painting as a work of art. Students will develop a working knowledge of oil painting materials and techniques. Personalized studio demonstrations and experiences, will increase students' understanding of painting, not only as a means of self expression, but also as a way of heightening perception. Hands on creative problem solving and strong work ethic are highly encouraged in a studio atmosphere.

## **ART 107 INTRODUCTION TO WATERCOLOR**

**3 CREDITS**

This course is an introduction to watercolor painting. Through hands-on exercises and demonstrations, students will gain insight, skill and understanding to create original watercolor paintings. Students will develop a working knowledge of beginning level watercolor materials and basic techniques. In-class demonstrations and individual participation will help to develop greater understanding of watercolor painting, not only as a medium for self-expression but to broaden personal observation skills. Class involvement and a strong work ethic are encouraged in this course.

## **ART 108 3D DESIGN**

**3 CREDITS**

ART 108 Introduces students to problem solving related to the principles and elements of three dimensional design. The hands on experience emphasizes individual creative solutions to design problems. Students will explore a variety of materials/media.

## **ART 111 TRADITIONAL PHOTOGRAPHY**

**3 CREDITS**

This course is a lecture/laboratory course in which the beginner learns the use and function of the camera and lens. Basic darkroom techniques, including film processing, printing and print finishing are taught. The course explores

the aesthetics of photography and good photographic technique. (Students must provide their own cameras and will have to purchase film and photo paper.)

### ART 112 PHOTOGRAPHY II

**3 CREDITS**

*Prerequisite: ART 111*

This course is an extension of ART 111, Photography I. It introduces students to Fine Art photographic applications, medium format photography, and studio photography, all of which broaden the student's experience and skills both with the camera and in the darkroom. (Students must provide their own cameras and will have to purchase film and photo paper.)

### ART 113 DIGITAL & COMPUTER IMAGERY

**3 CREDITS**

This introductory course is a unique combination of the exploration of digital photography and the use of computer imaging to capture, manipulate and enhance a photograph. Through the use of Adobe Creative Suite Software, the student will learn how to edit, manipulate, and save photographs, using Adobe Photoshop and how to manage their digital files, using Adobe Bridge. The student will also be introduced to the basics of photography utilizing the digital camera. The student will acquire skills including exposure for the digital camera; file formats; composition; the creative use of aperture and shutter speed; lighting characteristics and white balance; and understanding and manipulating histograms. The student will also become familiar with the terms of digital technology. Students must have access to a digital camera.

### ART 114 INTRODUCTION TO ILLUSTRATION

**3 CREDITS**

This course is an introduction to the professional field of illustrative drawing and painting. The student will work with traditional media (such as pen and ink, oil and acrylic paints) to create images for use in a variety of areas within the field such as Book Publishing, Advertising, Pre-Production Concepts, and Editorial. While employing a range of techniques, the student will use their knowledge of drawing and painting to begin building a professional portfolio.

## Biology

### BIO 100 HUMAN BIOLOGY

**4 CREDITS**

*Corequisite: ENG 101*

This course is a general science course for non-science majors. It covers general topics in biology including the chemistry, cells, cell division, genetics, protein synthesis, biotechnology, and bioethics. Several body systems including the circulatory, respiratory, digestive, and immune systems are also covered. The objective is to raise students' science literacy to enable them to understand scientific issues for making personal and public policy decisions. There are three hours of lecture and one two-hour laboratory per week. Students who have received credit for BIO 101 or BIO 102 cannot subsequently receive credit for BIO 100. In the case that a student completes BIO 100 prior to completing BIO 101 or 102, then BIO 100 will count as a free elective credit only.

### BIO 101 GENERAL BIOLOGY I

**4 CREDITS**

*Corequisite: ENG 101*

This course is the first of a two-semester introductory course covering some central biology concepts, including

molecular and cellular bases of life, photosynthesis, cellular respiration, cellular reproduction, and introductory concepts of genetics, inheritance, and biotechnology. The laboratory includes basic laboratory skills such as safety, microscope use, and measurement, and reinforces topics discussed in lecture. There are three hours of lecture and one two-hour laboratory per week. Students who have received credit for BIO 101 or BIO 102 cannot subsequently receive credit for BIO 100. In the case that a student completes BIO 100 prior to completing BIO 101 or 102, then BIO 100 will count as a free elective credit only. (*Course description change, effective Fall 2010.*)

### BIO 102 GENERAL BIOLOGY II

**4 CREDITS**

*Prerequisite: BIO 101; Corequisite: ENG 101*

This course is a continuation of BIO 101. Topics include evolution, biological diversity, plant structure and function, animal systems, and development and reproduction, and introductory concepts of ecology. The laboratory reinforces concepts discussed in lecture emphasizing evolution, plant and animal diversity, and anatomy and physiology of selected plants and animals. There are three hours of lecture and two hours of laboratory per week. Students who have received credit for BIO 101 or BIO 102 cannot subsequently receive credit for BIO 100. In the case that a student completes BIO 100 prior to completing BIO 101 or 102, then BIO 100 will count as a free elective credit only. (*Course description change, effective Fall 2010.*)

### BIO 204 MICROBIOLOGY

**4 CREDITS**

*Prerequisite: Successful completion of BIO 101 or acceptance into CCC Nursing Program or Permission of Instructor.*

*Corequisite: ENG 101*

This course is an introduction to the study of bacteria, viruses and eukaryotic members of the microbial world with an emphasis on their relationship to health and disease. Course topics include microbial structure, growth and replication, metabolism, pathogenicity of microorganisms, and the control of microbial growth. The laboratory includes basic techniques, such as staining, aseptic technique, and methods of bacterial identification. There are three hours of lecture and one two-hour laboratory per week.

### BIO 206 ECOLOGY

**4 CREDITS**

*Prerequisite: BIO 101; Corequisite: ENG 101*

This course introduces basic relationships between organisms and their environment. It includes a study of the abiotic environment, natural selection, population ecology, growth and genetics, species interactions, energy flow and nutrient cycling, geographic ecology, and animal behavior. There are three hours of lecture and one two-hour laboratory each week. Field trips may be included in the laboratory.

### BIO 228 ANATOMY & PHYSIOLOGY I

**4 CREDITS**

*Prerequisite: Successful completion of BIO 101 or acceptance into CCC Nursing Program or Permission of Instructor.*

This course is the first of a two-semester, comprehensive survey of the ten organ systems of the human body, integrating chemical bases of the physiology of each system with structure and function. Includes a study of cells and tissues, integumentary, skeletal, muscular, digestive, respiratory, urinary and reproductive systems. The laboratory section of the course includes mammalian dissection and

direct observation, by experiment, of the natural laws governing human physiological processes. There are three hours of lecture and one two-hour laboratory per week.  
\*Students should have taken biology within the past 5 years to be prepared for this course.

### **BIO 229 ANATOMY & PHYSIOLOGY II**

**3 CREDITS**

*Prerequisite: BIO 228 – Anatomy and Physiology*

BIO 229 is a continuation of BIO 228. The nervous, endocrine, cardiovascular, lymphatic and immune systems are covered. There are three hours of lecture and one two-hour laboratory per week.

### **BIO 250 BIOTECHNOLOGY**

**4 CREDITS**

*Prerequisite: BIO 100, BIO 101 or CHE 101; Corequisite: ENG 101*

This course provides an introduction to biotechnology and its application in a variety of medical, clinical and science disciplines. Topics covered include GLP, GMP, solution chemistry, spectroscopy, chromatography, basic microbiology techniques and DNA and protein purification/separation techniques. This course emphasizes basic laboratory skills essential for beginning level employment in clinical, pharmaceutical and biotechnology laboratories. This course is well suited to students in all majors programs. There are three hours of lecture and one two-hour laboratory per week.

## **Business**

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### **BUS 101 BUSINESS ORGANIZATION & MANAGEMENT**

**3 CREDITS**

A general survey of business, with an analysis of business enterprise elements and functions. A fundamental consideration is also made of the various areas of business specialization.

### **BUS 110 PERSONAL FINANCE**

**3 CREDITS**

Designed to help the student reason and understand the basis of his/her own personal finance decisions in everyday activities. Attention is given to personal income and personal expenditures, borrowing, and the use of personal credit. Introductory personal investment practices, insurance, annuities, home investment, securities and mutual funds will also be covered, as well as taxes and estate planning.

### **BUS 153 BUSINESS MATH**

**3 CREDITS**

A course which covers topics in mathematics of importance to modern business practice with emphasis on checking accounts, payroll, tax preparation, insurance, and other financial applications. This course counts as free elective of business elective only.

### **BUS 209 SMALL BUSINESS MANAGEMENT**

**3 CREDITS**

*Prerequisites: BUS 101 and ACC 101*

This course is designed to provide students with real life applications in a business setting. The student will be responsible for all applications: accounting, federal taxes, NYS Corporate franchise taxes, and all other necessary business activities such as financing, purchasing, inventory, budgeting, marketing, sales, internal and external communication, asset control, and human resources. The course will be reinforced by using a text, Quick Books, and Turbo Tax.

### **BUS 210 PRINCIPLES OF MARKETING**

**3 CREDITS**

*Prerequisite: BUS 101*

A study of methods, policies and institutions involved in the distribution of goods and services, including an analysis of consumer and industrial markets, channels of distribution, and the organization of a marketing program. Students will be required to read current literature in the field.

### **BUS 211 INTERNATIONAL BUSINESS MANAGEMENT**

**3 CREDITS**

*Prerequisite: BUS 101*

Introduces the concepts and mechanics of conducting business in a global environment. Topics focus on the United States and its trade relations with other countries.

### **BUS 213 BUSINESS COMMUNICATIONS**

**3 CREDITS**

*Prerequisite: ENG 101*

Designed to give a comprehensive view of communication: its scope and importance in business, its role in establishing a favorable outside-the-firm environment, and effective internal communication program. The various types of business communication media are covered. The course also develops an awareness of the importance of succinct written expression to modern business communication. Required assignments are to be typewritten.

### **BUS 215 HUMAN RESOURCES**

**3 CREDITS**

*Prerequisite: BUS 101*

A study of the utilization of the workforce in business. Text material, discussions, and case studies are used in preparation for the responsibility of supervising and managing people.

### **BUS 217 INVESTMENTS**

**3 CREDITS**

Covers the relationship between the corporation and the investor, common and preferred stock and their value, securities, and market organizations. Additional topics are the behavior of speculative markets, brokerage houses, stock and commodity exchanges, and an approach to investment analysis.

### **BUS 218 BUSINESS ETHICS**

**3 CREDITS**

*Prerequisite: ENG 101*

This course introduces students to important ethical issues that arise in business. Students will explore and discuss major ethical theories, including Utilitarianism, Kantianism, and virtue ethics, and develop strategies for evaluating ethical business practices in a variety of contexts, using case studies.

### **BUS 243 MONEY & BANKING**

**3 CREDITS**

An analytical, institutional, and historical examination of the monetary systems of the United States. Particular attention will be paid to the operation of commercial banks, and to the powers, purposes and performance of the Federal Reserve System. The quantity of money's influence on the level of economic activity is also considered.

### **BUS 245 ANALYZING FINANCIAL STATEMENTS**

**3 CREDITS**

*Prerequisite: ACC 101*

Teaches the basic skills of financial statement analysis to the prospective bank lender/credit analyst who is already familiar with fundamental accounting procedures and practices. The course is a practical means of discovering how financial data

is generated. Techniques for analyzing the flow of a business's funds, and methods for selecting and interpreting financial ratios will also be covered in this course. In addition, analytical tools for predicting and testing assumptions about a firm's future performance are reviewed.

### **BUS 250 PRINCIPLES OF MANAGEMENT**

**3 CREDITS**

*Prerequisite: BUS 101*

Studies theories and techniques of management, including case studies of managers in action and the problems they face.

### **BUS 252 REAL ESTATE FINANCE**

**3 CREDITS**

*Prerequisite: BUS 140 or permission of instructor.*

Real Estate Finance provides an introduction to construction lending and other areas of commercial real estate financing with an emphasis of managing credit risk. Real estate law, appraisals, and investment analysis are also covered in the course.

### **BUS 260 BUSINESS LAW I**

**3 CREDITS**

*Prerequisite: BUS 101*

Introduces fundamental legal principles and their applications to business and everyday life. Includes law and society, contracts, agency, sales, commercial paper, bailments, and secured transaction.

### **BUS 261 BUSINESS LAW II**

**3 CREDITS**

*Prerequisite: BUS 260*

A continuation of BUS 260 covering partnerships and corporations, real and personal property, insurance suretyship, bankruptcy, wills and trusts, and labor law.

### **BUS 280 LIFE EXPERIENCE**

**3 CREDITS**

This course is intended for people who have been accumulating college-level knowledge or experience in other than the traditional classroom setting. First the student applicants are interviewed to determine if they qualify for the courses for which they want to get credit. Once students enroll in the 3-hour credit class, the Instructor guides them in developing a portfolio which documents prior learning that can be assessed by an experienced person in the field to determine appropriate academic credit to be applied to the students' transcripts. The portfolio must specifically identify the college-level learning that took place because of the prior experience.

### **BUS 285 BUSINESS INTERNSHIP**

**3 CREDITS**

*Prerequisite: candidates should be second-year students and certificate candidates should be in at least their second semester. All students should have completed CSC 102. CIS majors must have completed 9 credits of CSC courses. Any second-year, second semester A.S. Business Administration or Accounting student may take this course as a business elective.* A supervised, on-the-job, work experience related to the student's course of study. Students must apply for this course as they would any job and should obtain such information from the instructor of the course at the time of registration. Students are required to attend weekly seminars in addition to working 120 hours. Students are expected to have employment or an acceptable alternative at the time of enrollment in the course, either of which must be approved by the instructor.

# Chemistry

## **CHE 100 INTRODUCTION TO FORENSIC SCIENCE**

**4 CREDITS**

*Corequisite: ENG 101*

This course is designed to provide an overview of the basic science concepts and techniques used in a forensic laboratory. The nature and significance of physical evidence and the underlying chemical and biological principles of the scientific techniques employed for analysis and the interpretation will be emphasized. Topics covered include hair, fiber and paint analysis, forensic toxicology and serology, blood spatter, arson and explosives, fingerprinting and forensic DNA analysis techniques. There are three hours of lecture and one two-hour laboratory per week.

## **CHE 101 APPLIED CHEMISTRY**

**4 CREDITS**

*Prerequisites: ENG 094 and MAT 100 or equivalent*

This is a basic chemistry course appropriate for non-science majors, elementary education majors, and students in pre-nursing. Students learn basic concepts and the vocabulary used in chemistry as well as how to apply concepts to quantitative problems. The topics covered include measurement, atoms, molecules, mass, energy, naming compounds, acids and bases, and basic organic chemistry concepts. There are three hours of lecture and one two-hour laboratory per week. Students who have received credit for CHE 111 or CHE 112 cannot subsequently receive credit for CHE 101. In the case that a student completes CHE 101 prior to completing CHE 111 or CHE 112, then CHE 101 will count as free elective credit only.

## **CHE 111 GENERAL CHEMISTRY I**

**4 CREDITS**

*Prerequisite: ENG 094; Corequisite: MAT 103*

This course is the first course of a two-semester sequence which presents the concepts of general quantitative chemistry. The course will include measurement, stoichiometry, thermochemistry, the periodic table, introduction to acids and bases, reduction and oxidation, ionic and covalent bonding, molecular structure, VSEPR, and MO theory.

