



**2017-2018
COLLEGE CATALOG**

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Correspondence Directory

Mohawk Valley Community College

1101 Sherman Drive
Utica, NY 13501-5394

Telephone: 315-792-5400

Fax: 315-792-5666

Toll-Free Number: 1-800-SEE-MVCC (1-800-733-6822) is for Admissions inquiries for callers within New York State.

Mohawk Valley Community College

1101 Floyd Avenue
Rome, NY 13440-4699

Telephone: 315-339-3470

Fax: 315-339-6934

Accessibility Resources	Utica 315-792-5413 or V/TTY Rome 315-334-7709 or V/TTY
Admissions	Utica 315-792-5354 Rome 315-334-7709
Adult Learner Services	Utica 315-792-5326
Alumni Office.....	Utica 315-792-5340
Assessment and Placement Testing	Utica 315-731-5802
Athletics, Physical Education, and Recreation....	Utica 315-792-5573
Bookstore.....	Utica 315-792-5442/315-735-2945 Rome 315-334-7725
Business Office.....	Utica 315-792-5475 Rome 315-334-7709
College Libraries	Utica 315-792-5408 Rome 315-334-7728
Center for Corporate and Community Education	Utica 315-792-5300
Counseling Services	Utica 315-792-5326 Rome 315-334-7709
Financial Aid	Utica 315-792-5415 Rome 315-334-7709
Health Center	Utica 315-792-5452
Dual Credit	Utica 315-792-5314
Housing (on/off-campus)	Utica 315-792-5657
Records and Registration	Utica 315-792-5336 Rome 315-334-7709

TTY/TDD users may use the New York State Relay Service at 1-800-662-1220.

Notice

This edition of the Mohawk Valley Community College Catalog reflects MVCC's 2017-2018 programs and services at the time of printing. Information contained herein is accurate as of September 1, 2017 (unless otherwise indicated), and may have changed since that time. Please see the College's website, www.mvcc.edu, for the most up-to-date information. It is the student's responsibility to be familiar with this information as it is the guide to the academic experience at MVCC. Mohawk Valley Community College reserves the right at any time to make changes deemed advisable in the calendar, regulations, tuition and fees, and to add, modify, or cancel any course or program as necessary.

Mohawk Valley Community College is sponsored by Oneida County, New York, and is affiliated with the State University of New York.

Accreditation

- Since 1960, the College has enjoyed accreditation by the Middle States Commission on Higher Education, 3624 Market Street, Philadelphia, PA 19104 (Telephone: 267-284-5000, website: www.msche.org). The Middle States Commission on Higher Education is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation.

- The Civil, Mechanical, and Electrical Engineering Technology curricula is accredited by the Engineering Technology Accreditation Commission of ABET (website: www.abet.org).

- The Nursing Program is accredited by the Accreditation Commission for Education in Nursing (ACEN) (3343 Peachtree Road, NE, Suite 850, Atlanta, Georgia 30326. Telephone: 404-975-5000, Fax: 404-975-5020, website: www.acenursing.org, email: info@acenursing.org) and registered by the New York State Education Department, Office of the Professions.

- The Radiologic Technology program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT) (20 N. Wacker Drive, Suite 2850, Chicago, IL 60606-3182. Telephone: 312-704-5300, website: www.jcert.org).

- The Respiratory Care program is accredited by the Commission on Accreditation for Respiratory Care (CoARC) (1248 Harwood Road, Bedford, TX 76021. Telephone: 817-283-2835, website: www.coarc.com).

- The Dual Credit Program is accredited by the National Alliance of Concurrent Enrollment Partnerships (NACEP). (126 Mallette Street, Chapel Hill, NC 27516. Telephone: 919-593-5205. Fax: 877-572-8693, website: www.nacep.org).

- The Health Information Technology program is accredited by the Commission on the Accreditation for Health Informatics and Information Management (CAHIIM). (233 N. Michigan Avenue, 21st Floor, Chicago, IL 60601-5800. Telephone: 312-233-1100, website: www.cahiim.org).



A Message from the President

To our students:

On behalf of everyone at Mohawk Valley Community College, it is my pleasure to welcome you to a new academic year. Whether you chose MVCC as a starting point for your education or as a vehicle to further your career, we are unwaveringly dedicated to your success. MVCC has been transforming lives through learning with exceptional academic programs, activities, support, and athletics for 70 years, and we are perpetually looking forward. In a rapidly changing world, we recognize the importance of not only keeping up, but staying ahead of economic and societal trends, and keeping our programs current and classes relevant to best prepare you for what the future holds.

