NIAGARA COUNTY COMMUNITY COLLEGE
ACCELERATION PROGRAM
COURSE OFFERINGS
(MAY VARY BY HIGH SCHOOL)

ACC 116 - Financial Accounting
3 Cr.

This is a course of study that introduces financial accounting and financial reporting for business entities.

ANI 103 - 2D Animation I
3 Cr.

Explore and implement the Principles of Animation, such as timing and spacing, squash and stretch, anticipation, follow-through, and overlapping action. Traditional and digital frame-by-frame animation techniques utilizing hand-drawn imagery, pencil-testing, rotoscoping, stop-motion, and digital ink and paint are presented. Open to non-majors.

BIO 109 - General Biology I
4 Cr.

This course represents the first semester of a two-semester study of topics in General Biology. Initial emphasis is placed on the chemistry of living organisms. This knowledge is applied to the second major area of study, the cell. General histology, molecular genetics, energy utilization, protein synthesis, cell structure, and general cellular metabolism will be discussed.

BIO 109L - General Biology I Lab
0 Cr.

This is the required lab course associated with BIO 109. (See the BIO 109 course description for details.)

BIO 110 - General Biology II
4 Cr.

This course represents the second semester of a two-semester study of topics in General Biology. Topics of Mendelian genetics and evolution are presented as first units. Basic knowledge acquired in the first semester and these first units is applied to the comparison of the diverse structural and physiological adaptations of living organisms. Systems of support, movement, control, reproduction, internal transport, gas exchange, waste excretion, and nutrition will be discussed.

BIO 110L - General Biology II Lab
0 Cr.

This is a required lab course associated with BIO 110. (See the BIO 110 course description for details.)

BIO 117 - Human Biology
4 Cr.

A survey course designed to meet the needs of a one semester introductory course in anatomy and physiology of the human body. Individuals preparing for a health-oriented career or individuals who desire basic knowledge in structure and function of the human body will find this course both interesting and stimulating. Topics may include the cell, DNA, the body as a whole, biomechanics, integration and control, exchange and transport, metabolism and reproduction. When appropriate, topics may be enhanced or deleted depending on the interest of the students.

BIO 117L - Human Biology Lab
0 Cr.

This is the required lab course associated with BIO 117. (See the BIO 117 course description for details.)

BIO 136 - Contemporary Environmental Issues
3 Cr.

This course is an introduction to select principles of ecology associated with human impact on the biosphere. Local and global effects of human interaction will be studied with special attention paid to population growth, water and air pollution, land use, energy use, and atmospheric problems.

BUS 101 - Organization & Management
3 Cr.

This course contains an analysis of the characteristics of the various types of business organizations. The principles of effective management and the relationships between business and other segments of society are also examined. Among the topics discussed are alternative approaches to management, management functions, productivity, quality control, decision-making, and the history of management thought. The course provides a foundation for additional coursework in the areas of organization and management.

BUS 103 - Introduction to International Business
3 Cr.

The changes in the world environment are bringing totally new opportunities and threats to organizations and individuals. This broad introductory course will help prepare students to compete successfully in the global market place as it exists today and as it is likely to develop tomorrow. Following an introduction to international business theory, students will explore the cultural implication of international business. Economic, legal, political, and technological environments are studied in relationship to their impact on management. Students will review international trade organizations, global trade agreements, and other relevant issues.

BUS 117 - Business Law I
3 Cr.

This course provides an introduction to the study of law and the processes by which law is created. A brief discussion of court systems and tort law is followed by an extended analysis of the principles of contract law. The law of sales is also reviewed. Ethical decision-making and examples of ethical, unethical and illegal behavior are reviewed during each topic. The relationship between principles and agents, as well as employees, are examined in some detail.

BUS 122 - Small Business Management
3 Cr.

A complete coverage of small business operations with proper balance between entrepreneurship and small business management functions (planning, organizing, leading and controlling). Real world case studies are presented and analyzed to better relate the practical applications. Students will develop a complete business plan after studying a broad range of topics including but not limited to location selection, advertising, sales, employee policies, credit procedures, record keeping and budgeting

CHE 120 - General Chemistry I
4 Cr.