There are three hours of lecture and one two-hour laboratory per week. Students who have received credit for CHE 111 or CHE 112 cannot subsequently receive credit for CHE 101. In the case that a student completes CHE 101 prior to completing CHE 111 or CHE 112, then CHE 101 will count as free elective credit only.

## **CHE 112 GENERAL CHEMISTRY II**

**4 CREDITS**

*Prerequisite: CHE 111 or equivalent*

This is a second semester course in a two-semester sequence which presents the basic laws and concepts of general quantitative chemistry. This course will focus on the principles of reactivity of solids, liquids and gases with respect to chemical kinetics, chemical equilibrium, acid-base chemistry, precipitation reactions, entropy, free energy, red-ox chemistry, and an introduction to nuclear chemistry. There are three hours of lecture and one two-hour laboratory per week. (Course description change, effective Fall 2010.)

## **CHE 241 ORGANIC CHEMISTRY I**

**4 CREDITS**

*Prerequisite: CHE 112 or equivalent*

This course is the first course of a two-semester sequence of basic organic chemistry covering saturated, unsaturated

and aromatic hydrocarbons, alkyl halides, their reaction, structure, reaction mechanisms, stereochemistry, mass spectrometry, and spectroscopy. There are three hours of lecture and one two-hour laboratory per week.

#### **CHE 242 ORGANIC CHEMISTRY II**

**4 CREDITS**

*Prerequisite: CHE 241 or equivalent*

This course is the second course of a two-semester sequence of basic organic chemistry covering aromatic reactions, the chemistry of functional groups: alcohols and thiols, ethers, epoxides and sulfides, aldehydes and ketones, carboxylic acids, amines, and some biological compounds. There are three hours of lecture and one two-hour laboratory per week.

#### **CHE 260 INSTRUMENTAL ANALYSIS**

**4 CREDITS**

*Prerequisite: CHE 112 or equivalent*

This course provides an intensive study of instrumental analysis for the evaluation, separation, isolation and identification of the chemical components of a variety of both pharmaceutical and environmental samples. Introductory topics covered are measurement, sampling protocol, methods involving preparation of standards and the basic components common to most instruments. Specific topics deal with sample preparation, instrument design, calibration, operation, data collection, spectral analysis and troubleshooting for each instrument being studied. The instruments used in this course are UV/VIS, FITR, AA, GC/MS and HPLC. There are two hours of lecture and one three-hour laboratory per week.

#### **CHE 280 BLOODSTAIN PATTERN ANALYSIS**

**3 CREDITS**

*Prerequisite: CHE 100*

This course provides a basic and fundamental knowledge in the field of bloodstain pattern interpretation and illustrates the scientific principles and practical application of bloodstain pattern interpretation to actual casework. Emphasis is placed on the correct observation, documentation and interpretation of bloodstain patterns. Upon completion of this course students will have acquired an understanding of how bloodstain pattern analysis can assist in the investigation of crime scenes involving blood spatter. The curriculum follows the recommended 40-hour course curriculum set forth by the International Association of Bloodstain Pattern Analysts.

## **College Success Seminar**

#### **CSS 101 COLLEGE SUCCESS SEMINAR**

**1 CREDIT**

This course is designed to help students develop and enhance skills necessary for college success. Emphasis is placed on student self-reflection and success strategy application. Topics of individual and group exploration include campus resources, study skills, goal setting, learning styles, time management, and diversity. Students will identify individual academic and career goals and work to develop practical strategies to achieve these goals.

## **Communication**

#### **COM 100 COMMUNICATION AND LIFE SKILLS**

**3 CREDITS**

This course is designed to help students develop a fuller understanding of themselves and their interactions with other people. As an entry-level hybrid course, it may include many of the basic areas of the field of communication, such as interpersonal (communicating with self), verbal and non-verbal, intercultural, listening, interpersonal (dyadic or one-on-one), small group, leadership, public speaking, and organizational/business communication skills that should help students to become more effective and at ease in academic, social, work and family situations.

#### **COM 101 PUBLIC SPEAKING**

**3 CREDITS**

An introductory course offers the student the opportunity to understand and to improve public communication skills by writing and delivering a minimum of four speeches during the semester. These may include (but are not limited to): speaking to inform, speaking to persuade, speaking for special occasions, and speaking in small groups. At least one of these speeches must include the use of visual aids. Students will learn theories and techniques of writing effective speeches that are audience-centered, and they will participate in the performance, observation, and critical evaluation of public speaking presentations.

## **Computer Science**

#### **CSC 100 KEYBOARDING**

**1 CREDIT**

Teaches effective keyboarding skills while familiarizing students with common computer applications. The course facilitates writing research papers, compositions, and reports, as well as inputting information requiring use of the computer keyboard.

#### **CSC 101 COMPUTER ORIENTATION**

**1 CREDIT**

This course covers the computer terminology, computer hardware components and accessories, and the history of computers. Students will also get a brief hands-on introduction to word-processing and spreadsheet applications.

#### **CSC 102 INTRODUCTION TO MICROCOMPUTER APPLICATIONS**

**3 CREDITS**

This course focuses on the latest application software and operating systems used in the business world. The course will prepare students to be intelligent users of computers and to understand the basics of word processing, spreadsheets, database, and the Internet through "hands-on" laboratory experiences.

#### **CSC 121 FUNDAMENTAL CONCEPTS OF COMPUTING**

**3 CREDITS**

*Prerequisite: placement into MAT 101 or higher.*

This course introduces students to the fundamental ideas in computer programming. Students will be exposed to both object oriented and non-object oriented programming languages. Topics include flow charts, variables, loops, if statements, events, string commands and functions. Major emphasis is placed on problem solving, sound programming techniques, and good program design.

**CSC 201 ADVANCED SOFTWARE APPLICATIONS****3 CREDITS***Prerequisite: CSC 102 or permission of instructor.*

This course is designed to give students a thorough exposure to the advanced computer software skills that employers are seeking. In addition, it will satisfy all the objectives for the MCAS (Microsoft Certified Application Specialist) certification. The MCAS Program is an international certification for users of the Microsoft Office products to demonstrate their skills in Word, Excel, PowerPoint, and Access. The certification provides businesses with a benchmark for skills assessment for prospective employees and a measureable assessment of training and/or experience for current employees; also, it provides potential employees with a valuable credential that enhances their productivity in the workforce.

**CSC 202 DATABASE SYSTEMS****3 CREDITS***Prerequisites: CSC 102 and CSC 121*

This is a comprehensive course in database management with a significant focus on, database design and application development. Topics include advanced queries, SQL, data entry forms, relational reports, database programming, database normalization, and relational database design.

**CSC 215 WEB DESIGN & PROGRAMMING****3 CREDITS**

This course will enable students to design, develop and maintain a website on the Internet. Students shall learn the basics of graphical editing and manipulation, HTML coding, website construction, uploading, maintenance and ongoing administration. Exercises and projects will allow students to apply the principles of web design to their own sites that will be created in the course.

**CSC 217 COMPUTER PROGRAMMING****3 CREDITS***Prerequisite: CSC 121*

This course teaches computer programming using an object oriented programming language to solve a variety of different problems. Topics include program design, program documentation, public and private variables, conditional statements, loops, functions, subroutines and arrays.

**CSC 220 OPERATING SYSTEMS****3 CREDITS***Corequisite: CSC 121*

In this course students will build a solid foundation of knowledge in the most widely used operating systems for personal computers. Students will learn to install, configure and troubleshoot operating systems. Students will also learn how to use operating systems for file management, memory management and a variety of other tasks.

**CSC 221 INTERMEDIATE COMPUTER PROGRAMMING****4 CREDITS***Prerequisite: CSC 217*

Intermediate course in computer programming presenting algorithm design and computer implementation techniques. Structured programming using top-down organization of data and its effect on algorithms will be discussed.

**CSC 225 COMPUTER HARDWARE****3 CREDITS**

In this course students will learn the function of all major hardware components in the personal computer. Students will also learn how to diagnose and troubleshoot computer hardware and peripheral devices. Appropriate safety measures for working on personal computers will also be covered.

**CSC 230 INTRODUCTION TO NETWORKING****3 CREDITS**

In this course students will learn skills necessary to plan, install and troubleshoot a network in a corporate environment.

**CSC 240 NETWORKING II****3 CREDITS***Prerequisite: CSC 230*

This course extends the concepts presented in Intro to Networking (CSC 230) through additional study of network implementations coupled with hands-on activities. Topics include the study of network design, administration, security and troubleshooting. In addition to those topics, router configurations will be examined. Activities include hands-on application and practice in the lab environment that covers the theories discussed in the classroom.

**CSC 280 TECHNOLOGY PRACTICUM SEMINAR****3 CREDITS***Prerequisite: Students must have completed at least 12 credits of CSC courses.*

A supervised, on-the-job, work experience related to the student's course of study. Students can obtain information about approved internship sites from the instructor of the course or the technology department chair. Students must apply for the internship portion of the course as they would any job. Students are required to attend weekly seminars in addition to working 120 hours at the internship site.

## Criminal Justice

**CRI 101 INTRODUCTION TO CRIMINAL JUSTICE****3 CREDITS**

This course is a study of the criminal justice system's philosophical and historical background; with special emphasis on the heritage of the British and American Criminal Justice systems, the government role of law enforcement and correction, and the role of various agencies of our criminal justice system.

**CRI 201 CRIMINAL LAW****3 CREDITS***Prerequisite: CRI 101*

This course undertakes an examination of crime and the elements of offenses. Various mental states, capacities to commit crime, and defenses to criminal liability are intensely studied. The course includes a detailed study of some major crimes as defined in the New York State Penal Law.

**CRI 203 CRIMINAL PROCEDURE LAW****3 CREDITS***Prerequisite: CRI 101*

This course is an overview of criminal procedure law including: constitutional provisions, rules of evidence, trial and pre-trial processes, arrest, search and seizure, admissibility of admissions and confessions.

**CRI 204 PROBATION & PAROLE****3 CREDITS***Prerequisite: CRI 208 or permission of instructor.*

This course includes the history and philosophy of probation and parole: the function, coordination and operation of probation and parole boards. Attention is focused on utilization of parole and probation as tools of social control with special emphasis on their sociological implications.



**CRI 205 MANAGEMENT & SUPERVISION IN  
CRIMINAL JUSTICE**

**3 CREDITS**

*Prerequisite: CRI 101*

This course is designed to offer the Criminal Justice student an understanding of the organizational aspects of a police department, how the structure of a department affects the outcome, as well as how proper organizational design will attain a desired community service. The early history of organized policing, including department make-up and objectives will be discussed and followed through the evolution of today's modern multifaceted police department structure.

**CRI 206 FAMILY VIOLENCE**

**3 CREDITS**

*Prerequisite: CRI 101, PSY 101, SOC 101, or HUS 101*

This course examines the moral, social and ethical implications of family violence. The focus is on understanding the dynamics and causes of family violence from social, legal, and medical perspectives. Medical and legal responses to family violence will be explored as well as efforts of community organizations and social agencies in preventing family violence and in protecting its victims. This course can be used for criminal justice, social science or elective credit.

**CRI 207 CRIMINAL INVESTIGATION**

**3 CREDITS**

*Prerequisite: CRI 101*

This course is designed to provide the student with a working knowledge of the academic, theoretical and practical application of criminal investigative techniques related to the lawful acquisition and development of evidence, prior to the introduction of advanced or specialized criminalistics and forensic sciences. The course has been upgraded to include basic instruction in conducting preliminary investigations and the collection and reporting of intelligence related to terrorist organizations. The course will also focus on the employment of applicable federal statutes in conjunction with covert and overt investigative techniques.

**CRI 208 CORRECTIONS THEORY & PRACTICE**

**3 CREDITS**

*Prerequisite: CRI 101*

This course is a study program for the treatment of criminal offenders: the courts, probation and parole problems, and a survey of the theories and practices in today's penal system.

**CRI 209 DRUGS & CRIME**

**3 CREDITS**

*Prerequisite: CRI 101*

This course is designed to provide the student with a working knowledge of the theoretical and practical problems related to the unlawful trafficking and use of controlled substances and the social, health, economic and political ramifications of unlawful drug trafficking and illicit drug use. Specific emphasis will be placed on the impact of unlawful drug trafficking and illicit drug use on law enforcement and correctional agencies, youths, families, education, employment, and other institutions of government. Special attention will be focused on the relationship between international drug trafficking and the funding of terrorism.

**CRI 210 POLICE OPERATIONS**

**3 CREDITS**

*Prerequisite: CRI 101*

This course teaches the line activities of law enforcement agencies with emphasis on the patrol officer and the patrol

function. Various calls for service, other activities of the patrol officer and the proper recommended procedures for dealing with these situations in light of legal and constitutional restrictions are discussed.

**CRI 212 WOMEN & THE CRIMINAL JUSTICE SYSTEM**

**3 CREDITS**

*Prerequisite: CRI 101*

This course explores the changing roles of women in today's criminal justice system. The student will explore the changing roles and critical issues surrounding women as offenders, victims and professionals within this system.

**CRI 213 SECURITY THEORY & PRACTICE**

**3 CREDITS**

*Prerequisite: CRI 101*

This course teaches an understanding of the role security plays in modern society. The historical, legal, philosophical, and operational aspects of security will be examined. The various forms of settings for security operations are discussed with the administrative, personnel and physical needs of each.

**CRI 214 ETHICS IN CRIMINAL JUSTICE**

**3 CREDITS**

*Prerequisite: CRI 101 and completion of 24 credits.*

This course covers theoretical and practical aspects of criminal justice ethics including examination of the ethical duties of law enforcement officers, other criminal justice officials, and administrators. This is an applied ethics course that utilizes a practical approach to analyzing ethical dilemmas that criminal justice practitioners face in the real world.

**CRI 280 FIELD PRACTICUM IN CRIMINAL JUSTICE**

**3 CREDITS**

*Prerequisite: Second year Criminal Justice students or permission of instructor.*

This practicum is a unique plan of educational enrichment. It is designed to enhance self-realization and direction by means of integrating classroom study with planned and supervised experience. It offers the student educational and vocational learning situations in criminal justice agencies. Field experience: approximately 180 hrs. per semester.

## Economics

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**ECO 101 PRINCIPLES OF MICROECONOMICS**

**3 CREDITS**

*Prerequisites: MAT 100 or placement in MAT 103 or higher.*

This course is an analytical introduction to the mechanisms for allocating economic resources and distributing income. The course examines supply and demand, elasticity applications, price determination and utility theories, costs and outputs in various market structures, regulation and deregulation of business, financial markets, the effect of globalization on the micro economy, the operation of factor markets and international trade relations, while assessing government policies intended to alter resource allocation improve efficiency and redistribute income.

**ECO 102 PRINCIPLES OF MACROECONOMICS**

**3 CREDITS**

*Prerequisites: MAT 100; placement in MAT 103 or higher.*

This course is a survey introduction to economic aggregates and their determinants. The course examines market relationships, aggregate performance objectives and measurements, national income determination theories,

money and the banking system, fiscal and monetary policies and productivity and economic growth. Issues analyzed include the effectiveness of stabilization policies, the inflation - unemployment trade off, and the deficit dilemmas as the global implications of U.S. macroeconomic policies and the effects of U.S. and world free-trade agreements.