Every day, we enthusiastically pursue our mission of student success. Our range of educational options, combined with a supportive learning environment and vibrant campus life, ensures that your experience at MVCC will provide a solid foundation for your own exciting future. Dedicated faculty and staff are here to help you learn and grow. Extra-curricular activities offer many opportunities for social and cultural involvement. Championship athletics are a great source of spirit and pride. Become a full partner in learning by dedicating yourself to your studies. Make MVCC your own.

We know that our success as a College is best measured by your experience, and we wouldn't be here without you. We are here to help you achieve your educational goals. Best wishes for a productive year, and thank you for choosing Mohawk Valley Community College.

Randall J. VanWagoner, Ph.D.
President

Academic Calendar 2017-18

FALL 2017

Aug. 24	Payment due and schedule cancellation
Sept. 4	Labor Day (College closed)
Sept. 5	Last day for 100% refund (15-week term/Term A)
Sept. 6	First day of instruction
Sept. 12	Last day for 75% refund (15-week term)
	Last day for 25% refund (Term A)
Sept. 19	Last day for 50% refund (15-week term)
	Submit application for graduation Fall 2017 (Sept. 19-Oct. 20)
Sept. 25	Last day for 25% refund (15-week term)
Oct. 9	Columbus Day (College open, classes in session)
Oct. 11	Last day to withdraw
Oct. 24	Midterm of semester (15-week term)
	Last day of instruction (Term A)
	Last day for 100% refund (Term B)
Oct. 25	First day of instruction (Term B)
Oct. 27	Midterm grades due by noon (15-week term)
Oct. 30	Final grades due by noon (Term A)
Oct. 31	Last day for 25% refund (Term B)
Nov. 13	Priority Registration Spring 2018 (SIRS) starts
Nov. 15	Last day to withdraw (15-week term)
Nov. 20	Spring 2018 Registration open to all students
Nov. 22	College is open, classes not in session
Nov. 23-24	Thanksgiving recess (College closed)
Dec. 4	Last day to withdraw (Term B)
Dec. 15	Last day of instruction (15-week term/Term B)
Dec. 18-19	Final exams
Dec. 21	Commencement
Dec. 22	Grades due by 9 a.m. (15-week term/Term B)

INTERSESSION

Dec. 22	Last day for registration
Dec. 26	First day of instruction
Jan. 19	Last day of instruction

Important Information for Applicants and Students at Mohawk Valley Community College

MVCC students and applicants for admission to MVCC are entitled under Federal regulations to receive information on a variety of topics. Included is information about students' graduation, completion, and transfer-out rates; tuition and fees; cost of room, board, books, supplies, and other expenses; withdrawal and refund policies and procedures; financial aid availability, eligibility, application, selection, academic progress requirements, and disbursements, including Title IV grants and loans; instructional programs, facilities, and personnel; college and program accreditation, facilities, and services for students with disabilities; and campus crime information and security policies.

The majority of this information is contained in this catalog or in the College's online Student Handbook, available from the Admissions Office (Room 101, Payne Hall, Utica Campus, Telephone: 315-792-5354) or the Rome Campus Student Services Office (Room 130, Plumley Complex, Telephone: 315-334-7709). Campus crime statistics and important safety information can be found at www.mvcc.edu, in a publication titled "Your Right to Know," or from offices including Admissions, Records and Registration, Public Safety, or Marketing and Communications.

SPRING 2018

Jan. 12	Payment due and schedule cancellation
Jan. 22	Last day for 100% refund (15-week term/Term A)
Jan. 23	First day of instruction (15-week term/Term A)
Jan. 29	Last day for 75% refund (15-week term)
	Last day for 25% refund (Term A)
Feb. 5	Last day for 50% refund (15-week term)
	Submit application for graduation Spring 2018 (Feb. 5-March 30)
Feb. 9	Last day for 25% refund (15-week term)
Feb. 12	Web pre-scheduling for Summer 2018
Feb. 27	Last day to withdraw (Term A)
March 12-16	Spring break
March 19	Midterm (15-week term)
	Last day of instruction (Term A)
	Last day for 100% refund (Term B)
March 20	First day of instruction (Term B)
March 22	Midterm grades due at noon (15-week term)
March 23	Grades due at noon (Term A)
March 26	Last date for 25% refund (Term B)
April 10	Last day to withdraw (15-week term)
April 16	Priority Registration Fall 2018 (SIRS) starts
April 23	Fall 2018 registration open to all students
April 24	Last day to withdraw (Term B)
May 7	Last day of instruction (15-week term/Term B)
May 8-9	Final exams
May 11	Commencement
May 14	Grades due by 9 a.m. (15-week term/Term B)