This is the first course in a two-semester sequence of general chemistry for a variety of science and engineering majors where the principles of chemistry will be covered in detail. The topics covered will include atomic structure, formation of compounds and molecules, chemical reactions, stoichiometry, and chemical bonding. This course is intended for students who have passed high school chemistry. Students without prior chemistry coursework are strongly encouraged to enroll in CHE 100 before beginning the CHE 120/121 sequence.

CHE 111L - General Chemistry I Lab
1 Cr.

This is the first course in a two-semester sequence of general chemistry laboratory. Proper use of laboratory equipment, safe handling of chemicals, and accurate collection of data are emphasized through experiments that focus on the principles of chemistry covered in CHE 120.

CHE 121 - General Chemistry II
4 Cr.

This is a continuation of CHE 120 where the principles of chemistry will be covered in detail. The topics covered will include kinetics, thermodynamics, equilibrium, acids and bases, and electrochemistry.

CHE 113L - General Chemistry II Lab
1 Cr.

This is the second semester in the general chemistry laboratory sequence. Proper use of laboratory equipment, safe handling of chemicals, and accurate collection of data are emphasized through experiments that focus on the principles of chemistry covered in CHE 121.

CIS 100 - Introduction to Computer Applications
3 Cr.

This course is an introduction to computer applications. Topics include an overview of personal computer hardware and software, Windows, and a variety of software applications (word processor, spreadsheet, database and presentation software). If you have taken any three of the module courses below, you are not allowed to register for CIS 100, Introduction to Computer Applications. CIS 100 contains the same content as:

CIS 105 - Introduction to Operating Systems
CIS 109 - Introduction to Database
CIS 111 - Introduction to Word Processing
CIS 115 - Introduction to Spreadsheets
CIS 116 - Introduction to Presentations

CPS 210 - Computer Science Principles
3 Cr.

This course introduces students to the foundational concepts of computer science and challenges them to explore how computing and technology can impact the world. The course explores many of the foundational ideas of computing, so students understand how these concepts are transforming the world we live in.

DRF 173 - Introduction to Computer Aided Drafting Design
2 Cr.

This course will introduce each student to the concepts and principles of engineering drawing preparation using a computer. Common methods to retrieve and store drawings as well as developing and editing drawings will be covered. All common 2D commands (basic and advanced) relating to engineering drawing are covered in depth and an introduction to 3D modeling will also be covered.

DRF 173L - Introduction to Computer Aided Drafting Design Lab
0 Cr.

This is the required lab course associated with DRF 173. (See the DRF 173 course description for details.)

DRF 275 - Advanced Computer Aided Design & Drafting
3 Cr.

This course will familiarize the students with basic and sophisticated functions of solid modeling in computer-aided design and drafting. Drawings will be created using a true 3-D software program. Sophisticated functions for creating 3 dimensional models, assemblies, and prototypes will be covered.

DRF 275L - Advanced Computer Aided Design & Drafting Lab
0 Cr.

This is the required lab course associated with DRF 275. (See the DRF 275 course description for details.)

EDU 101 - Introduction to Careers in Teaching
1 Cr.

A survey of career opportunities within the teaching profession investigating the following issues: teacher roles, attributes typically needed to achieve career success and satisfaction; public school employment qualifications; career advantages and disadvantages; employment outlook; and career information resources. This course will also assist students to become more aware of related NCCC program offerings and questions related to transferring to a four-year program.

EDU/HUS 120 - Disabilities Birth to Adolescence
3 Cr.

This course will familiarize students with the causation, assessment, and treatment of physical, emotional and cognitive disabilities experienced from birth through adolescence. An inter-disciplinary perspective including social work, rehabilitation, and exceptional education will be utilized in understanding the experiences of a person with a disability throughout the life stages of childhood and adolescence. Likewise, the role of the family member and helping professional will be addressed with an emphasis on the psycho-social aspects of disability. Major topics include socialization, legislation, demographics, intervention strategies, and ethical concerns. Also available as HUS 120.

ENG 101 - Writing I
3 Cr.

This course, based on writing as a process as well as rhetorical principles, is designed to develop effective, non-fiction prose. Students will learn the use of documentation within the Modern Language Association (MLA) format. They will use writing to promote critical thinking. If ENG 099 and ENG 101 are taken concurrently as an ALP course, a combination of essay assignments for both ENG 099 and ENG 101 will be completed. If ENG 099 and ENG 101 are taken concurrently, the student must pass both courses. Failure to pass either course will result in the failure of both.

ENG 102 - Writing II & Introduction to Literature
3 Cr.