## Education

### EDU 118 CHILDHOOD GROWTH AND DEVELOPMENT

**3 CREDITS**

*Corequisite: EDU 120*

*(cross registration at SUNY Plattsburgh)*

This course is designed for students who plan to pursue a degree in education and is for education majors only. The course is designed to study cognitive, social, physical, and emotional development across the lifespan. Factors affecting development and learning will be investigated, such as cultural and family variables. Major theoretical perspectives will serve as frameworks for developing links between theory and experience. Students registering for this course must also cross-register for the corequisite, EDU 120 at SUNY Plattsburgh.

## Electronics Technology

### ETE 101 ELECTRICAL CIRCUITS I

**4 CREDITS**

*Prerequisite: Placement into MAT 101 or higher.*

This course presents the fundamentals of electricity as they apply to direct and alternating current circuits. Topics include the concepts of voltage, current, resistance, and power and their application to series and parallel circuits. Magnetism and the concepts of capacitance and inductance are also included. Laboratory activities allow students to gain hands-on experience making measurements on circuits and interpreting the data collected. There are three hours of lecture and two hours of laboratory per week. Students continuing on to ETE 102 will need to take MAT 105 concurrently with ETE 101.

### ETE 102 ELECTRICAL CIRCUITS II

**4 CREDITS**

*Prerequisite: ETE 101 and MAT 105 or equivalent*

*Corequisite: MAT 205 or equivalent*

This course is devoted to the analysis of AC circuits building on the concepts developed in the Electrical Circuits I course. Topics include network theorems, transformers, and analysis of RC, RL, and RLC circuits. The operation of filters and polyphasic power generation are also included. Laboratory activities allow students to gain hands-on experience making measurements on circuits and interpreting the data collected. There are three hours of lecture and two hours of laboratory per week.

### ETE 103 COMPUTER PROGRAMMING FOR ELECTRONICS

**2 CREDITS**

This course is devoted to the study of the C programming language. C is used as a vehicle for problem solving in future courses in the Electronics Technology and Computer Technology Programs. Topics include input/output operations, functions, control statements, arrays and strings, and pointers.

### ETE 104 ELECTRONICS I

**4 CREDITS**

*Prerequisites: ETE 100 or ETE 101 and MAT 105 or equivalent.*

This course is the first of a three semester sequence in electronics. Topics include diodes and their applications, bipolar transistors, and field effect transistors. Biasing techniques are analyzed through the construction of load lines and calculation of quiescent points. A laboratory is included where students will become proficient using test equipment, and construct and test circuits described in class. There are three hours of lecture and two hours of laboratory per week.

### ETE 105 DIGITAL ELECTRONICS I

**3 CREDITS**

*Prerequisite: ETE 100 or ETE 101*

This first course in digital electronics includes number systems, Boolean algebra, the logic gates used in digital circuits and flip-flop devices. Applications of circuits critical to digital systems are emphasized. There are two hours of lecture and two hours of laboratory per week.

### ETE 106 PHOTOVOLTAIC SYSTEMS THEORY AND DESIGN

**3 CREDITS**

*Prerequisite: ETE 100 or ETE 101*

This course is designed to instruct the student in the theory and design of photovoltaic systems and their practical installation and operation. The course includes semiconductor operational theory, properties of silicon and semiconductor material, solar cell manufacturing and companies involved, history of solar power and its uses, photovoltaic systems safety, site assessments, system design, and adapting mechanical and electrical design. Layout skills are developed and the National Electrical Code is examined. There are two hours of lecture and two hours of laboratory per week.

### ETE 107 PHOTOVOLTAIC SYSTEMS INSTALLATION AND MAINTENANCE

**3 CREDITS**

*Prerequisite: ETE 106*

This course is designed to instruct the student in the installation and maintenance of photovoltaic systems. The course includes the installation of components and sub-systems on site, concerns with owners, utilities, and permit agencies, completion of lists of electrical components and material, array alignment based on location, building and roof design, aesthetics, wind loading, equipment support, labeling of equipment and components, methods and procedures for visual system checks, open circuit voltage testing, short circuit tests, system specific tests, calculating efficiency factors, battery maintenance, various test equipment, safety concerning testing of equipment components and batteries, system start up and shut down, and emergency operations. There are two hours of lecture and two hours of laboratory per week.

### ETE 202 INTRODUCTION TO INDUSTRIAL ELECTRICITY

**3 CREDITS**

*Prerequisite: ETE 100 or ETE 101*

Teaches and demonstrates control circuits, switch gears, protective devices, buses, breakers, and power distribution systems found in the industrial environment. Control circuits for both DC and AC motors are explained along with basic motor theory. Common power plant distribution systems are studied. The theory, use, and programming of Programmable Logic Controller (PLC) systems in industry is emphasized and practiced. Students will also study the

National Electrical Code. There are two hours of lecture and two hours of laboratory per week. The two-hour lab will provide practical, hands-on experience for students as they are required to design, build, test, troubleshoot, and repair various circuits and devices as well as programming PLC.

#### **ETE 204 ELECTRONICS II**

**4 CREDITS**

*Prerequisites: ETE 102 and ETE 104*

This second course of the electronics sequence is devoted to the analysis of amplifier circuits. Various single stage and cascaded amplifier circuits are studied using bipolar transistors, junction field effect transistors (JFETs) and metal oxide field effect transistors (MOSFETs). The response of amplifier circuits to a range of frequencies is also studied. There are three hours of lecture and two hours of laboratory per week.

#### **ETE 205 DIGITAL ELECTRONICS II**

**4 CREDITS**

*Prerequisite: ETE 105*

This course includes analysis of circuits for digital arithmetic, counters, registers, interfacing digital and analog systems and memory devices. Characteristics of the various families of IC's are also discussed. There are three hours of lecture and two hours of laboratory per week.

#### **ETE 207 MICROCONTROLLER FUNDAMENTALS**

**4 CREDITS**

*Prerequisites: ETE 103 and ETE 105*

In this course students study the PIC microcontroller, its architecture, and instructions set. Students write programs in assembly language and C to control simple electronic circuits using this device. There are three hours of lecture and two hours of laboratory per week.

#### **ETE 208 OPERATIONAL AMPLIFIERS**

**3 CREDITS**

*Prerequisite: ETE 204*

This is the third course of the electronics sequence. It is devoted to the study of the properties and characteristics of operational amplifiers, and how negative feedback affects their behavior. Both linear and non-linear applications are studied. There are two hours of lecture and two hours of laboratory per week.

#### **ETE 210 MICROCOMPUTER SYSTEMS**

**4 CREDITS**

*Prerequisites: ETE 105 and ETE 207*

This course is a study of 16 bit and 32 bit microprocessors. The Intel 80x86 family is used. Topics include software architecture, hardware architecture, assembly language programming and interfacing. There are two hours of lecture and two hours of laboratory per week.

## English

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*\*Developmental English courses or placement are a prerequisite for any English course above ENG 100.*

#### **ENG 093 READING & STUDY SKILLS**

**0 CREDITS**

*Required on the basis of placement test.*

The purpose of this course is to teach students the reading and study skills necessary for success in college. This course provides students with effective strategies for increasing vocabulary, taking notes, and reading college-level texts. The course promotes active reading including the formation

of inferences, conclusions, and judgments. Students are encouraged to consider the possible applications of what they read. By the end of the semester, students will take a department-wide exit examination in reading comprehension. Students must earn a "C" or better for their work during the semester and pass the exit exam to pass the course.

#### **ENG 094 FUNDAMENTALS OF COMPOSITION**

**0 CREDITS**

*Required on the basis of placement test.*

This writing course is designed to help students develop the writing skills they will need in college, and, more specifically, to prepare them for English 101. The course focuses on the writing process and developing writing skills in two areas: out-of-class compositions and in-class essay tests. Students learn to write short papers that are clear, concise, unified, and relatively free of mechanical and grammatical problems. Students write a minimum of eight papers, some out of class and at least two in class. Students must earn a "C" or better to pass the course. Near the end of the course, students will complete a timed writing that will be evaluated by the English Department to assess the writer's preparedness to move on to English 101.

#### **ENG 100 COLLEGE READING**

**3 CREDITS**

*Prerequisite: ENG 093 or placement.*

This course teaches students to apply reading strategies such as those taught in English 093 (including annotation and outlining/mapping) to many of the types of reading that they will encounter in the college classroom: essays, poems, short stories, textbook chapters, and electronic media. The course approaches reading as a transaction between an author and a reader, so students are taught to question and evaluate texts in both oral and written discussions and to determine possible applications of the ideas and information presented in the texts. (Course addition, effective Fall 2010.)

#### **ENG 101 ENGLISH COMPOSITION**

**3 CREDITS**

*Students must place into this class.*

This course is designed to help students acquire the skills they will need for academic success. They will learn to produce essays that are clear, concise, and unified. The writing process is emphasized. Students write papers both out of class, at least one of which requires outside sources and documentation, and in class. Near the end of the course, students will complete a final in-class essay which will be evaluated by the English Department to assess the writer's preparedness to move on to other college-level writing courses.

#### **ENG 102 LITERATURE & COMPOSITION**

**3 CREDITS**

*Prerequisite: ENG 101*

This course is designed to introduce students to literature and to writing about literature. Since passing ENG 101 is a prerequisite to this course, students are expected to have mastered basic writing skills and be able to write an effective essay. ENG 102 emphasizes oral and written analysis of poetry, fiction, and drama. Students write a minimum of six papers, some out-of-class and at least two in-class.

**ENG 120 CRITICAL READING****3 CREDITS***Prerequisite: ENG 101. Counts as Humanities credit or English credit.*

This course enhances reading comprehension and analytical abilities in a variety of academic areas. It develops student skill in evaluating oral and written material, focuses on analysis of logic and evidence, strengthens critical thinking and communication skills through written critiques of expository prose, and builds general knowledge through interactive reading across disciplines regarding contemporary issues.

**ENG 201 INTRODUCTION TO FICTION****3 CREDITS***Prerequisite: ENG 102 or permission of instructor.*

This course is an introduction to the study of fiction. Students explore the historical development of fiction as a literary form and learn about the elements of fiction in order to read, interpret, and react critically. In addition, students analyze the interaction of these various elements to create a whole in a work of fiction. Through written and oral discussion of short stories and novels, students work to understand the relationship between author, fiction, and reader.

**ENG 206 INTRODUCTION TO NEWSWRITING****3 CREDITS***Prerequisite: ENG 102 or permission of instructor.*

This course is designed to teach the skills needed for writing print media. While the focus is on news writing (summary leads, inverted pyramid-style journalism), the course also covers news gathering, coverage of special beats, feature writing, journalism law and ethics. Students will report real events and learn to work on deadline.

**ENG 210 EARLY AMERICAN LITERATURE****3 CREDITS***Prerequisite: ENG 102 or permission of instructor.*

The course explores American literature from pre-colonial years to the Civil War. Readings include non-fiction, such as journals of exploration and captivity, political essays, sermons, and short and long fiction. The course follows chronological order and considers political, social, religious, and economic influences on writers. Students will read well-known authors such as Bradstreet, Franklin, Hawthorne, Thoreau, Whitman, and less widely-published minority writers.

**ENG 211 MODERN AMERICAN LITERATURE****3 CREDITS***Prerequisite: ENG 102 or permission of instructor.*

The course explores American literature from post-Civil War era to the present. Readings include non-fiction, poetry, drama, and short and long fiction. The course follows chronological order and considers political, social, religious, and economic influences on writers. Students will read well-known authors such as Twain, James, B.T. Washington, Chopin, and Faulkner, and less widely-published minority writers.

**ENG 220 MULTICULTURAL AMERICAN LITERATURE****3 CREDITS***Prerequisite: ENG 102 or permission of instructor.*

This course explores literature by Americans of Asian, African, Hispanic, and Native heritage. Readings include non-fiction, poetry, short stories, and novels. The course is designed to increase student awareness of the multicultural nature of American life and literature. The values and beliefs of non-European cultures in America are examined through the readings.

**ENG 225 NINETEENTH & TWENTIETH CENTURY WORLD LITERATURE****3 CREDITS***Prerequisite: ENG 102 or permission of instructor.*

This course introduces students to an international collection of writers, cultures, and literature. Students read a variety of literary genres, and the course approaches literature as a vehicle for analysis and discussion of the global nature of writing and reading, as well as the diversities that the literature reflects.

**ENG 231 CREATIVE WRITING****3 CREDITS***Prerequisite: ENG 102 or permission of instructor.*

This course is a study of basic creative writing techniques, including those employed in fiction, poetry, and drama. Through class participation, students are encouraged to attain the kinds of insights into literature and creativity that accompany artistic expression.

**ENG 233 LITERATURE & FILM****3 CREDITS***Prerequisite: ENG 102 or permission of instructor.*

Literature and Film examines the relationship between literary and cinematic forms of narrative. Through the reading of selected short stories, plays, and novels, and the viewing of feature-length films, this course stresses the similarities and dissimilarities between the two art forms, as well as the nature and processes of adaptation. Students will also develop skills in film analysis and criticism in written responses to the films that are viewed.

**ENG 234 SPECIAL STUDIES IN ENGLISH****3 CREDITS***Prerequisite: ENG 102 or permission of instructor.*

This is a flexible course in which an instructor teaches some aspect of literature, writing and language for which he or she has a special competence when there is sufficient student interest.

**ENG 235 TECHNICAL WRITING****3 CREDITS***Prerequisite: ENG 101 or permission of instructor. (Does not fulfill a humanities requirement.)*

This course focuses on the forms of written communication required to obtain and hold a job, to participate in business, to report in technical and investigative fields, and to serve in community or professional organizations. Students will receive instruction and practice in writing summaries, correspondence, instructions, publicity releases, reports, brochures and proposals. Students will also learn to choose a format and style appropriate for their audience and purpose.

**ENG 240 LITERATURE & NATURE****3 CREDITS***Prerequisite: ENG 102*

This course examines the work of writers – traditional and contemporary – who respond to nature in ways that are scientifically informed, but also carry a personal voice and a concern for literary values. Students will read and respond to the writing of authors who record their observations of natural details, promote an appreciation of the natural environment, and relate a sense of human responsibility in the natural world. Since English 102 is a prerequisite for this course, students are expected to have acquired the skills necessary to write essays in response to literature and to actively participate in class discussions of the readings.

## ENG 242 LITERATURE & POPULAR CULTURE

3 CREDITS

*Prerequisite: ENG 102 or permission of instructor.*

This course examines genres of literary popular culture as expressions of how a given society views itself and the world. Examples include the western, the romance, horror, science fiction, and best-selling fiction. Writing assignments will require students to produce informed critical analysis of popular culture. Topics vary based on the instructor's special interest.

## ENG 245 CHILDREN'S LITERATURE

3 CREDITS

*Prerequisite: ENG 102 or permission of instructor.*

This course provides an introduction to various genres of children's literature and the important role literature plays in a child's development. Students will learn to apply evaluation criteria in choosing and reviewing the quality of literature selections. They will critique, both orally and in writing, a wide variety of literature for children and will establish and maintain a database of their work. They will also learn and demonstrate strategies for developing a child's interaction and response to literature.

## ENG 250 ENGLISH LITERATURE 1800 TO THE PRESENT

3 CREDITS

*Prerequisite: ENG 102 or permission of instructor.*

English Literature 1800 to the Present is a study of British Literature from the Romantic period to the present. Readings include a variety of forms – from short stories, novels and essays, to letters and poetry – paying particular attention to themes (Revolution/War/Empire/Colonialism, the Rights of Women, Religion and Science, and the Role of the Artist). Students read works by such authors as Blake, Wordsworth, Austen, Hardy, Eliot, Yeats, Tennyson, and Woolf.