SUMMER 2018

First 5-Week Session

May 29	First day of instruction
July 2	Last day of instruction

Second 5-Week Session

July 9	First day of instruction
Aug. 10	Last day of instruction

First 8-Week Session

May 29	First day of instruction
July 19	Last day of instruction

About Mohawk Valley Community College

Mohawk Valley Community College, a unit of the 64-campus State University of New York, is a publicly supported community college.

The College offers two-year degree programs on campuses in Utica and Rome, as well as online, that prepare students for technical and semi-professional careers in business, industry, social service, health care, and many other fields, and for further college study. Shorter length certificate programs also are offered. MVCC currently enrolls approximately 6,625 full-time and part-time students.

The Community College Concept

Community colleges are a uniquely American institution. Their mission is to provide access to higher education to everyone regardless of race, gender, social status, income, and geographic location. In support of this goal, community colleges have a tradition of open admissions and low tuition. Public support enables them to keep tuition low and quality high.

Across the U.S., more than 10 million students attend community colleges to improve their future — and that of their families. In return, they improve the country's ability to compete with the rest of the world, and they become the educated populace on which a free nation depends. For this reason, community colleges have been referred to as "democracy's colleges."

Community colleges are teaching institutions. As such, their entire focus is on creating a learning environment that is student-centered. Classes are kept small and opportunities for interaction between instructor and student are frequent. Community colleges are leaders in developing new programs and new instructional techniques.

Community colleges are strongly oriented toward meeting the needs of the areas they serve. They are actively involved in providing continuing education for adult students and training needed to support employers. MVCC's comprehensive programming, broad network of support services, Center for Corporate and Community Education, and two campuses are all the result of its commitment to this orientation.

Organization and Support

Mohawk Valley Community College is sponsored by Oneida County, New York, and is governed by a 10-member Board of Trustees. All regular Board members reside within Oneida County and serve rotating terms. A Student Trustee is elected annually by the student body. The operating funds of the College come from three principal sources: Oneida County for students who are legal residents of the County (or from other New York counties in which students are legal residents), New York State, and students' tuition. State and County support enables MVCC to offer an excellent educational value.

History

Mohawk Valley Community College was the first community college established in New York State. Founded in 1946 as the New York State Institute of Applied Arts and Sciences at Utica, it was one of five post-secondary institutions established on an experimental basis after World War II. The two-year public college offered programs leading to technical and semi-professional employment in business and industry.

In 1948, the State University of New York was created and authorized to recommend the establishment of community colleges. The College became a constituent unit of the State University in 1950. The following year, the College was authorized to grant the Associate in Applied Science degree.

In 1953, Oneida County assumed the sponsorship of the College, then known as Mohawk Valley Technical Institute, under the Community College Law section of the 1948 Education Law. This section authorized the cost of operating a community college to be shared equally through student tuition, state aid, and charges to the counties of New York State. The following year, MVCC began

offering classes in Rome, N.Y., to better serve the needs of northern and western Oneida County. Classes were offered at the former Griffiss Air Force Base from 1954 to 1958 and again from 1969 to 1974. In 1974, a branch campus was established in Rome at the current location on Floyd Avenue.

As a community college, MVCC saw its enrollment and facilities grow. From 1946 to 1960, the College occupied temporary quarters in New Hartford and downtown Utica. In 1960, the College moved to new buildings on an 80-acre site in southeast Utica. The Utica Campus completed a Master Plan in 2002 that included renovating virtually every building on campus and adding an Information Technology/Performing Arts/Conference Center building.

The College's academic offerings have continued to expand in response to the community needs determined through community surveys. The College now offers an exceptionally wide variety of transfer, career, and vocational programs.