This course reinforces writing skills emphasized in ENG 101, Writing I; presents more sophisticated writing skills, not included in ENG 101; and introduces students to the study of literature. Students will use writing to promote critical thinking.

FRE 203 - Intermediate French I
3 Cr.

Continued development of audio-lingual skills and review of French grammar. Improvement of reading skills through selected prose and writing assignments.

FRE 204 - Intermediate French II
3 Cr.

FRE 204 is sequential to FRE 203 and a continuation of the development of the audio-lingual skills and a review of the grammar. The course emphasizes the development of reading skills through selected short stories and serves also as an introduction to the fundamentals of composition.

GER 203 - Intermediate German I
3 Cr.

Continuing study of the language with a continuation of audio-lingual skills. There is a special emphasis on the student's ability to differentiate and identify grammatical structure.

GER 204 - Intermediate German II
3 Cr.

Continuation of the audio-lingual skills with an emphasis on the development of reading skills.

HED 201 - Healthful Living
3 Cr.

A comprehensive overview of current health and wellness themes that will assist students in critical thinking and making well informed decisions regarding health-related issues. Topic areas include drug misuse and abuse, nutrition and weight management, human sexuality, stress reduction, cancer prevention, cardiovascular disease and others. State mandated Child Abuse Identification and Reporting and Safe Schools Against Violence in Education workshops will be made available in this course.

HED 214 - Advanced First Aid and CPR
2 Cr.

This course prepares a student as a caregiver in First Aid and CPR. It also emphasizes the importance of a safe, healthy lifestyle and knowledge to prevent lifestyle-related injuries and/or illnesses. National Safety Council guidelines and sanctions are adhered to. Certifications in "CPR for the Professional Rescuer," "Responding to Emergencies" and "Automated External Defibrillator" are awarded to students who successfully complete the written and practical exams.

HIS 120 - US to 1865
3 Cr.

This course is a survey of American history from the colonial period through the Civil War, emphasizing the origins and early development of political, social, economic, and cultural institutions.

HIS 122 - US Since 1865
3 Cr.

This course is a survey of American history from Reconstruction to the present, emphasizing the continuing development of political, social, economic, and cultural institutions. Special emphasis is placed on the rise of the United States as a world power.

HPE 225 - Kinesiology/Exercise & Sport
3 Cr.

Students will analyze human movement based on anatomical and mechanical principles. Emphasis is given to the application of these principles to the understanding of human movement and athletic performance. The course will include an examination of the cause-and-effect relationships between structure and function in the human body. As a result, students will examine the factors of muscular force production and their mechanical consequences.

HRT 100 - Introduction to Horticulture
3 Cr.

This is a broad, fast-paced introduction to the basics of horticulture. Topics include professions in horticulture and industry overview; soils and fertility; plant propagation; insect, disease, and weed identification; integrated pest management; techniques of installing and maintaining trees, shrubs, annuals, and perennials; and the greenhouse and nursery production of plant materials. Students will also be introduced to numerous specialties within the horticulture field including landscape design, floral design and turf management. Sustainable practices are presented within each topic area as appropriate.

HUS 101 - Introduction Human Services
3 Cr.

Designed to give students an understanding and working knowledge of the human services system and the role of the human services professional. Students will be introduced to the philosophy, goals, structure, organization and client population of the human services sector.

MAT 116 - Pre-calculus Mathematics
4 Cr.

To prepare for MAT 120, Calculus and Analytic Geometry I. Topics include an introduction to the theory of functions and transformations; polynomial, logarithmic, exponential and trigonometric functions and equations; complex numbers; and the Binomial Theorem.

MAT 120 - Calculus and Analytic Geometry I
4 Cr.

The first of a three-semester sequence to present derivatives and integrals of basic functions. Topics include limits, rates of change, derivatives of algebraic and trigonometric functions with applications, integration of algebraic functions and trigonometric functions with applications.

MAT 121 - Calculus and Analytic Geometry II
4 Cr.

The second of a three-semester sequence to present transcendental functions, methods of integration, sequences, infinite series, power series, parametric equations, and polar coordinates.

MAT 164 - Introduction to Statistics
3 Cr.

Introduction to statistical concepts including descriptive statistics, basic probability rules, conditional probability, probability distributions, estimation of parameters, hypothesis testing using one or two samples, correlation and regression. Computer applications and simulations are done using StatCrunch, EXCEL, or other tools of technology.