# ESL (English as a Second Language)

**Prerequisites: Non-native speaker of English. TOEFL test score below 500 and/or CCC Placement Test or permission of instructor. ESL courses count as Humanities Elective Credit.**

## ESL 100 INTERMEDIATE COMPOSITION

6 CREDITS

This course is designed to introduce **non-native English speakers** the writing skills they will need in college. The course focuses on the writing process and developing writing skills in two areas: out-of-class compositions and in-class essay tests. Students learn to write short papers that are clear, concise, unified, and relatively free of mechanical and grammatical problems. Students write a minimum of eight papers, some out of class and at least two in class. Near the end of the course, students will complete a timed writing which will be evaluated by the department to assess the writer's preparedness to move on to ESL 101.

## ESL 101 ADVANCED COMPOSITION

3 CREDITS

This course is designed to help **non-native English speakers** to acquire the college level writing and language skills they will need for academic success. They will learn to produce essays that are clear, concise, and unified. The writing process and language skills at the advanced level are emphasized. Students write papers both out of class and in class. At least one paper requires outside sources and documentation. Near the end of the course,

students will complete a final timed in-class essay which will be evaluated by the English faculty to assess the writer's preparedness to move on to other college-level writing courses. This course satisfies the ENG 101 basic communication requirement.

## ESL 110 AMERICAN CULTURE

3 CREDITS

This class is to be taken by international students in their first semester. This course is designed to introduce American idioms, grammar and writing, as well as to familiarize students with American culture and guide students through the stages of the acculturation process.

## ESL 120 INTERMEDIATE LISTENING AND SPEAKING

3 CREDITS

This course designed to teach **non-native English speakers** the basics of the pronunciation of American English (the sounds, intonation, stress, and rhythm). The course is designed to develop students' clarity of speech and listening comprehension skills through a variety of listening/speaking activities.

## ESL 121 ADVANCED LISTENING AND SPEAKING

3 CREDITS

This course is designed for the **non-native speaker of English** to improve listening comprehension, speaking, note-taking, and discussion skills at the advanced level to prepare for academic coursework. Students will develop listening strategies and critical thinking skills through lectures, discussions, debates, readings, and writing assignments on cultural topics, and gain a deeper understanding of North American culture.

## ESL 130 INTERMEDIATE READING SKILLS

3 CREDITS

This course is designed to help **non-native speakers of English** acquire the intermediate level reading skills necessary for success in college. This course provides students with effective strategies for increasing vocabulary, taking notes, and reading college-level texts. The course promotes active reading skills that guide students from basic literal understandings of a text to interpretations, including the formation of inferences, conclusions and judgments.

## ESL 131 ADVANCED READING

3 CREDITS

This course is designed to teach **non-native English speakers** the advanced level of reading skills necessary for success in college. This course provides students with effective strategies for increasing academic vocabulary and for developing active reading skills that guide students from basic literal understandings of a text to higher-order thinking skills of analysis and synthesis, interpretation, evaluation, and application.

# Environmental Technology

## ENV 101 ENVIRONMENTAL SCIENCE

**4 CREDITS**

*Corequisite: ENG 101*

This course is an interdisciplinary science course that provides an overview of environmental processes, human impact on the global environment, and solutions to environmental problems. There will be a strong emphasis on environmentally sustainable practices, pollution prevention and control, conservation and ecological factors, economic issues and influences on environmental policies, and renewable versus nonrenewable energy and mineral resources. There are three hours of lecture and one two-hour laboratory per week.

## ENV 210 ENVIRONMENTAL TECHNOLOGY

**4 CREDITS**

*Prerequisite: ENV 101, GEL 101, or MET 101; MAT 105 or equivalent.*

The physical and chemical nature of soil, water, and air in a variety of geologic settings is the background for applying practical methods of site characterization. Topics include pollution sources and the fate of pollutants in the environment. Emphasis is placed on technologies for sampling environmental media, handling hazardous materials, pollution prevention and cleanup, and occupational health safety. Concepts are explored from the perspective of the environmental manager. Field methods and the use of Global Positioning System (GPS) and Geographic Information Systems (GIS), as tools used by environmental scientists, will be integrated into the course. There are three hours of lecture and one two-hour laboratory per week.

## ENV 211 WATER QUALITY OPERATOR

**1 CREDIT**

*Prerequisite: ENV 210; Corequisite: ENG 101*

Water quality standards are largely set by two major federal environmental statutes: the Safe Drinking Water Act, which specifies standards for drinking water, and the Clean Water Act, which regulates the discharge of pollutants. This course describes the guidelines established by federal, state and local regulations and their effect on plant operations. Instrumentation used to sample and measure water quality, and make repairs to valves, pumps, and other equipment are discussed.

## ENV 214 INTERNSHIP/FIELD TRAINING

**1 CREDIT**

*Prerequisites: ENV 101 and ENV 210  
Corequisites: ENV 220 and ENV 230*

The ENV Internship will provide students with a supervised, on-the-job, work experience related to environmental science technology. Students are required to work a minimum of forty hours at a sponsor site and meet with the instructor for approximately four class hours during the semester.

## ENV 215 ENVIRONMENTAL SITE ASSESSMENT

**3 CREDITS**

*Prerequisite: ENV 210; Corequisite: ENG 101*

This course examines recognized environmental conditions and good commercial and customary practice in the United States of America. Conducting an environmental site assessment of a parcel of commercial real estate with respect to the range of contaminants within the scope of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. 9601) and petroleum products will be addressed.

## ENV 216 HAZWOPER/HAZMAT

**2 CREDITS**

HAZWOPER (Hazardous Waste Operations and Emergency Response) is at the intersection of three Federal regulatory agencies (EPA, OSHA, DOT) and includes several career fields (science, technology, engineering, medicine, toxicology, law, psychology, organizational management, loss prevention, QA/QC, construction, waste management, etc.). The purpose of this course is to ensure awareness and promote safety among employees who may be exposed to chemical hazards in the work-site. This course meets the mandated OSHA requirements for the classroom training portion of personnel engaged in hazardous waste operations as outlined in 29 CFR 1910.120. This certification is a job requirement for many entry-level positions in the area of environmental consulting.

## ENV 220 SEMINAR IN ENVIRONMENTAL ISSUES

**1 CREDIT**

*Prerequisite: ENV 101 or equivalent*

This course provides the student with an opportunity to discuss in depth a local environmental issue that is indicative of our region. The students will work together to analyze the environmental issue from all aspects. All public documents related to the issue will be reviewed and students will participate in any public hearing or forum related to the issue. This course is offered in the Spring Semester.

## ENV 230 SIMULATED ENVIRONMENTAL IMPACT STATEMENT PROJECT

**1 CREDIT**

*Corequisite: ENV 101 or equivalent*

This course allows the student to participate in a simulated Environmental Impact Statement (EIS) on a fictitious project. The students work together to prepare the EIS document that thoroughly analyzes the environmental consequences of the project. The students will prepare their findings and present them in a mock hearing to the public for scrutiny. This course is offered in the Spring Semester.

# Foundations for College Success

## FCS 101 FOUNDATIONS FOR COLLEGE SUCCESS

**3 CREDITS**

This course is designed to assist the student in obtaining the skills, services and self-awareness needed to reach his/her educational and life objectives. Topics include self-assessment, CCC student services and resources, goal setting, self-management, cultural awareness, study strategies and, critical thinking. *(Course addition, effective Fall 2010.)*

# French

## FRE 101 ELEMENTARY FRENCH I

**3 CREDITS**

Elementary French I is designed for the beginning student with no previous experience in French. The main objectives of this course are to help students develop effective communication skills in French through the elementary development of the four basic language skills (listening, speaking, reading and writing), while focusing on and critically examining cultural beliefs, values and aspects of everyday life in Francophone societies.

## FRE 102 ELEMENTARY FRENCH II

**3 CREDITS**

*Prerequisite: FRE 101 or*

*2-3 units of high school French, or equivalent.*

Elementary French II is a direct continuation of FRE 101 with further development of the four language skills to a high novice level and continued introduction to Francophone culture.

## FRE 201 INTERMEDIATE FRENCH I

**3 CREDITS**

*Prerequisite: FRE 102 or*

*4 units of high school French, or equivalent.*

Intermediate French I is a second year, first semester course designed for students with previous experience in French. The main objectives of this course are to help students develop effective communication skills in French through the development of the four basic language skills (listening, speaking, reading and writing) and cultural knowledge.

## FRE 202 INTERMEDIATE FRENCH II

**3 CREDITS**

*Prerequisite: FRE 201 or*

*5 units of high school French, or equivalent.*

Intermediate French II is a direct continuation of FRE 201 with further development of the four language skills and cultural knowledge to a high intermediate level.

## FRE 250 QUEBEC CULTURE & SOCIETY

**3 CREDITS**

*Pre-requisites: Completion of ENG 093 or ENG 100, or placement into college level reading; and placement into ENG 101.*  
The course offers an in-depth study of the Quebec people, their land, their history, their traditions, and their culture, and examines its relationship and influence upon the cultural heritage of northern New York. Students will examine these topics in a seminar format with an interdisciplinary approach, utilizing a variety of resources, including selected literature, newspaper articles, films, music, internet sites, television broadcasts, and an optional field trip to Quebec. This course is taught in English and does not require knowledge of French. *(Course addition, effective Spring 2011.)*

# Geography

## GEG 121 CULTURAL GEOGRAPHY

**3 CREDITS**

*Prerequisite: Completion of ENG 094 or placement in ENG 101.*

This course is an introduction to the relationships between humans and the lands where they live. Special emphasis is given to the role of languages, economic systems, ethnicity, religion and "life styles" such as agricultural or urban in helping to define a person or group's "place" in the world.

# Geology

## GEL 101 PHYSICAL GEOLOGY

**4 CREDITS**

*Prerequisite: ENG 094 and MAT 100 or equivalent*

This is an introductory course that covers Earth materials and the processes that develop and modify the composition, structure, and topography of the earth. Included is an overview of minerals, rocks, volcanoes, earthquakes, plate tectonics, geologic time, water resources, glaciation, structural geology, and energy and mineral resources. There are three hours of lecture and one two-hour laboratory per week.

# German

## GER 101 ELEMENTARY GERMAN I

**3 CREDITS**

For the beginning student with no previous experience in German. The course focuses on effective communication in everyday situations. The main objectives of German 101 are the elementary development of the four basic language skills (listening, speaking, reading, and writing), and introducing students to cultural materials concerning everyday life in German-speaking countries.

## GER 102 ELEMENTARY GERMAN II

**3 CREDITS**

*Prerequisite: GER 101 or*

*2-3 units of high school German, or equivalent.*

A direct continuation of German 101, focusing on communication in everyday situations with further development of the four basic language skills and introduction of cultural materials.

# Health and Physical Education

Various Associate Degree and Certificate programs require students to complete courses within the health and/or physical education disciplines. Individual degree requirements with regard to health and physical education courses can be located on the curriculum worksheet for each respective program. Students may enroll in health or physical education courses for elective credit, personal enrichment, or in pursuit of a degree in Physical Education Teacher Preparation, Recreation Management, Therapeutic Recreation, or Expeditionary Studies. The Health and Physical Education Department also offers courses leading to New York State Public High School Coaching Certification.

## HPE 100 SEMINAR IN HEALTH CAREER PATHWAYS

**1 CREDIT**

The seminar in Health Career Pathways is designed for the HSC student who wishes to explore a variety of health career opportunities and prepare for the expectations and rigors of the professional healthcare role.

*(For Health Studies Certificate students only.)*

## HPE 101 PERSONAL HEALTH

**3 CREDITS**

This course emphasizes the importance of knowledge, attitudes, and practices relating to personal health. Topics of discussion include, but are not limited to, emotional and mental health, drug and alcohol use, physical fitness, nutrition, child abuse identification, schools against violence in education training and human sexuality.

## HPE 102 SAFETY & FIRST AID

**3 CREDITS**

This course is a study of accident causation and prevention athletics, recreation, industry, home and community. The Red Cross or National Safety Council Standard First Aid and CPR Certifications are granted upon completion of required units and satisfactory skill demonstration.

## HPE 124 CAREER FITNESS TRAINING

**1 CREDIT**

This course introduces students to the key health-related fitness components: cardiovascular-respiratory fitness, muscular strength, muscular endurance, body composition

and flexibility. Special emphasis is given to the role these components play in preparing students to meet the fitness standards required for various careers in wind energy and turbine technology, law enforcement, firefighting, or the military. The connection between career fitness training and the ultimate goal of lifelong wellness and productivity will also be emphasized in this course.

This course is structured toward students who are already planning a career in wind energy & turbine technology, law enforcement, firefighting, or the military; students interested in exploring more about those types of careers; students who are employed in those types of careers and who need to improve and/or maintain their career fitness status; and students who want to improve their overall fitness with more discipline and challenge.

**HPE 125 NUTRITION FOR HEALTH & FITNESS**

**3 CREDITS**

*Prerequisite: MAT 098, ENG 093, and ENG 094*

This course emphasizes the important relationship between nutrition, health promotion, and fitness. Students will investigate sound, practical nutritional and fitness recommendations that reduce stress, boost the immune system, increase energy, decrease body fat, build muscle, protect good health, enhance performance and invest in lifelong well-being. Topics of discussion include nutritional requirements and guidelines, nutritional needs at various ages and fitness levels, nutritional and exercised-base weight management, and nutritional research and application.

**HPE 146 PHILOSOPHIES, PRINCIPLES, ORGANIZATION OF ATHLETICS IN EDUCATION**

**3 CREDITS**

This course examines basic principles and philosophies of interscholastic athletics as part of physical education. State, local, and national policies and regulations of athletics will be discussed. Other topics will include legal issues, the function and organization of leagues and athletic associations in New York State, personal standards for the coach as an educational leader, public relations, safety procedures, principles of school budgets, record keeping, purchasing, and facility usage.

**HPE 147 CARE & PREVENTION OF ATHLETIC INJURIES**

**4 CREDITS**

The course will provide a comprehensive analysis of the care and prevention of athletic injuries. This highly specialized area within the Sports Medicine realm is constantly changing; ensuring the athlete's health, safety, and overall success is imperative. Therefore, emphasis will be placed on developing a strong care and prevention foundation as students delve into selected principles and topics involving sports-related anatomy, biology, kinesiology, and physiology; sports-specific strength and conditioning; sports nutrition; sports supplements, ergogenic aids and substance abuse; current and on-going sports-related health issues; recognition, evaluation, treatment, and rehabilitation of athletic injuries; and athletic bracing, taping and wrapping.

This course is approved by the New York State Education Department and satisfies the Health Science Applied to Coaching requirement for certification as a coach in New York State.

**HPE 148 THEORY & TECHNIQUES OF COACHING SOCCER**

**2 CREDITS**

Theory and Techniques of Coaching Soccer explores the theories, practices and strategies involved in coaching the game of soccer. Emphasis is given to the objectives, rules, regulations, and policies of competitive athletics, as well

as to individual skills, team tactics, and organization and management skills necessary to administer a high school or intercollegiate soccer program.

**HPE 149 THEORY & TECHNIQUES OF COACHING BASKETBALL**  
**2 CREDITS**

Theory and Techniques of Coaching Basketball explores the theories, practices, and strategies involved in coaching the game of basketball. Emphasis will be placed upon objectives, rules, regulations, and policies of competitive athletics, as well as individual skill development, team strategy, organization and management practices pertaining to high school and intercollegiate basketball programs.