The Region

The Mohawk Valley is composed of Fulton, Herkimer, Schenectady, Montgomery, and Oneida counties and boasts some of the best scenery in the nation, with near and distant mountains and hillsides and a stunning valley bisected by the Mohawk River.

The City of Utica has a population of about 60,000. Its cultural and recreational advantages are many. Munson-Williams-Proctor Arts Institute maintains an excellent art gallery and museum, there are numerous public parks, 10 golf courses (one of which is municipally owned and operated) as well as city swimming pools, a zoo, public tennis courts, and picnic grounds.

Rome, a city of approximately 35,000, was the starting point for construction of the Erie Canal. A reconstructed Fort Stanwix, important in the American Revolution, is located in the heart of the city. Delta Lake State Park is nearby.

Utica and Rome are centrally located in New York State, and are served by the New York State Thruway, along with bus and train lines. Close to the Adirondacks, the area is rich in recreational activities including a variety of water sports, camping, hunting, skiing, and snowmobiling.

UTICA CAMPUS

The Utica Campus of Mohawk Valley Community College is at 1101 Sherman Drive. The campus is on level ground and all buildings are accessible to persons with disabilities. Buildings include:

Information Technology/Performing Arts/Conference Center

This building includes a 500-seat theater. It is wheelchair-accessible and offers headsets for the hearing impaired. The 58-foot-high proscenium features a hydraulic orchestra lift and computer-operated lights and sound. The facility hosts College and community cultural events, and is home to specialized instruction related to theater and the arts. The building also houses a 120-seat lecture hall, "smart" classrooms, computer laboratories, the Learning Commons (tutorial services) and the Excellus BlueCross BlueShield Conference and Training Center.

Academic Building

The Academic Building houses classrooms, as well as computer laboratories, fine arts studios, and laboratories for nursing, respiratory care, biology, physics, and graphic arts. Offices for Public Safety, high school services, human services, educational technologies, and nursing laboratories also are located here.

Science and Technology Building

The Science and Technology Building features a variety of laboratories, including those for chemistry, welding, heating, refrigeration, FABLab, air conditioning, metallurgy, electricity, and machine tools courses.

Payne Hall

Payne Hall, named for MVCC's late President Emeritus Albert V. Payne, houses a comprehensive Student Service Center, including Admissions, Advisement, Business Office, Counseling, Office of Accessibility Resources, Financial Aid, and Office of Records and Registration, as well as a special Help Desk. Many faculty members and administrators have their offices in Payne Hall. The main library is located on the second floor.

Alumni College Center

The Alumni College Center serves as the hub of the Student Activities program. This facility contains recreation rooms, a snack bar ("MV Commons"), dining halls for resident and commuter students, conference facilities, the Bookstore, Student Congress offices, Student Activities Office, University Partners and Transfer Center, and the Student Health Center.

Robert R. Jorgensen Athletic/Events Center

The Robert R. Jorgensen Athletic/Events Center houses a main gymnasium, which accommodates more than 750 spectators for athletic events, and the 27,000-square-foot Field House featuring an indoor track, three athletic courts, and a fitness center with free weights, aerobic, and Nautilus equipment. Both the gymnasium and Field House serve as instructional facilities for physical education classes and team practices. Special activity areas include two handball-racquetball courts, swimming pool, multi-purpose rooms, and classrooms. Adjoining athletic fields include an all-weather track, soccer and softball fields, and six lighted tennis courts.

Residence Halls

The residence hall complexes on the Utica Campus provide housing for more than 500 students. Modified rooms for students

with disabilities are available. The Willis V. Daugherty Residence Hall is named for an MVCC Trustee Emeritus. Three others are named for New York State historical figures: Thomas D. Penfield, Edward Huntington, and John Butterfield. Bellamy Hall honors Oneida County historical figure Francis Bellamy, author of the "Pledge of Allegiance."

ROME CAMPUS

MVCC's Rome Campus is located at 1101 Floyd Avenue in Rome, N.Y., and consists of the John D. Plumley Science and Technology Complex. MVCC also operates an Aviation Training Center at Griffiss Business and Technology Park and is a partner with SUNY Canton in the Dental Hygiene Training Clinic at the Griffiss Veterans Administration Facility. The Rome Campus offers all services available on the Utica Campus with the exception of housing. The Rome Campus Student Services Center is a one-stop-shop for all services including admissions, advisement, financial aid, counseling, disability accommodations, payments, student activities, and more.