MET 110 - Engineering Drawing I
2 Cr.

Basic lettering, orthographic projection, sectioning, dimensioning, pictorial drawing, fasteners, auxiliaries, and working drawings will be accomplished by use of freehand sketching instrument drawings and use of CADD.

MUS 101 - Music Appreciation
3 Cr.

This course is a general introduction to musical styles and forms. Material is discussed in terms of the nature and aesthetics of music, the elements of music, musical instruments, and performing ensembles as it relates to the human experience from around the world. The ability to read musical notation is not necessary. The course is recommended for the non-music major or students without previous music experience. It presumes no prior music training.

MUS 102 - Foundations of Music Theory
3 Cr.

This is an introductory course that presents the basics of musical notation. Topics covered include melodic and rhythmic notation, clefs, scales, key signatures, principles of rhythm, and chord symbols. The ability to read music notation is the course content. The course is recommended for the non-music major or students without previous music experience.

MUS 130 - Urban Music: BeBop to Hip-Hop
3 Cr.

This course is designed to explore urban music 1950 through the present day. It will introduce significant musical artists that influence the social and political values of the urban community in the United States. It will examine the musical metamorphoses that led to musical forms such as BeBop, Gospel, Reggae, Funk, Rap, Hip Hop, and others. Individual contributors will be discussed along with musical groups identified with the values and politics of their respective generations. The ability to read music notation is not a necessity. It is recommended for the non-music major or students without previous music experience. It can serve as a music elective for music majors.

PED 135 - Adventure Education
1 Cr.

This is an activity course designed to encourage participants to develop greater self confidence and at the same time acquire a sense of trust and commitment to their classmates. Students are given the opportunity to test themselves against physical and emotional limits through exploration of a series of group and personal challenges to attain higher levels of performance. Experiences include initiatives, trust activities, team building experiences, and the low and high challenge ropes course.

PED 142 - Physical Fitness
1 Cr.

Acquaints students with different methods of physiological conditioning enabling them to design their own program for a lifetime of physical fitness and wellness, includes cardiovascular training, circuit training, conditioning and weight training.

PED 235 - Adventure Education II
1 Cr.

An activity course designed for individuals interested in the understanding and application of low and high ropes course activities. Participants will experience an overview of teaching strategies, safety principles, rescue techniques, programming for K-12 school systems and develop experience on the low and high ropes course.

PHS 101 - Introduction Physical Science
4 Cr.

The course is divided into three parts: mathematical computations used in basic science courses; physics: Newton's Laws of Motion, work, energy and levers; the remainder of the course is devoted to the basic laws of chemistry, atomic structure, periodic chart, nomenclature, chemical reactions and solution chemistry. A basic algebra based approach is taken in the physics and chemistry.

PHY 112 - Our Solar System
1 Cr.

A modular course oriented specifically toward a fuller understanding of the members of our solar system. An in-depth study of the planets will be supplemented with the reasons for the habitability of our planet. An awareness on how to prevent self destruction and promote environmental protection of Earth is given.

PHY 113 - The Universe
1 Cr.

A modular course which stresses an understanding of the evolutionary theories of the universe. Discussions will include such subjects as supernova, pulsars, nova, black holes, red shift, matter, anti-matter and space-time.

PHY 114 - Extraterrestrial Life
1 Cr.

A modular course examining the possibility of the existence of life outside the Earth. Known life processes will be discussed with other possible processes relevant to existing conditions near other stars. Course principles will be applied to the investigation of extraterrestrial civilizations and possible modes of contact.

PHY 131 - General Physics I
4 Cr.

As a survey course, PHY 131-132 is a two semester, non calculus sequence. Topics include vectors, forces, acceleration, linear and circular motion, gravitation, energy, momentum, fluids, gases, liquids, solids and thermo dynamics.

PHY 131L - General Physics I Lab
0 Cr.

This is the required lab course associated with PHY131. (See the PHY 131 course description for details.)

PHY 132 - General Physics II
4 Cr.

Continuation of PHY 131, General Physics I. General topics include wave motion, light, optics, electricity, magnetism, atomic and nuclear physics.

PHY 132L - General Physics II Lab
0 Cr.

This is the required lab course associated with PHY 132. (See the PHY 132 course description for details.)