**Physical Education Activity Courses**

The following courses provide instruction in selected activities to help each student develop and maintain fundamental skills and lasting interests in the activity. Courses include two activity hours equal to one credit hour. Students may earn up to two credits for activity courses in intercollegiate sports.

- HPE 103 CROSS COUNTRY SKIING – 1 CREDIT**
- HPE 104 CANOEING – 1 CREDIT**
- HPE 105 PHYSICAL FITNESS – 1 CREDIT**
- HPE 106 GOLF – 1 CREDIT**
- HPE 107 HIKING AND CAMPING – 1 CREDIT**
- HPE 109 VOLLEYBALL – 1 CREDIT**
- HPE 111 RACQUETBALL – 1 CREDIT**
- HPE 113 TENNIS – 1 CREDIT**
- HPE 114 INDOOR SOCCER – 1 CREDIT**
- HPE 117 BEGINNING DOWNHILL SKIING – 1 CREDIT**
- HPE 118 AEROBIC CONDITIONING – 1 CREDIT**
- HPE 119 INTRODUCTION TO DANCE – 1 CREDIT**
- HPE 120 PILATES – 1 CREDIT**
- HPE 121 SNOWBOARDING – 1 CREDIT**
- HPE 123 CARDIO-KICKBOXING – 1 CREDIT**
- HPE 150 MEN'S SOCCER – 1 CREDIT**
- HPE 151 WOMEN'S SOCCER – 1 CREDIT**
- HPE 153 MEN'S BASKETBALL – 1 CREDIT**
- HPE 154 WOMEN'S BASKETBALL – 1 CREDIT**
- HPE 155 MEN'S BASEBALL – 1 CREDIT**
- HPE 156 WOMEN'S SOFTBALL – 1 CREDIT**

**History**

**HIS 101 HISTORY OF EARLY AMERICA**

**3 CREDITS**

*Prerequisite: Completion of ENG 094 or placement in ENG 101.*

This course surveys American development from early settlement through the Civil War. Tracing the origin and growth of political, economic, social and cultural institutions, special emphasis will be placed on key questions about the relevance and significance of American Colonial life, the American Revolution, Constitution making, Jeffersonian Republicanism, the War of 1812, Jacksonian Democracy, Manifest Destiny, slavery, and the Civil War.

**HIS 102 HISTORY OF MODERN AMERICA**

**3 CREDITS**

*Prerequisite: Completion of ENG 094 or placement in ENG 101.*

This course surveys and examines selected problems and opportunities facing the United States in the late Nineteenth



and Twentieth Centuries. Tracing the development and growth of political, economic, social and cultural institutions, special emphasis is on the significance and relevance of industrial growth, the Gilded Age, the Populist Revolt, the Progressive Reform movement, America as a World Power, World War I, the Roaring Twenties, the New Deal, World War II, The Fifties, The Dissenting Sixties, and the trials and tribulations of the Seventies and the Eighties.

### **HIS 121 ORIGINS OF WESTERN CIVILIZATION**

**3 CREDITS**

*Prerequisite: Completion of ENG 094 or placement in ENG 101.*

This course is an introduction to the Western tradition of historical study, with emphasis on how the beliefs and actions of past cultures continue to influence historical perspective. The course begins with the classical Greco-Roman civilizations, advances through Medieval society, and concludes with the development of a Renaissance perspective in art, commerce, politics and science. (This course can be used for social science, humanities or elective credit.)

### **HIS 122 WESTERN CIVILIZATION IN THE MODERN ERA**

**3 CREDITS**

*Prerequisite: Completion of ENG 094 or placement in ENG 101.*

This course is a survey of the actions and beliefs that have shaped Western Civilization from the Renaissance, through the ages of scientific and social revolution, including the Enlightenment and the Industrial Revolution. The course concludes with the 20th century and concepts of nationalism, globalization and progress as basic parts of our social structure. (This course can be used for social science, humanities or elective credit.)

### **HIS 132 HISTORY OF THE MODERN WORLD**

**3 CREDITS**

*Prerequisite: Completion of ENG 094 or placement in ENG 101.*

This course surveys the major civilized traditions during the past five centuries. Principle themes include the evolution of Western dominance, the development of the scientific and cosmopolitan world views, political revolutions East and West, the rise and fall of colonial empires, the impact of the industrial and democratic revolutions, global conflicts, and nation-building in the Third World. (This course can be used for social science, humanities or elective credit.)

### **HIS 208 HISTORY OF THE WAR IN VIETNAM**

**3 CREDITS**

*Prerequisite: Completion of ENG 094 or placement in ENG 101.*

This course examines the historical and political origins of the Vietnam Conflict dating back to World War II, and follows events internationally and domestically which ultimately culminated in the U.S. evacuation of Saigon in 1975. Students also study legacies involving warfare, veterans, and social change.

### **HIS 218 AMERICA IN THE 1960s**

**3 CREDITS**

*Prerequisite: Completion of ENG 094 or placement in ENG 101.*

This course is a historical examination of this turbulent and confusing decade. Special emphasis will be placed on the Kennedys, Vietnam, the Civil Rights Movement, and the Counter Culture.

### **HIS 250 TWENTIETH CENTURY WORLD HISTORY**

**3 CREDITS**

*Prerequisite: Completion of ENG 094 or placement in ENG 101.*

This course employs a global historical approach to the comprehension of the social, political, economic and cultural events which helped shape and define the twentieth century. Specific topics covered will include the advent of mass society, the end colonialism, nationalism, the rise of totalitarianism, two world wars, the cold war, various social and intellectual movements, scientific and technological advances and the reemergence of Asia as an increasingly relevant actor in global affairs.

## **Humanities**

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### **HUM 110 INTRODUCTION TO THE ARTS**

**3 CREDITS**

With the use of community and area resources in the arts, as well as classroom lectures, videos and reading assignments, the course provides the foundation needed for appreciation of the visual and performing arts.

### **HUM 285 INTERNATIONAL EXPERIENCE**

International Experience is designed to help students develop knowledge, skills and strategies to have a successful study abroad experience. Students will enhance their cultural observation, communication, and acculturation skills and learn basic knowledge of the language, history and culture of the country of study. This course begins in the fall or summer semester and continues beyond the end of the semester with travel and study abroad. Students will participate in classroom lectures and visits to sites that are historically and culturally significant in the country of study. The number of credits for this course will vary from 1-15 depending on the length of study abroad; 1 credit per week abroad plus one additional credit is the standard.

## **Human Services**

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### **HUM 101 INTRODUCTION TO HUMAN SERVICES**

**3 CREDITS**

This course is an introduction of the human service profession and the broad range of services and functions of the human service professional. The student will be exposed to the many roles that human service professionals play at their workplaces, types of agencies that employ human service workers, and a general overview of the human services profession. Students will learn about the helping process, aspects of multicultural work, ethical standards, legal and professional issues in the human service profession.

### **HUM 103 INTRODUCTION TO EARLY CHILDHOOD CARE AND DEVELOPMENT**

**3 CREDITS**

This course introduces the profession of early childhood care and development focusing on developmentally appropriate practices; types of programs in the field of early childhood and curriculum planning principles for young children's early educational experiences, along with providing an overview of historical and social perspectives related to early childhood education.

**HUS 104 OBSERVATION OF CHILDHOOD BEHAVIOR****3 CREDITS**

This course is designed to assist students develop an understanding of the general principles of early childhood education through observation of children and gain a basic understanding of developmentally appropriate practice. A combination of classroom and field based observation designed for prospective early childhood educators will be used.

**HUS 105 INTRODUCTION TO BASIC COUNSELING SKILLS USED IN HUMAN SERVICES PROFESSIONS****3 CREDITS**

This course is designed as an introduction to the skills used in basic counseling roles found in the human services field. Interviewing techniques, communication skills, problem-solving techniques, and conflict resolution are explored. Working with special populations is addressed. The course includes presentations, discussions, experiential activities, and role-playing which will afford the student the opportunity to test his/her knowledge and skills in the counseling field.

**HUS 110 CRITICAL TOPICS IN CHEMICAL DEPENDENCY****3 CREDITS**

This course serves as an introduction to the field of chemical dependency counseling. It explores each drug classification, an historical overview of cultural attitudes, the impact of abuse on individuals, families, and communities, treatment modalities, and international drug policies.

**HUS 111 FAMILY DEVELOPMENT CREDENTIAL, PART I****6 CREDITS**

*Corequisite: Current employment with a Human Services Agency with direct family contact.*

This course provides Human Service workers with the skills and competencies they need to facilitate family empowerment, and to help families attain a healthy self-reliance and interdependence within their communities. This course is the first half of the required curriculum for students who wish to qualify as candidates for the New York State Family Credential. Students will also complete 300 hours of supervised work experience in which to practice skills learned in the lecture portion of the class and which will form the basis of the portfolio that is submitted for the credential. The course is presented in an interactive format and the student will commit to role-playing as well as maintaining confidentiality.

**HUS 112 FAMILY DEVELOPMENT CREDENTIAL, PART II****6 CREDITS**

*Prerequisite: HUS 111; Corequisite: Current employment with a Human Services Agency with direct family contact.*

This course provides Human Service workers with the skills and competencies they need to facilitate family empowerment, and to help families attain a healthy self-reliance and interdependence within their communities. This course is the second half of the required curriculum for students who wish to qualify as candidates for the New York State Family Credential. Students will also complete 300 hours of supervised work experience in which to practice skills learned in the lecture portion of the class and which will form the basis of the portfolio that is submitted for the credential. The course is presented in an interactive format and the student will commit to role-playing as well as maintaining confidentiality.

**HUS 114 CHILD DEVELOPMENT ASSOCIATE, PART I****6 CREDITS**

*Corequisite: Be 18 years of age or older, hold a high school diploma or equivalent, be able to speak, read, and write well enough to fulfill the responsibilities of a CDA candidate, sign a statement of ethical conduct, obtain a field advisor, be currently working in an age-appropriate work setting approved by the Council's guidelines. This will allow the candidate to practice "on-the-job" the principles presented in this course, along with fulfilling the required 480 hours experience working with children in the age-appropriate group setting for which the candidate is applying for CDA credentialing.*

This course is designed to give candidates an in depth look at the early childhood profession. Based on the requirements for the Child Development Associate National Credential (CDA), the candidates will gain understanding in the following areas: providing a safe and healthy environment, principles of child development, observation skills of children's interactions, enriching the learning environment through strategic room arrangement and develop a working knowledge of the concept "Developmentally Appropriate Practices." Students will implement what they learn in childcare employment and through preparing the CDA portfolio. This course meets for 60 hours/semester.

**HUS 115 CHILD DEVELOPMENT ASSOCIATE, PART II****6 CREDITS**

*Prerequisite: HUS 114*

This course will give candidates a deeper understanding of early childhood best practices and theories. The candidate will gain a working knowledge in the following areas: providing stimulating activities to foster constructive play, explore positive discipline and provide a supportive environment for early development. The candidate will learn ways to develop partnerships with parents and strengthen their overall level of professionalism. Successful completion of the program fulfills the candidates working hours of 480 and education requirements to earn the CDA credential. This course meets for 60 hours/semester.

**HUS 116 OVERVIEW OF THE DEVELOPMENTALLY AND MENTALLY DISABLED POPULATIONS****3 CREDITS**

This course serves as an introduction to the field of working with the developmentally and mentally disabled populations. It explores the diagnoses and prevalence, and historical overview of cultural attitudes, the impact of stigma on individuals, families, and communities, and treatment modalities used in the care of individuals with disabilities.

**HUS 175 ETHICAL FOUNDATIONS OF CHEMICAL DEPENDENCY COUNSELING****3 CREDITS**

This course is designed as an introduction to the theories and ethical practices used in the chemical dependency counseling field. Historical development of each theory and current practical application will be stressed. Ethical situations that arise in counseling will be discussed and students' understanding of the need for ethical practice will be explored.

**HUS 200 CASE MANAGEMENT AND CRISIS INTERVENTION****3 CREDITS**

*Prerequisites: HUS 101 and HUS 105*

This course is designed to offer specialized, applied knowledge in the community services field to develop the skills and abilities in the case management process. The course will examine each step from intake through

termination. Actual agency forms will give the student the opportunity to compile and manage cases and prepare client files. Students will also explore the role of the Human Services professional by examining different theories and strategies for crisis intervention for individuals and groups.

### **HUS 201 SOCIAL SERVICE AGENCIES**

**3 CREDITS**

*Prerequisites: HUS 101 and HUS 105*

This course examines the mobilization of communities and the delivery systems of various social service programs. Community change processes will be introduced. Nationally prominent and locally managed programs will be analyzed in relation to internal structure, functions of management, defining mission statements, the identification of goals and objectives, competent service provision, the referral process, advocacy, diversity issues, flexibility, and worker burnout. The challenge of client empowerment via agency programming and influences of social policy will be addressed.

### **HUS 203 PLANNING PROGRAMS FOR CHILDREN**

**3 CREDITS**

*Prerequisites: HUS 103 and HUS 104*

This course is designed to introduce the specific information and skills that are necessary for planning age appropriate programs for young children. Competency in planning activities that promote the emotional, social, physical, cognitive, and creative development of young children will be addressed. Some observation of early childhood behavior will be required.

### **HUS 206 GROUP SKILLS FOR HUMAN SERVICE PROFESSIONALS**

**3 CREDITS**

*Prerequisites: HUS 101 and HUS 105*

This course identifies and introduces the crucial skills that are necessary for competence in the area understanding systems and conducting groups. Areas include working with different types of groups, the treatment process, and responding to cultural differences that may affect group process. Specified populations will be addressed.

### **HUS 208 SOCIAL SERVICE AGENCIES II**

**3 CREDITS**

*Prerequisite: HUS 201*

This course examines in depth the knowledge and skills needed to maintain non-profit organizations in the human services field focusing predominantly on fund raising and developing and maintaining sustainable budgets.

### **HUS 210 IDENTIFICATION, DIAGNOSIS, & TREATMENT PLANNING**

**3 CREDITS**

*Prerequisites: HUS 101, HUS 105 and HUS 110*

This course is designed to instruct the student in the process of client identification, diagnosing, and treatment planning of substance abuse/dependency issues. It also explores the motivational techniques and the completion of treatment documentation.

### **HUS 217 WORKING WITH PERSONS WITH BRAIN DISORDERS**

**3 CREDITS**

*Prerequisites: HUS 101 and HUS 116*

This course provides the human services worker with the skills and competencies they need to support the individual who has sustained a brain disorder. It will provide ways in which to assist with reintegration back into the community and help the individual recognize their new normal.

### **HUS 219 PRACTICAL APPLICATIONS WHEN WORKING WITH THE ELDERLY AND TERMINALLY ILL POPULATIONS**

**3 CREDITS**

*Pre-requisites: HUS 101, HUS 105; placement in ENG 101.*

This course is designed to offer applied knowledge in the area of working with the elderly and/or the terminally ill populations and their families. Specialized skills in non-medical personal care will be explored along with community and family needs.

### **HUS 281 FIELD PRACTICUM SEMINAR**

**3 CREDITS**

*Prerequisites: HUS 101 and HUS 105*

*Corequisites: HUS 200, HUS 201 or HUS 206*

The objective of the Field Practicum Seminar is to provide students with the opportunity to discuss, examine, and prepare for their internship experiences. The seminar is intended to compliment the internship by offering a structured, yet informal setting to study the application of human services principles, objectives, and skills.