Plumley Complex

The Plumley Complex houses a full-service library, Learning Commons, classrooms, specialized laboratories, and administrative and student services offices. The building also features a 100-seat auditorium and conference facilities. There is a fitness center, faculty offices, and College Store. Hospitality and culinary students prepare for their futures in the building's state-of-the-art instructional kitchens, baking lab, and 100-seat restaurant-style dining room. The MVCC-Sage Tractor-Trailer driving program is also headquartered here. The Rome Campus offers a wide range of credit-bearing courses and non-credit workshops. Some of MVCC's associate degree programs are available in Rome in their entirety. The Cultural Series brings films, lectures, and performances to Rome Campus audiences.

The College's Statements

Mission Statement

Mohawk Valley Community College provides accessible, high-quality educational opportunities to meet the diverse needs of our students. We are the community's college, committed to student success through partnerships, transfer and career pathways, and personal enrichment.

Vision Statement

Transforming lives through learning.

Values Statement

1. Embrace our community

- a) I value every person
- b) I celebrate diversity
- c) I create strength
- d) I foster culture

3. Inspire confidence

- a) I achieve the dream
- b) I seize the opportunity
- c) I expand horizons
- d) I defy the odds

2. Model the way

- a) I enjoy the climb
- b) I design solutions
- c) I cherish the journey
- d) I treasure every day

4. Encourage excellence

- a) I find a way
- b) I make things happen
- c) I exceed expectations
- d) I go beyond

Student Retention

Typically 79 percent of the freshmen who start as full-time associate degree students in the Fall continue their education at MVCC during the following Spring semester. About 58 percent of that freshman class returns the following Fall.

Notice of Non-Discrimination Policy

MVCC is committed to fostering a diverse community of faculty, staff, and students, as well as ensuring equal educational

opportunity, employment, and access to services, programs, and activities. MVCC does not discriminate on the basis of race, color, national origin, religion, creed, sex, age, disability, gender identity, sexual orientation, pregnancy, predisposing genetic characteristics, domestic violence victim status, marital status, military status, criminal conviction, or retaliation for opposing unlawful discrimination practices. MVCC is committed in policy, principle, and practice to maintain an environment free of intolerance, illegal, or discriminatory behavior toward any person. This commitment is consistent with federal and state laws and College policy. The College's Affirmative Action Officer is the Director of Human Resources, Room 113 of the Academic Building, Utica Campus, Telephone: 315-792-5496. The coordinator of Disability Services and Section 504/ADA Coordinator is Tamara Mariotti, Room 104F, Payne Hall, Utica Campus, Telephone: 315-792-5413 (V/TTY).

The Title IX Coordinators at the College are:

Kim Evans-Dame
Executive Director
of Human Resources
Academic Building, Room 113
315-792-5637

Stephanie C. Reynolds, LMSW
Vice President
for Student Affairs
Payne Hall, Room 347
315-792-5324

Drug-Free Workplace Act of 1988

Mohawk Valley Community College is committed to maintaining a drug-free environment in accordance with the Drug-Free Workplace Act of 1988, and will not tolerate the unlawful possession or use of controlled substances on its campuses. The unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited. Compliance with the provision of this policy shall be a condition of employment at MVCC. (Adopted by MVCC Board of Trustees November 2011.)

Assessment and Competencies

Assessment

MVCC is committed to and conducts assessment activities to obtain information for the improvement of student learning, programs, services, and the overall effectiveness of the College. These activities may include surveys and questionnaires, exams, focus groups, research projects, and standardized tests. Members of the College community are expected to participate. MVCC Principles of Assessment can be found on the Assessment Handbook page of the MVCC Institutional Effectiveness website.

Competencies

The College is committed to providing opportunity for students to gain knowledge and to use it effectively. To accomplish this goal, degree and certificate candidates will follow a course of study that addresses the competencies listed below. The course of study lays the groundwork for further learning. Students are expected to be responsible partners in the learning process.

By the time of program completion, students will have demonstrated, at a level appropriate to their degree or certificate, the ability to:

I. Communicate effectively with others.

Students will:

- produce coherent texts meeting standards appropriate to academic programs.
- demonstrate the ability to understand and use the language of their academic programs.
- effectively use the oral discourse of the academic program.
- research a topic and develop an oral or written argument and evaluate an oral presentation according to established criteria.