SPA 203 - Intermediate Spanish I
3 Cr.

SPA 203 focuses on the development of audiolingual skills and the review of Spanish grammar. The course serves also as a reinforcement of reading skills through selected prose.

SPA 204 - Intermediate Spanish II
3 Cr.

SPA 204 is sequential to SPA 203, Intermediate Spanish I, and serves as continued development of audio lingual skills and review of Spanish grammar. The course will also provide students with an opportunity to improve their reading and writing skills through selected prose and writing assignments.

SPE 102 - Public Speaking
3 Cr.

This course is devoted to developing effective public speaking skills. Students will be provided with opportunities to prepare and deliver different types of speeches (informative, persuasive, special occasion) in a variety of modes (manuscript, memorized, impromptu, extemporaneous). Special attention will be paid to the art of preparing and delivering speeches through the study of the techniques of good delivery and composition.

TEC 110 - Introduction to Technical Calculations
1 Cr.

An introduction to the handling of technical data. Scientific functions of the hand held calculator and basic use of the personal computer are covered. Topics include scientific notation, significant figures, and computation by means of the calculator and computer. Basic use of the computer operating system and electronic spreadsheets for both computation and plotting graphs are included. Course required for first semester MET and DRF students.

TEC 250 - Introduction to Robotics
2 Cr.

This course will introduce the fundamental concepts and characteristics of industrial robots. Topics such as robot architecture, kinematics and capabilities will be studied. Features of end effectors, programming methods of both servo and non-servo robots, typical applications and major manufacturers will also be considered. Laboratory sessions will involve “hands on” programming with teach pendants and personal computers and determination of typical robot operating parameters leading to the operation of work cells. Required course for third semester MET students and elective for DRF students.

TEC 250L - Introduction to Robotics Lab
0 Cr.

This is the required lab course associated with TEC 250. (See the TEC 250 course description for details.)

WLD 210 - Tig Welding Processes
3 Cr.

This course covers the theory and application of Gas Tungsten Arc Welding (GTAW). It includes the welding of ferrous as well as non-ferrous metals in various welding positions.

WLD 210L - Tig Welding Processes Lab
0 Cr.

This is the required lab course associated with WLD 210. (See the WLD 210 course description for details.)

WLD 220 - Metal Fabrication
2 Cr.

This course covers weldment design factors. Topics include the interpretation of trade drawings as well as the specification and use of welding symbols.

WLD 220L - Metal Fabrication Lab
0 Cr.

This is the required lab course associated with WLD 220. (See the WLD 220 course description for details.)

WLD 230 - Welding Inspections and Quality Control
2 Cr.

This course presents the American Welding Society standards. Topics include the standards of testing of welds, preparation of test samples, methods of inspection and quality control, and fundamentals and interpretations of the American Welding Society, the American Society of Mechanical Engineers and the American National Standards Institute welding codes.

WLD 230L - Welding Inspections and Quality Control Lab
0 Cr.

This is the required lab course associated with WLD 230. (See the WLD 230 course description for details.)

WLD 240 - Advanced Electric Arc Welding Processes
4 Cr.

This course continues with the instruction of the principles and practices of gas arc (TIG) and gas metallic arc (MIG) welding on ferrous and non-ferrous metals as well as pipe.Topics include special arc cutting techniques such as air carbon arc, oxygen arc, underwater cutting, plasma cutting, along with theory and safety.

WLD 240L - Advanced Electric Arc Welding Processes
0 Cr.

This is the required lab course associated with WLD 240. (See WLD 240 course description for details.)

WLD 250 - Welding Certification
4 Cr.

This course discusses welding codes. Topics include set regulations covering permissible materials, service limitations, fabrication, inspection, testing procedures, and qualifications of welding operations. Emphasis is placed on preparation for the New York State Welding Certificate Exam and American Welding Society Test.

WLD 250L - Welding Certification Lab
0 Cr.

This is the required lab course associated with WLD 250. (See the WLD 250 course description for details.)

WLD 260 - Capstone Project
2 Cr.

This course allows the student to apply welding knowledge to a project. Laboratory time and welding equipment are available to take a set of design requirements and apply the knowledge and skills gained throughout the Welding program to complete a design. The capstone project can be replaced with a formal internship experience.

WLD 260L - Capstone Project Lab
0 Cr.

This is the required lab course associated with WLD 260. (See the WLD 260 course description for details.)