A basic premise of this seminar is that in any field setting a great deal about the delivery of human services, and about one's own skills and attitude, can be learned if one knows where, when, and how to observe.

### **HUS 282 FIELD PRACTICUM**

**3 Credits**

*Prerequisite: HUS 281*

The objective of the Field Practicum is to provide students with the opportunity to discuss, examine, and evaluate their internship experiences and observations. Students will be encouraged to integrate and apply knowledge learned in earlier courses, as well as to develop an analytical perspective appropriate for a student "participant observer."

This practicum seeks to support students as they work their way through the maze of the field setting, by providing a forum for sharing questions and insights.

A total of 250 hours of fieldwork experience is needed to complete this course.

## **Industrial Technology**

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### **INT 100 INDUSTRIAL OPERATIONS**

**3 CREDITS**

This course is designed to acquaint students with different facets of manufacturing as well as the study of organizational structures and the responsibilities of the different departments within manufacturing. Topics include plant layout and materials handling, production and inventory control, and principles associated with an engineering economy.

### **INT 101 TECHNICAL DRAWING/COMPUTER ASSISTED DRAFTING (CAD)**

**3 CREDITS**

*Corequisite: CSC 102*

This course covers mechanical and engineering drawings, teaches students traditional board drawing skills, and emphasizes computer aided drafting (CAD) skill development. Students will be able to properly use various drafting tools, draw views of objects using orthogonal techniques, illustrate interior views, draw sectional views, and dimension drawings using CAD. With CAD, students will also prepare back-up disks, use cursors, work on keypads, create cells, perform bookkeeping operations, and draw various types of prints.

**INT 102 BLUEPRINT READING & TECHNICAL SCHEMATICS**  
**2 CREDITS**

This course is designed to acquaint students with a broad overview of methods of constructing blueprints and their interpretations. Students will study, read and draw schematic drawings used for industrial processes and controls including electrical, hydraulics, pneumatics, and mechanical drawings.

**INT 203 INTRODUCTION TO QUALITY CONTROL/QUALITY ASSURANCE**  
**3 CREDITS**

*Prerequisite: MAT 101 or higher*

This course examines quality control and quality assurance practices in manufacturing. Students will learn the international quality standards such as ISO 9000, ISO 14000, and ASTM. Practice in using quality improvement methodologies and tools will be used to solve problems. Skills will be taught so students can use statistical concepts, data collection techniques, problem solving tools, and the scientific method to improve processes.

**INT 204 MANUFACTURING PROCESSES**  
**4 CREDITS**

*Prerequisite: INT 100*

This course covers the theory and skill development needs in various manufacturing industries such as metals, plastics, chemical, and pulp and paper. Students will also learn the skills and methods of machining and shaping parts to required specifications. Includes newer processes such as laser machining and welding, water-jet cutting, high-energy-rate forming (HERF), cryogenics, chipless machining, electrical discharge machining (EDM), electrochemical machining (EMC) robotics, and rapid prototyping. The importance of computer numerical control (CNC) systems and processes, machine tools, and CNC's role in automated manufacturing is also examined and demonstrated. Enrollees use a variety of instruments in their work including micrometers, verniers, calipers, depth gauges, and gauge blocks. Students will be required to program machines, make molds and objects, and to complete various operations and processes according to industry standards. There are three hours of lecture and two hours of laboratory per week.

**INT 206 PRINCIPLES OF FLUID POWER SYSTEMS**  
**3 CREDITS**

*Prerequisite: MAT 101 or higher*

This course is designed to teach theory, applications, and skills on a range of hydraulic and pneumatic power systems. The course will cover laws and principles of fluid power, (both compressible and non-compressible fluids) operations, and maintenance requirements of hydraulic and pneumatic components including valves, pumps, cylinders, and motors. Students will study various hydraulic and pneumatic systems, design and build circuits, test circuits, and develop and practice trouble shooting and repair skills. There are two hours of lecture and two hours of laboratory per week.

**INT 207 PRINCIPLES OF INDUSTRIAL MAINTENANCE**  
**2 CREDITS**

*Prerequisite: INT 100*

This course covers the economic benefits of properly maintaining manufacturing equipment to minimize down-time and capital cost of premature replacement. The course emphasizes the importance and techniques of preventive maintenance and Total Productive Maintenance (TPM). Students will design and develop inspection plans for various manufacturing processes and machinery.

**INT 209 ENVIRONMENTAL HEALTH & SAFETY**  
**3 CREDITS**

This course covers the importance of worker safety in the manufacturing environment and explores components of effective safety programs. Students study the sources of industrial pollution and processes to mitigate pollution. Various local, state, and federal regulations and laws are studied in detail along with the roles of EPA and OSHA.

**INT 210 INTRODUCTION TO PLASTICS MOLDING TECHNOLOGY**  
**3 CREDITS**

*Prerequisite: Permission of instructor or Department Chairperson.*

Study of the development of the plastics industry ranging from the historical to the technical perspective. The characteristics of plastics, types of plastics, and polymer chemistry are studied and demonstrated. Common processes such as extrusion, welding, and thermoforming are performed by students with the emphasis on injection molding. Other studies and practices included in the course are tooling, mold making, grinding, finishing, and product design. Students will demonstrate the skills they learn throughout the course. There are two hours of lecture and two hours of laboratory per week.

**INT 211 INTRODUCTION TO PULP & PAPER**  
**3 CREDITS**

*Prerequisite: Permission of instructor or Department Chairperson.*

This course covers the production and practical aspects of the development of the pulp and paper industry with emphasis on paper-making. Students will study paper chemistry, raw materials, pulp making and mills, white and brown paper-making, and various operations such as digesting, sizing, finishing, storage, and shipping. Special emphasis is placed on mechanical operations and repair in which students will practice such skills as water pump repair, alignment, and testing. There are two hours of lecture and two hours of laboratory per week.

**INT 212 COMPUTER AIDED MANUFACTURING (CAM)**  
**3 CREDITS**

*Corequisite: CSC 102*

This course introduces theory, operation, and programming of robotics and computer numerically controlled machines. Students will demonstrate common applications of CAM as well as making products and programming CNC devices and machines.

**INT 214 INDUSTRY INTERNSHIP**  
**0 CREDITS**

*Prerequisite: 30 credit hours toward the Industrial Technology degree.*

Students work as interns in manufacturing to get first-hand experiences under a skilled supervisor selected by the company and approved by the College. The student, business, and faculty advisor will jointly develop a work program of approximately 45 hours during a semester.

**INT 215 WORKFORCE LEADERSHIP**  
**3 CREDITS**

*Prerequisite: INT 100*

This course covers the roles and responsibilities of a supervisor or team leader. It examines the skills required to effectively lead people and manage their efforts. Topics include effective communications, leadership, problem solving, decision making, continuous quality improvement, change, stress management, diversity issues, and training. Both union and non-union environments are examined.

## INT 217 INSTRUMENTATION

3 CREDITS

*Prerequisite: MAT 101 or higher*

This is an introductory course in industrial instrumentation and controls. Theory will be explained from the text and tested with experiments using actual equipment typically used in industry.

# Library Research

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## LIB 101 LIBRARY RESEARCH SKILLS

1 CREDIT

Focuses on the use and retrieval of information within the Clinton Community College library and other information networks. Students will gain an understanding of the structure of information, the process of information retrieval and critical evaluation of sources. Emphasis will be on the development of lifelong information skills.

# Mass Media

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## MSM 118 MASS MEDIA

3 CREDITS

*Prerequisite: ENG 101 or permission of instructor.*

Students will examine the processes and functions of mass communication and their effects on mass audiences. Each of the major mass media (newspapers, magazines, books, radio, television, movies, and electronic media) is defined and analyzed. Media issues explored include First Amendment freedoms, control and censorship, mass media's relationship to government, media ethics, and global mass media. Counts as Social Science or Humanities credit.

## MSM 239 ART OF THE FILM

3 CREDITS

*Prerequisite: ENG 102 or permission of instructor.*

This is an introductory course intended to help students acquire both a greater understanding and a deeper appreciation of the films that they attend by studying film as a distinct art form. The course focuses primarily on filmmaking techniques (e.g. photography, mise en scene, movement, editing, sound, etc.), and also the narrative elements of film (acting, drama, story, writing, and so on). There may also be secondary emphasis on film theory and history, as well as the study of certain film genres. The course will include screenings of full-length films that illustrate different cinematic techniques, or that represent a certain era of filmmaking, or the work of important directors. Students will develop skills in film analysis and criticism in written responses to films that are viewed.

# Mathematics

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## MAT 096 ARITHMETIC

0 CREDITS

*Prerequisite: placement test results*

This course covers the basic arithmetic skills necessary for all higher-level math courses. Course topics include operations with whole numbers, fractions and decimal numbers; ratios and proportions; percent problems. Applications of each of these topics will be explored. Students must earn a CN or better to pass the course. Near the end of the course, students will complete a comprehensive, departmental final exam to assess their preparedness to move on to MAT098 Prealgebra.

## MAT 098 PREALGEBRA

0 CREDITS

*Prerequisite: MAT 096 or placement*

This course reviews fundamental mathematical skills in preparation for introductory college algebra. Course topics include set theory; the study of real numbers including integers, fractions and decimals; algebraic expressions; linear equations and an introduction to graphing on the coordinate plane. Students must earn a CN or better to pass the course. Near the end of the course, students will complete a comprehensive, departmental final exam to assess their preparedness to move on to MAT100 Introductory Algebra.

## MAT 100 INTRODUCTORY ALGEBRA

4 CREDITS

*Prerequisite: MAT 098 or placement*

This course covers basic algebraic skills essential to the study of mathematics. Course topics include linear expressions, equations and inequalities; systems of equations and inequalities; polynomial, rational and radical expressions and equations; and graphing on the coordinate plane. Applications to various fields of study will be explored. This course counts as free elective credit only. Students must earn a C- or better to move on to MAT104 or MAT105.

## MAT 103 FINITE MATHEMATICS

3 CREDITS

*Prerequisite: MAT 100 or equivalent*

This course emphasizes mathematical skills and techniques applicable to business, life sciences and social sciences. Course topics include linear functions, quadratic functions, mathematics of finance, systems of equations, matrices, linear programming, set theory, basic probability and combinatorics. The use of a graphing calculator is required for this course to further the exploration of these topics and their applications.

## MAT 104 COLLEGE ALGEBRA WITH TRIGONOMETRY I

4 CREDITS

*Prerequisite: MAT 100 or equivalent*

This course is the first course of a two-semester sequence designed to prepare students for calculus and technical courses. Course topics include an introduction to relations and functions; the study of linear, quadratic, polynomial, and rational expressions and functions; and right triangle trigonometry. Algebraic techniques of simplification will be emphasized. The use of a graphing calculator is required for this course to further the exploration of these topics and their applications.

## MAT 105 TECHNICAL MATHEMATICS I

4 CREDITS

*Prerequisite: MAT 100 or equivalent*

This is the first course in a two-semester sequence of intermediate algebra and trigonometry with technical applications. Course topics include operations in the real number system, units of measurement and approximate numbers, 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. The use of a graphing calculator is required for this course to further the exploration of these topics and their applications.

**MAT 161 ELEMENTARY STATISTICS****3 CREDITS***Prerequisite: MAT 101 or higher or placement*

This course is a study of basic statistical techniques and some related probability theory. Course topics include data collection and presentation, measures of central tendency and dispersion, grouping and graphing data sets, linear correlation and regression, sampling distributions, estimation, and hypothesis testing. Distribution studies include the binomial, normal, and student's  $t$ . At least one student project is required for this course. The use of a graphing calculator is required for this course to further the exploration of these topics and their applications.

**MAT 204 COLLEGE ALGEBRA WITH TRIGONOMETRY II****4 CREDITS***Prerequisite: MAT 104 or equivalent*

This course is the second course of a two-semester sequence designed to prepare students for calculus and technical courses. Course topics include exponential, logarithmic, and trigonometric functions; trigonometric identities and equations; oblique triangles; polar coordinates; conic sections. If time permits, systems of equations and matrices will be covered. The use of a graphing calculator is required for this course to further the exploration of these topics and their applications.

**MAT 205 TECHNICAL MATHEMATICS II****4 CREDITS***Prerequisite: MAT 105 or equivalent*

This is the second course in a two-semester sequence of intermediate algebra and trigonometry with technical applications. Course topics include operations on exponents and radicals, exponential and logarithmic functions and equations, radians, trigonometric functions of any angle, sinusoidal functions and graphing, oblique triangles, vectors, complex numbers and their applications, inequalities, ratio and proportion, variation, and (optional) an introduction to statistics. If time permits, a brief intuitive approach to calculus will be covered. The use of a graphing calculator is required for this course to further the exploration of these topics and their applications.

**MAT 215 CALCULUS FOR BUSINESS STUDENTS****4 CREDITS***Prerequisite: MAT 101 or higher or equivalent*

This course provides skills and techniques necessary to solve mathematical problems of modern businesses. Course topics include a review of algebra and basic set theory; mathematical modeling; functions and their graphs; an introduction to limits; the methods of finding derivatives; the interpretation and applications of derivations in economic terms, and finding antiderivatives with their applications in the business world. The use of a graphing calculator is required for this course to further the exploration of these topics and their applications.

**MAT 224 CALCULUS & ANALYTIC GEOMETRY I****4 CREDITS***Prerequisite: MAT 200, MAT 204, MAT 205 or equivalent*

This course is an introduction to the basic concepts of differential and integral calculus. Course topics include limits and continuity; differentiation and its applications including curve sketching; indefinite and definite integrals; the Fundamental Theorem of Calculus; derivatives and integrals of the trigonometric functions. The use of a graphing calculator is required for this course to further the exploration of these topics and their applications.

**MAT 225 CALCULUS & ANALYTIC GEOMETRY II****4 CREDITS***Prerequisite: MAT 224*

This course is a continuation of MAT 224. Course topics include applications of integration, transcendental functions, techniques of integration, polar coordinates, infinite series including the Taylor Series and some differential equations. The use of a graphing calculator is required for this course to further the exploration of these topics and their applications.

**MAT 226 CALCULUS & ANALYTIC GEOMETRY III****4 CREDITS***Prerequisite: MAT 225*

This course is the concluding course in the three-semester sequence. Course topics include analytic geometry of three dimensions, determinants and linear equations, vector analysis, partial differentiation, cylindrical and spherical coordinates, and applications. The use of a graphing calculator is required for this course to further the exploration of these topics and their applications.

**MAT 232 INTRODUCTION TO LOGIC****3 CREDITS***Prerequisite: MAT 100 or equivalent*

This course is an introduction to the laws, principles, and methods of logic and problem-solving. Course topics include forms of deductive and inductive argument; fallacious reasoning and an analysis of problem-solving methods emphasizing mathematical techniques and applications. This course is taught when there is sufficient enrollment.

## Meteorology

**MET 101 METEOROLOGY****3 CREDITS***Corequisite: MAT 100 or equivalent*

Meteorology is a course designed for the student who would like to learn more about weather phenomenon. This course explores atmospheric phenomena such as the nature and variability of the wind, temperature, cloud and precipitation as well as the Earth's energy budgets. Emphasis is placed upon the various terminology and tools that meteorologists employ to observe, study and predict storm systems, the development and movement of fronts, as well as thunderstorms and tornadoes. Current topics such as the El Nino, climate modification and air pollution will also be addressed. There are three hours of lecture and one two-hour laboratory per week.