II. Organize information, evaluate alternatives, distinguish fact from opinion, and reach logical conclusions.

Students will:

- effectively frame questions and develop hypotheses.
- obtain, evaluate, and organize information.
- research and present logical conclusions.

III. Interact effectively within a diverse society.

Students will:

- demonstrate an awareness of and respect for the differences among individuals and for other cultures in the global society.
- demonstrate an understanding of how different cultures interact in the global society.
- appropriately participate with diverse groups and with individuals with different points of view.

IV. Think logically and solve quantitative problems by using various computational and other mathematical techniques.

Students will:

- express mathematical information symbolically, visually, numerically, and verbally.
- use mathematical processes to solve quantitative problems and draw reasonable conclusions.
- interpret and draw inferences from mathematical models such as formulas, graphics, tables, and schematics.

V. Identify and locate information from a variety of sources and understand the related legal and ethical uses.

Students will:

- use traditional and contemporary information technology.
- identify, access, and appropriately use authoritative sources of information.

Preparation for the Global Community

In the classroom and the broader community, the College emphasizes an appreciation of individual differences. These include, but are not limited to race, ethnicity, cultural background, gender, sexual orientation, socioeconomic class, academic ability and interest, age, religious background and belief, and physical ability. The College recognizes that students need to understand how different cultures interact and must be appreciated in the world today. The College holds a global view that perceives the interconnectedness of technological, ecological, economic, social, health, and political issues that must be understood and addressed from an international perspective. Students will develop an intercultural awareness and respect for other points of view, and will be prepared to participate in an increasingly global community.

The Admissions Process

General Information

The Admissions Office assists:

- Individuals who seek to enroll in a degree or certificate program (matriculated). If an individual intends to receive a degree or certificate from the College and any financial aid for which they may become eligible, they must file an application for admission, and be accepted to the College in a degree or certificate program prior to the semester in which they wish to begin their studies.
- International students, who will need an F-1, J-1, or M-1 visa to enter the United States and enroll (matriculated student), should contact the International Student Services Office at the address listed in the box to the right.

Services:

We recommend that all potential applicants make an interview appointment to discuss their program options and preparation.

The following information and services are also available:

- College literature and brochures;
- Interviews and/or tours: individual or group visitations by appointment; and
- Online and print applications.

Prospective students with disabilities who need materials provided in alternative formats should contact the Office of Accessibility Resources.

Admissions Policy Information

Open Admissions

MVCC is an open admissions institution, as are all community colleges within the State University of New York system. We will provide educational services to all who can demonstrate that they can benefit from them. The open admissions format does not require that applicants compete for space based on past performance, superior grades, or standardized test scores.

Many of our programs have prerequisite requirements. These prerequisites are stated so that applicants are aware of the level of difficulty within the program. If applicants do not possess the appropriate prerequisite background, it may be recommended that they begin their college program in an alternate major or they may be required to take preparation courses equivalent to those entry prerequisites. The need to take preparation course work can extend the time needed to complete a degree or certificate.

The College does not require that applicants take either the SAT or ACT for admission; however, students may be exempt from some or all portions of the placement test based on SAT or ACT scores, and should check the College's placement testing exemption policy.

Regular Admission

High school graduates, high school seniors, General Equivalency Diploma (GED) or Test Assessing Secondary Completion (TASC™) recipients, home-schooled students, or students attending unregistered high schools who can provide evidence of equivalent education in New York State, and immigrants who possess Foreign Diploma Credentials can apply for regular admission.

- In order to be considered for regular admission as a high school graduate, applicants who have been home-schooled must provide documentation of completion of "Equivalent Education" in New York State. If available, certification must be in the form of an original letter from the superintendent in whose district the equivalent education has taken place.

Contact Information

Address applications or correspondence to either:

Admissions Office

Mohawk Valley Community College

1101 Sherman Drive

Utica, NY 13501-5394

315-792-5354

Toll-free number (New York State): 1-800-733-6822

Fax: 315-792-5527

email: admissions@mvcc.edu

International Admissions Counselor

Mohawk Valley Community College

1101 Sherman Drive

Utica, NY 13501-5394

315-792-5351

Fax: 315-792-5527

email: international.admissions@mvcc.edu

Assistance with Admissions on Rome Campus:

Student Services Center — Rome Campus

Mohawk Valley Community College

1101 Floyd Avenue

Rome, NY 13440-4699

315-334-7709

Fax: 315-334-7726

The letter must include the name of the applicant, name of the home school, and how the education was considered a equivalent to that of the school district.

- Applicants who have earned a Foreign Diploma must provide an official copy of the diploma and a certified English translation of their documentation to verify graduation. If documents are not available, then applicants will need to apply under the special admissions category.

Special Admission

(admission of non-high school graduates)

Undocumented immigrants, non-high school graduates, home-schooled students who cannot provide evidence of "equivalent education," correspondence diploma recipients, students who attend a non-registered high school, and those who have completed an Individualized Education Program (IEP) Diploma, New York State Career Development and Occupational Studies Commencement Credential (CDOS), or Skills and Achievement Commencement Credential for Students with Severe Disabilities (SACC) are considered non-high school graduates and must apply for admission under the Special Admission category. All applicants in this category must take and pass an "Academic Opportunity Assessment" (AOA) test before being accepted into a degree or certificate program.

Contact the Admissions Office at 315-792-5354 or the Rome Student Services Center at 315-334-7709 to arrange for an interview to discuss the requirements you must meet in order to enroll as a non-high school graduate.

Important note for students granted Special Admission:

Completing the General Education Degree Equivalency Diploma or Test Assessing Secondary Completion (TASC™) is required by New York State Education Law, which states a student must possess a high school diploma or an equivalency diploma (GED or TASC™) before they can be authorized to receive a degree or

The Admissions Process (continued)

certificate from a college or university. The equivalency diploma can be earned by either:

1. Passing a standard GED or TASC™ test,
OR
2. Completing 24 college credit hours in subjects specified by the New York State Education Department and receiving an equivalency diploma. A detailed discussion of the 24-credit-hour requirement will be a part of the Admissions interview. Those granted special admission will be enrolled in a section of our Liberal Arts and Sciences: General Studies major. Student Advisement will be coordinated by and through the Advisement Center Staff in the Student Service Center, Payne Hall, on the Utica Campus. They must remain in this major until they have completed the GED or TASC™ requirements. Information and applications for earning the GED or TASC™ by completing college credit can be obtained from staff in the Admissions Office, the Office of Records and Registration, the Advisement Center, and/or directly from the New York State Education Department website at www.emsc.nysed.gov/ged. Upon receiving the GED or TASC™, the student must present a copy of the GED or TASC™ to the Admissions Office who will update the student record to a high school equivalent graduate status.

International Student Admission

Persons who are citizens of a foreign country, have completed the equivalent of a U.S. high school education, and who must apply for an F-1, J-1, or M-1 visa in order to attend college in the United States, are eligible to apply for admission as an international student. International students attend college with the intention of returning to their home country after their education has been completed. Contact the International Admissions Counselor at 001-315-792-5351 or international.admissions@mvcc.edu for additional information.

Non-High School Graduates, No high school equivalency, Home-Schooled students who do not possess a Superintendent equivalent education letter, non-Dual Credit, College Connection, or Magnet Bridge, and those between the ages of 16 and 19 (at the start of the semester)

If you wish to attempt college-level coursework but you have not completed high school graduation requirements, do not possess a high school equivalency, are a Home Schooled student but do not possess a Superintendent equivalent education letter, and are not participating in Dual Credit, College Connection, or the Magnet Bridge programs, you must contact the Director of Admissions to schedule a pre-enrollment interview with appropriate college personnel to assess your academic and social readiness. Interested students may be required to take the MVCC Placement Test prior to enrolling for any courses offered by the College as part of the process.