## Music

**MUS 101 MUSIC APPRECIATION****3 CREDITS**

This course presents a basis of intelligent music listening with a series of listening experiences. Knowledge of music technicalities, and information relating to the historical/cultural aspects of music, develops sensitivity to the art. A wide variety of music from ancient through contemporary styles, including representative masterpieces which form an important part of our musical tradition are explored.

**MUS 110 COLLEGE CHORALE****1 CREDIT**

This course is designed to give the student practical experience in singing and music reading as well as performance. It is a course that allows participating students an alternative experience in the performing arts. A student may enroll in this course twice for a total of two credits.

### MUS 115 AMERICAN MUSICAL THEATRE

3 CREDITS

This course traces the development of the American musical theatre from its late 19th Century roots to the present, viewing the musical as entertainment, art form, and commercial enterprise. The dramatic literature, music, personalities, and traditions of musical theatre are explored, along with the effect of social, political, and economic influences. This is a critical appreciation course, not a production course.

## Nursing

### NUR 101 INTRODUCTION TO NURSING

1 CREDIT

This course provides information on the profession and practice of nursing. Past, current and future trends in health care are discussed. An overview of therapeutic communication, stress management, critical thinking, problem solving, data collection and infection control are presented. Basic math and algebra skills are reviewed.

### NUR 102 DOSAGE CALCULATIONS

1 CREDIT

*Prerequisite: MAT 100 or equivalent*

This course is designed to help the student who feels uncomfortable with mathematics and its application to computation with dosage problems. Based on the comprehension of basic mathematic skills, students will become proficient in interpreting medication orders, converting between apothecary, metric, and household systems, and determining the safety of prescribed dosages for clients of all ages.

### NUR 103 FUNDAMENTALS OF NURSING

7 CREDITS

*Prerequisite or Corequisite: BIO 226 and PSY 101*

An overview of the relationship among the concepts of person, health, and nursing. The client's needs for a safe, effective environment, physiological integrity, and psycho-social integrity are explored. The nursing process is introduced as the problem solving technique. In addition, the student acquires the knowledge and skills essential to meet the basic needs of individuals exhibiting predictable health care needs. Clinical laboratory experience is gained in the college laboratory, the local hospital and a nursing home (60 lecture and 135 laboratory hours).

### NUR 104 MEDICAL/SURGICAL NURSING I

5 CREDITS

*Prerequisite: PSY 101, "C" or better in NUR 103 and BIO 226*

*Prerequisite or Corequisite: PSY 230 and BIO 227*

A family-centered study of physiological and psycho-social needs of all age groups with predictable health care needs. A beginning relationship among the concepts of person, health, and nursing is established. The student uses critical thinking in the application of the nursing process in caring for clients with predictable health problems related to respiration, digestion, mobilization, diabetes, and dermatology. Learning experiences will include observation in the Operating Room and Recovery Room, as well as client care experiences in med surg units, sub-acute rehab unit and Community Agencies. (30 hours lecture; 30 hours lab; and 93.75 hours clinical)

### NUR 105 NURSING CARE OF THE CHILD-BEARING FAMILY

4 CREDITS

*Prerequisite: PSY 101, "C" or better in NUR 103 and BIO 226*

*Corequisite: PSY 230, BIO 227 and NUR 104*

This course introduces relationships among the concepts of person, health and nursing in the child-bearing family. The student uses the nursing process to meet client health care needs during the child-bearing cycle. Trends and issues in reproductive health are discussed within the context of past, present, and future advances in technology. The course includes two hours per week (30 hrs.) of class lecture and 90 hrs. of clinical experiences at CVPH Medical Center on the Maternal/Newborn Unit and Pediatric Units.

### NUR 106 MEDICAL TERMINOLOGY

1 CREDIT

A comprehensive study of medical terminology involving spelling, pronunciation, and definitions. Included is the basic structure of medical words: prefixes, suffixes, combining forms, and plurals. Emphasis is on building a professional vocabulary helpful for employment in the medical field.

### NUR 201 MEDICAL/SURGICAL NURSING II

5 CREDITS

*Prerequisite: "C" or better in NUR 104, NUR 105,*

*BIO 226 and BIO 227*

The study of clients of all ages with health care problems that seriously disturb or threaten life status. The inter-relationship among the concepts of person, health, and nursing is developed. The student uses the nursing process in caring for clients with health care needs related to cancer, the cardiovascular system and endocrine system. Clinical laboratory experience occurs on Medical-Surgical, Pediatric, and Coronary Care Units of the local hospital and Hospice. (30 lecture and 135 laboratory hours)

### NUR 202 MENTAL HEALTH NURSING

4 CREDITS

*Prerequisite: PSY 230, PSY 101, "C" or better in*

*NUR 104, NUR 105, BIO 226 and BIO 227*

The focus is the individual's psycho-social adaptation to life events. The interrelationship among the concepts of person, health, and nursing is developed. The student uses the nursing process to meet health care needs of clients experiencing mental health problems that threaten or disrupt life status. Learning experiences include clinical assignments in a hospital setting, field experiences and interdisciplinary conferences. (30 hours lecture; 10 hours seminar; and 80 hours lab)

### NUR 203 MEDICAL/SURGICAL NURSING III

10 CREDITS

*Prerequisite: "C" or better in NUR 201, NUR 202 and BIO 204*

The focus is initially on the child and adult client with health care problems that seriously disturb or threaten life status. The inter-relationship among the concepts of person, health, and nursing are fully developed. The student uses the nursing process in caring for adult clients with unstable health care needs related to thermal injury, hepatic, urinary, and sensorineural disorders. The focus progresses from individuals to groups of clients within the hospital. The role of the nurse manager is presented encompassing effective communications, human relations, time management, and cost containment. Contemporary issues, legal and ethical issues, and professional responsibilities are explored. Learning experiences occur on Medical-Surgical Units, Critical Care Units, and Kidney Dialysis Unit, IV Therapy, Nursing Home settings and Home Health. (75 lecture and 225 laboratory hours)

**NUR 204 PHARMACOLOGY FOR NURSES****3 CREDITS***Prerequisites: NUR 201, BIO 226 and BIO 227*

This course presents basic pharmacological principles. All major drug families, relevant physiology and pathophysiology are reviewed. Drug actions and interactions are explored and the major drug classifications are reviewed using a system by system approach. The nursing process is integrated as it relates to the drug therapy for each client. The course will enhance the student's ability to care for and educate patients receiving medications.

**NUR 207 PHLEBOTOMY****2 CREDITS**

The course emphasizes the theory and practical instruction involved in a structured phlebotomy program to include simulated and experiential exercises. The content areas will be health care delivery systems, basic anatomy and physiology, specimen collection, infection control, professionalism, and laboratory testing.

## Philosophy

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**PHI 101 INTRODUCTION TO PHILOSOPHY****3 CREDITS**

This introductory course considers the nature of knowledge (epistemology) and value (axiology). In the first half of the course students investigate the work of philosophers who have sought to understand the origin and certitude of knowledge. These philosophers include rationalists, empiricists, and alternative thinkers such as Berkeley and Kant. In the second half of the course students confront the complex questions of moral philosophy, which involves disciplined reflection on human freedom and responsibility.

**PHI 102 THE WORLD'S RELIGIONS****3 CREDITS**

This is a philosophical inquiry into the structures of Judaism, Christianity and Islam. This course begins with a substantial examination of Eastern religious traditions in order to cultivate a holistic and historical perspective on the related elements of myth, symbol, and ritual in the world's religions. In the study of religion, students will seek to understand how religious expression functions as an integral component of philosophical reflection and what impact it has on human activity.

**PHI 103 MORAL PROBLEMS****3 CREDITS**

This course introduces students to philosophical reflection through the study of ethical theories and their application to moral problems in contemporary society. Students use readings from major theorists to establish and critique the traditional structures of moral reasoning and to focus arguments concerning contemporary moral dilemmas.

## Physics

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**PHY 101 CONCEPTUAL PHYSICS****3 CREDITS***Prerequisite: MAT 100 or equivalent*

Conceptual physics is a laboratory course that emphasizes the concepts of physics while de-emphasizing complex mathematical calculations. Topics include Newtonian mechanics, heat and temperature, sound and topics from modern physics. There are three hours of lecture and one two-hour laboratory per week. Students who have received

credit for PHY 111 or PHY 112 cannot subsequently receive credit for PHY 100. In the case that a student completes PHY 100 prior to completing PHY 111 or PHY 112, then PHY 100 will count as free elective credit only.

**PHY 111 GENERAL PHYSICS I****4 CREDITS***Prerequisite: MAT 104, MAT 105 or equivalent*

This is the first course of a two-semester sequence which covers: mechanics, which includes the study of linear, circular and rotational motion and how Newton's laws, and the concepts of energy and momentum can be applied, thermodynamics including temperature, heat transfer, and changes in state, and analysis of the sinusoidal nature of simple harmonic motion. There are three hours of lecture and one two-hour laboratory per week. Students who have received credit for PHY 111 or PHY 112 cannot subsequently receive credit for PHY 100. In the case that a student completes PHY 100 prior to completing PHY 111 or PHY 112, then PHY 100 will count as free elective credit only.

**PHY 112 GENERAL PHYSICS II****4 CREDITS***Prerequisite: PHY 111**Corequisite: MAT 204, MAT 205 or equivalent*

This is a continuation of General Physics I. The following topics include: wave phenomena and sound, electricity and magnetism, optics, and topics from modern physics including quantum theory and nuclear physics. There are three hours of lecture and one two-hour laboratory per week. Students who have received credit for PHY 111 or PHY 112 cannot subsequently receive credit for PHY 101. In the case that a student completes PHY 101 prior to completing PHY 111 or PHY 112, then PHY 101 will count as free elective credit only.

## Political Science

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**PSC 100 GOVERNMENT & POLITICS IN AMERICA****3 CREDITS***Prerequisite: Completion of ENG 094 or placement in ENG 101.*

This course is an introduction to the United States system of federal and constitutional government. A special emphasis is placed on the means by which citizens actively participate in public policy decisions, and the relationship between the branches of national government, and of the states to the central (Federal) system.

**PSC 120 INTRO TO POLITICAL SCIENCE COMPARATIVE POLITICS****3 CREDITS***Prerequisite: Completion of ENG 094 or placement in ENG 101.*

An introductory level course in Political Science with a specific focus on Comparative Politics. While students will gain some familiarity with the major areas of the discipline (Political Thought, International Relations & Domestic Politics), the primary focus of this course will be on how governments, political groups, and political procedures vary across countries of a democratic, nondemocratic, developed and developing nature. Specifically, the course will provide a comparative political analysis of a number of countries including the United States, Great Britain, India and China.



## **PSC 200 CONSTITUTIONAL LAW**

**3 CREDITS**

*Prerequisite: Completion of ENG 094 or placement in ENG 101.*

This course is a study of the relationship between the Supreme Court and the political elements of the United States system of national and state government, with emphasis on civil liberties and civil rights.

## **PSC 220 WORLD POLITICS**

**3 CREDITS**

*Prerequisite: Completion of ENG 094 or placement in ENG 101.*

This course examines the major developments in the field of International Relations over the past two hundred years. Specific areas addressed will include key theoretical approaches to the study of International Relations (e.g., Realism, Liberalism, etc.), system, state and individual levels of analysis, nationalism and transnationalism, diplomacy, international law and morality, national and international security, international trade, investment and monetary relations, the north/south debate and human rights. The structures and functions of various intergovernmental (IGOs) and nongovernmental (NGOs) organizations on both a regional and global scale will also be examined.

## **PSC 231 HISTORY OF POLITICAL IDEAS**

**3 CREDITS**

*Prerequisite: Completion of ENG 094 or placement in ENG 101.*

This course surveys a number of key figures in the History of Political Thought. In this regard, particular, yet not exclusive, attention will be paid to the political thought of Plato, Aristotle, St. Augustine, St. Thomas Aquinas, Machiavelli, Hobbes, Locke, Rousseau and Marx. Specific themes under consideration will include reflections on the character of justice, authority, obligation and freedom with a view to the appropriate political order for man and the proper relationship of the individual to the state.

## **PSC 240 STATE & LOCAL GOVERNMENT**

**3 CREDITS**

*Prerequisite: Completion of ENG 094 or placement in ENG 101.*

This course is an introduction to the organization, structure, and functions of state, county, and municipal governments.

# Psychology

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## **PSY 101 INTRODUCTION TO PSYCHOLOGY**

**3 CREDITS**

*Prerequisite: Completion of ENG 094 or placement in ENG 101.*

This course is a survey of the major areas and theories in psychology, introducing students to the research methods, terminology and diversity of contemporary psychology. The course will cover topics such as principles of personality, learning, thought, memory, biopsychology, emotion, stress, mental health, social psychology and developmental processes. This course meets SUNY General Education requirements.

## **PSY 230 HUMAN DEVELOPMENT**

**3 CREDITS**

*Prerequisite: PSY 101, completion of ENG 094 or placement in ENG 101.*

This course provides a general introduction to the area of Developmental Psychology and a survey of developmental

processes that influence the growth of the physical, intellectual, and socio-emotional aspects of the person throughout the lifespan.

## **PSY 235 CHILD DEVELOPMENT**

**3 CREDITS**

*Prerequisites: Completion of ENG 094 or placement in ENG 101, PSY 101. PSY 230 recommended for transferring students.*

This course provides a general introduction to the area of Developmental Psychology and a survey of developmental processes that influence the growth of the physical, intellectual, and socio-emotional aspects of the child from conception through middle childhood.

## **PSY 240 SOCIAL PSYCHOLOGY**

**3 CREDITS**

*Prerequisites: PSY 101; completion of ENG 094 or placement in ENG 101.*

This course is an introduction to the major concepts, theories, and current issues dealing with socio-psychological phenomena such as conformity, persuasion, prejudice, friendship, aggression, and altruism. The course acquaints students with major research findings in the area, and practical applications/implications of the major principles discussed.

## **PSY 247 HUMAN SEXUALITY**

**3 CREDITS**

*Prerequisite: Completion of ENG 094 or placement in ENG 101.*

This is a survey course designed to provide students with a broad range of information about sexuality and sex roles. Using an interdisciplinary approach, the course discusses sexuality from biological, psychological, and sociological perspectives.

## **PSY 260 PSYCHOLOGY OF WOMEN**

**3 CREDITS**

*Prerequisite: PSY 101; completion of ENG 094 or placement in ENG 101.*

This course explores the nature and extent of gender differences and the processes by which those differences emerge. Students will critically evaluate theories and research regarding gender as well as discuss their own experiences and values.

## **PSY 280 ABNORMAL PSYCHOLOGY**

**3 CREDITS**

*Prerequisites: PSY 101 and at least one other Psychology course (preferably Human Development or Psychology of Adjustment); completion of ENG 094 or placement in ENG 101.*

This course is designed to give an appreciation and understanding of the etiology, nature, and treatment of selected emotional and psychological disorders. The central topics of this course will cover abnormal behavior in our society, causal factors, stress, the various psychological problems and mental disorders via DSM IV, clinical assessment, psychological treatments and contemporary issues in Abnormal Psychology.

## Recreation

### REC 100 INTRO TO RECREATION & LEISURE SERVICES

**3 CREDITS**

This course is designed to present a foundation for the study of leisure and organizations delivering leisure services. This course provides an overview of the philosophical, historical, social, cultural, political and economic factors influencing leisure services. Additional focus will be placed upon the various agencies providing recreational services.

## Science

### SCI 101 SCIENCE INQUIRY FOR BIOLOGY & CHEMISTRY

**4 CREDITS**

*Corequisite: ENG 101, MAT 100 or equivalent*

This course is an interdisciplinary science course providing an overview of key biological, chemical and biochemical concepts as they pertain to the core curriculum for elementary (K-4) education and NYS Mathematical, Science and Technology standards. This course is designed to introduce non-science majors and future educators to biological and chemical concepts through methods of inquiry. The laboratory reinforces science content discussed in lecture and students will further develop their understanding of science using the process of inquiry. There are three hours of lecture and one two-hour laboratory per week.

### SCI 102 SCIENCE INQUIRY FOR EARTH/PHYSICAL

**4 CREDITS**

*Corequisite: ENG 101, MAT 100 or equivalent*

This course is an interdisciplinary science course providing an overview of key physical, earth and space, and science and technology concepts as they pertain to the core curriculum for elementary (K-4) education and NYS Mathematics, Science and Technology standards. This course is designed to introduce non-science majors and future educators to physical science concepts through methods of inquiry. The laboratory reinforces science content discussed in lecture and students will further develop their understanding of science using the process of inquiry. There are three hours of lecture and one two-hour laboratory per week.

## Social Work

### SWK 101 INTRODUCTION TO SOCIAL WORK

**3 CREDITS**

This course provides an introduction to the social work profession and prepares students for entrance to the social work major. Students are introduced to the attributes, contexts, fields of practice, and practice settings of professional social work. Practice with specific client groups is examined and students are encouraged to begin identifying practice areas of interest to them.

### SWK 260 INTRODUCTION TO SOCIAL WELFARE

**3 CREDITS**

*Prerequisites: ENG 101, SOC 101, SWK 101, and prior completion of a minimum of 24 credits.*

The history, organization, and adequacy of major cash support, in-kind, and social services programs in the United States are analyzed in this course. Attention is focused on the ideological, political, and economic factors that have shaped the development of such initiatives. The emergence of social work as a profession and the role of social workers in social welfare programs is examined.

## Sociology

### SOC 101 INTRODUCTION TO SOCIOLOGY

**3 CREDITS**

*Prerequisite: Completion of ENG 094 or placement in ENG 101.*

This course explores culture and society highlighting how these dynamic forces are created by and affect human social behavior, particularly in contemporary society. Major theoretical perspectives within sociology are emphasized throughout the course and the methods that sociologists use to study social phenomena are discussed. Topics studied include: the process of socialization, social interaction, group dynamics, bureaucracies, deviance, social stratification and inequality on the basis of social class, race, and gender. Social change, social movements and collective behavior are also addressed.

### SOC 102 SOCIAL PROBLEMS

**3 CREDITS**

*Prerequisites: SOC 101; completion of ENG 094 or placement in ENG 101.*

This course analyzes contemporary problems of American society through the application of different sociological perspectives. Topics include (but are not limited to) poverty, racism, sexism, problems within the family, crime, and ecology. Primary emphasis is placed on the structure of American social institutions and how social problems arise from those structures.

### SOC 103 JUVENILE DELINQUENCY

**3 CREDITS**

*Prerequisite: Completion of ENG 094 or placement in ENG 101.*

This course explores the problems of juvenile delinquency and the juvenile justice system in American society. Concepts of delinquency causation and control are discussed in both historical and modern perspectives. The interrelationship of delinquency and family, school, religion and society in general are explored. The roles of the juvenile court personnel, including the prosecutor, defense counsel, the judge and the juvenile probation officer are evaluated as are the concepts of community-based and institutional corrections. Special delinquency problems such as gangs, substance abuse and juveniles in adult courts are explored.

### SOC 104 CRIMINOLOGY

**3 CREDITS**

*Prerequisite: Completion of ENG 094 or placement in ENG 101.*

This course is a study of crime as a social phenomenon and how programs of social control affect and are affected by crime. It analyzes the conditions under which criminal laws develop and the causes of crime. It consists of the study of crime and control of crime including processes in criminal behavior, punitive policies and social structure.

### SOC 201 PROBLEMS IN CRIME & DEVIANCE

**3 CREDITS**

*Prerequisites: SOC 101; completion of ENG 094 or placement in ENG 101.*

This course examines the sociological concept of deviance. Definitions of deviance and theories of deviant behavior will be discussed and critically evaluated. The concept of deviance will be further explored by addressing various deviant and criminal behaviors of concern to our society and their causes and attempts to control them.

## **SOC 205 SOCIOLOGY OF WOMEN**

**3 CREDITS**

*Prerequisites: SOC 101; completion of ENG 094 or placement in ENG 101.*

This course explores the ways that gender and systems of inequality on the basis of gender impact the lives of women in America and around the world. Discussions include: the historical roots of the current system of gender inequality; the ways that both women and men perpetuate women's unequal status; the impact of inequality on the lives of women; and the future of women's status relative to men.

## **SOC 209 AGING IN SOCIETY**

**3 CREDITS**

*Prerequisites: SOC 101; completion of ENG 094 or placement in ENG 101.*

This course will explore aging as a social phenomenon (not just a biological fact) in order to more fully understand the social and personal implications of the aging process. Both "macro" and "micro" perspectives will be applied to answer questions about the experience of aging for the individual and their society. The diversity of the population referred to as "elderly" will be emphasized as students explore the cultural, social, economic, political, health, and personal dimensions of becoming old and being old in America.

## **SOC 212 SOCIOLOGY OF THE FAMILY**

**3 CREDITS**

*Prerequisites: SOC 101; completion of ENG 094 or placement in ENG 101.*

This course offers a comparative theoretical study of family organization in different societies. The dynamic nature of the family institution in American society is a core theme. Historical and contemporary issues are analyzed to include cross-cultural discussions regarding marital interaction, parent-child relations, sexual behavior, divorce, remarriage, and death.

## **SOC 215 SOCIOLOGY OF HEALTH AND ILLNESS**

**3 CREDITS**

*Prerequisites: Completion of SOC 101 and placement in ENG 101.*

This course provides a sociological analysis of health and illness. Topics include: how social factors (i.e. race, social class, and gender) influence health; factors which influence an individual's response to illness; social dynamics which have shaped and continue to influence the delivery of health care both nationally and internationally; and ethical issues our nation currently faces regarding health care.

# Spanish

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## **SPA 101 ELEMENTARY SPANISH I**

**3 CREDITS**

Elementary Spanish I is designed for the beginning student with no previous experience in Spanish. The main objectives of this course are to help students develop effective communication skills in Spanish through the elementary development of the four basic language skills (listening, speaking, reading and writing), while focusing on and critically examining cultural beliefs, values and aspects of everyday life in Spanish-speaking nations.

## **SPA 102 ELEMENTARY SPANISH II**

**3 CREDITS**

*Prerequisite: SPA 101 or 2-3 units of high school Spanish, or equivalent.*

Elementary Spanish II is a direct continuation of SPA 101 with further development of the four language skills to a high novice level and continued introduction to Hispanic Culture.

## **SPA 201 INTERMEDIATE SPANISH I**

**3 CREDITS**

*Prerequisite: SPA 102 or 4 units of high school Spanish, or equivalent.*

Intermediate Spanish I is a second year, first semester course designed for students with previous experience in Spanish. The main objectives of this course are to help students develop effective communication skills in Spanish through the development of the four basic language skills (listening, speaking, reading, and writing) and cultural knowledge.

## **SPA 202 INTERMEDIATE SPANISH II**

**3 CREDITS**

*Prerequisite: SPA 201 or 5 units of high school Spanish, or equivalent.*

Intermediate Spanish II is a direct continuation of SPA 201 with further development of the four language skills and cultural knowledge to a high intermediate level.

# Theatre

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## **THE 110 THEATRE & PERFORMANCE**

**3 CREDITS**

This course is an introduction to theater as an art form, which will be addressed through a broad overview of the history of theater. Work in the course will focus on the fundamentals of acting and the relationship established between performer and audience. Students will prepare and perform individual, duo, and group scenes. In addition, students will learn about the process and theory of directing and production.

## **THE 115 AMERICAN MUSICAL THEATRE**

**3 CREDITS**

This course traces the development of the American musical theatre from its late 19th Century roots to the present, viewing the musical as entertainment, art form, and commercial enterprise. The dramatic literature, music, personalities, and traditions of musical theatre are explored, along with the effect of social, political, and economic influences. This is a critical appreciation course, not a production course.

# Wind Energy & Turbine Technology

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## **WTT 101 INTRO TO WIND ENERGY & WIND TURBINE TECHNOLOGY**

**4 CREDITS**

This course is the first course in a series of four courses and is designed to cover the history, economics, politics, regulations and future of wind energy in the USA and elsewhere. Topics include basic wind turbine construction including; civil engineering, site locations, design features and specifications. The mechanical and electrical components of the wind turbine will be explained. Students will be able to explain how the blades on a wind turbine create lift and how that lift turns the rotor and creates electrical power. There are three hours of lecture and two hours of laboratory per week.

**WTT 102 WIND TURBINE MECHANICAL SYSTEMS**

**3 CREDITS**

*Prerequisite: WTT 101*

This course is the second course in a series of four courses and is designed to cover the identification and analysis of the components, gearboxes and other mechanical systems that make up subsystems of modern wind turbines. Students will be able to identify types and specifications of different types of fasteners, the effects of torque on the fasteners and how lubricants are used in the components of a wind turbine. The conversion and transfer of energy from the wind through the power train of a wind turbine will be illustrated and explained. There are one hour of lecture and four hours of laboratory per week.

**WTT 201 POWER GENERATION & DELIVERY**

**3 CREDITS**

*Prerequisites: ETE 101*

This course is the third course in a series of four courses and is designed to cover the in-depth study of the components of the input electrical power delivery systems for wind generation. Students will be able to explain the theory and operation of wind generators and explain the link between generators and converters. The wind farm high voltage underground and overhead power collection system will be explained along with how it is connected to the power grid via the sub-station. There are one hour of lecture and four hours of laboratory per week.

**WTT 202 TURBINE TROUBLESHOOTING & REPAIR**

**3 CREDITS**

*Prerequisites: WTT 102 and ETE 102; Corequisite: WTT 201*

This course is the last course in a series of four courses and is designed to cover the practice of installation, operation, maintenance, troubleshooting and repair of wind turbine mechanical systems and turbine blades. The student will work with electric/electronic/mechanical equipment using switches, fuses, breakers, interlocks, isolating valves and proper grounding techniques. Troubleshooting and repair of failed mechanical and electrical equipment will be explained and demonstrated. There are six hours of laboratory per week.

**WTT 214 INTERNSHIP/FIELD TRAINING**

**1 CREDIT**

*Prerequisite: WTT 102; Corequisites: WTT 201 and WTT 202*

The WTT Internship will provide students with a supervised, on-the-job, work experience related to wind turbine systems. Students are required to work a minimum of forty hours at a sponsor site and meet with the instructor for approximately four class hours during the semester.

# THE CENTER FOR COMMUNITY & WORKFORCE DEVELOPMENT



## WORKFORCE DEVELOPMENT

Clinton Community College offers contract training for business, industry, and community organizations.

- Benefit from training that is local, accessible, cost effective, and delivered how and when it is needed.
- Choose from existing training programs or customize training program to meet specific needs.
- Training that is hands-on, practical, and timely.

### Examples include:

- Industrial Training: AutoCAD, Blueprint Reading, Basic Electricity, OSHA Safety Training.
- Computer Training: Office 2007 Programs, Computer Literacy.
- Leadership and Human Resources: SHRM Certification, Time Management, Conflict Management, Supervisor Training.

Clinton Community College can help determine the needs and discuss the specifics for a company's particular program. Training may be held on site, at the CCC main campus, One Work Source classrooms, or the PARC conference room.

## WORKSHOPS

Workshops are offered throughout the year, including the summer. Workshop topics include physical fitness, professional development, personal enrichment, and computer skills. A credit-free brochure is published each semester that contains all information about workshops or visit [www.clinton.edu/continuingeducation](http://www.clinton.edu/continuingeducation).

## EMERGENCY MEDICAL TRAINING

Clinton Community College offers medical career training without having to enroll in a college degree program. Train in the field of Emergency Medical Services to become NYS Certified. The following courses are offered:

- Basic EMT
- Critical Care EMT
- Certified First Responder
- Refresher courses for all levels

## DRIVING EDUCATION PROGRAMS

Clinton Community College offers a Driving Education Program year-round that includes 5 Hour Pre-Licensing and Defensive Driving classes.

## DEFENSIVE DRIVING

Clinton Community College is proud to offer an online defensive driving course in conjunction with the American Safety Council and approved by the New York State Department of Motor Vehicles. Completion of a New York DMV approved Point and Insurance Reduction Program (also known as PIRP and defensive driving) provides a 10% reduction, for 3 years, of the motorist's liability, no-fault and collision insurance premiums. A car insurance discount is awarded on a current policy without a change of insurer or insurance agent. Simply complete this course to receive up to a four point reduction of points received within 18 months of course completion.

## CREDIT-FREE ONLINE TRAINING

Clinton Community College offers credit-free courses and programs through an online format ranging from short workshops to intensive training programs. Online offerings currently include Management and Leadership Training, Defensive Driving, OSHA certification, Medical Transcription, Medical Coding/Billing, Pharmacy Tech and Computer Training. CCC is constantly working to develop new courses and programs that can be offered in alternative formats. CCC programs allow students to study at home, at work, or on the go.

## MANAGEMENT AND LEADERSHIP TRAINING

Clinton Community College along with MindEdge deliver online management and leadership training. All courses are self-paced, delivered 100% online, and available 24/7 making learning convenient and accessible anytime and anywhere with internet access. These high quality courses are ideally suited for new managers, new hires or any professional seeking cross-functional training or needing to strengthen leadership, management and communications skills. CCC programs allow students to study at home, at work, or on the go.

## ALLIED HEALTH CAREERS

Clinton Community College currently partners with Career Step to offer three exciting online career training programs: Medical Coding/Billing, Inpatient/Outpatient Coding/Billing, Medical Transcription, Pharmacy Tech, Medical Admin Assistant and Admin Assistant. Prepare for a rewarding, in-demand career in the growing health care industry!

## REAL ESTATE

Clinton Community College has partnered with Dearborn Real Estate Education to offer a NY State approved and ARELLO certified Real Estate Salesperson Course online. Successful completion of this course satisfies the 75 hour educational requirement for those who wish to obtain a license to sell real estate. Topics include: law of contracts and agencies, real estate instruments, financing, disclosure law and more. Passing an on-campus proctored final exam is required. Upon successful completion of the course you will be sent a course completion certificate that you will use when applying to the state. For information on the steps involved with obtaining your license through NY State please visit the Division of Licensing Services website, <http://www.dos.state.ny.us/licensing/>.

## OSHA CERTIFICATION

Clinton Community College currently partners with American Safety Council to bring Online OSHA training for both the construction and general industry. Choose from the following courses:

- 10-Hour Online OSHA Training: Earn Your 10-Hour OSHA Card
- 30-Hour Online OSHA Training: Earn Your 30-Hour OSHA Card
- OSHA 510/511 Courses: Complete the prerequisites to the OSHA 500/501 Train-the-Trainer Courses

*For more information or to register for any of these programs call the Center for Community and Workforce Development at (518) 562-4143 or visit our website at [www.clinton.edu/continuingeducation](http://www.clinton.edu/continuingeducation).*