MVCC English Language Test Statement

Proof of English proficiency is required for issuance of an I-20 for an academic program. Proof of English proficiency may be demonstrated with: MVCC's free online writing sample, a TOEFL or IELTS score. The online writing sample or entrance of test scores must be completed prior to acceptance and issuance of the I-20 if the student wishes to be issued an acceptance letter and I-20 for an academic program. If a student cannot provide sufficient proof of English proficiency prior to acceptance (via the online writing sample, or a TOEFL or IELTS score), they will automatically be issued an I-20 for Language Training. For admittance into an

AP Course Credits

AP Course	Minimum Score	MVCC Credit Given
Art History	3	HU204
	5	HU204, HU205
Biology	3	BI141
	5	BI141, BI142
Calculus AB	3	MA151
	5	MA151, MA152
Calculus BC	3	MA151, MA152
	5	CH141, CH142
Chemistry	3	CH141
	5	CH141, CH142
Chinese & Culture	3	FL111
	4	FL111, FL112
Comparative Government & Politics	3	PS202
	5	CI110, CI245
Computer Science A	3	CI110
	5	CI110, CI245
English Language/Composition	3	EN101
	4	EN101, EN102
English Literature/Composition	3	EN102
	4	EN101, EN102
Environmental Science	3	BI105
European History	3	HI1XX
French & Culture	3	FR101
	4	FR101, FR102
German & Culture	3	GR101
	4	GR101, GR102
Government & Politics	3	PS101
Human Geography	3	GE101
Italian & Culture	3	IT101
	4	IT101, IT102
Japanese & Culture	3	FL141
	4	FL141, FL142
Latin	3	FL151
	4	FL151, FL152
Macroeconomics	3	BM115
Microeconomics	3	BM110
Physics 1	3	PH151
Physics 2	3	PH152
Physics B	3	PH151
	5	PH151, PH152
Physics C: Electricity & Magnetism	3	PH261
	5	PH261
Physics C: Mechanics	3	PH261
Psychology	3	PY101
Spanish Language	3	SP101
	4	SP101, SP102
Spanish Literature	3	FL2XX
Statistics	3	MA110
Studio Art: 2D Design	3	FA105
Studio Art: 3D Design	3	FA108
Studio Art: Drawing	3	FA103
U.S. History	3	HI111
	4	HI111, HI112

The Admissions Process (continued)

academic program with a standardized test, scores needed are 500 on TOEFL, 173 on CBT, 61 on iBT, or 5.5 on IELTS. Students will take the MVCC placement test upon arrival to the College, at which point the level of ESL or academic readiness will be determined. A new I-20 can be issued if a student moves up in level from Language Training to Associate's level.

Options for Non-Matriculated (non-degree) Student Status and Enrollment

Please note: Students enrolling as non-degree students or who are currently in high school are not eligible to receive standard financial aid assistance.

Special Notice: The one-year Airframe and Powerplant Technology Certificate program does not follow the College's standard academic calendar due to the required training schedule.

Advanced Standing Opportunities

MVCC recognizes that prospective students can earn college credit in a number of different ways including MVCC's extensive Dual Credit Program. Therefore, the College provides opportunities for applicants to enroll with advanced standing that reflects their prior learning and academic credit. Only credits meeting the requirements of the MVCC major can be accepted for inclusion in the major. The College may accept a maximum of 75 percent of all credits completed through the opportunities described below to complete MVCC degree or certificate requirements for graduation. Twenty-five percent of a student's graduation credits must be taken at MVCC. The advanced standing opportunities described below may only be posted to the student's MVCC transcript once the student has matriculated, with the exception of dual credit, College Connection, and Bridge Programs.

(See Residency Requirements: Page 23)

AP Course Credits

Applicants completing Advanced Placement Course work in high school may be eligible for MVCC credit according to the chart on the previous page. Applicants must request that the College Board send an official copy of their AP score report to the MVCC Admissions Office in order for potential AP credit to be evaluated.

Articulation Agreements

An articulation agreement serves as an understanding between MVCC and a specific secondary school. It provides pathways for students to enter specific academic programs with advance standing. The College maintains agreements with regional BOCES and local school districts. These agreements are subject to occasional change. Students should consult their high school counselors for agreement information.

Credit by Examination

The College may grant credit for course equivalent work completed through the following examinations:

1. College-Level Examination Program (CLEP) Exams, general and subject. CLEP is sponsored by The College Board. For more information, go to www.collegeboard.com. The American Council on Education (ACE) recommends a scaled score for the granting of college credits by completing CLEP examinations. However, the Council also recognizes the right of each college and university to set its own standards for the granting of credit. At MVCC, CLEP examination credits are evaluated by the Associate Dean in charge of either the course or program in which the credits are intended to be used. Original score reports are required for evaluation.
2. New York College Proficiency Exams.

3. MVCC Credit by Examination: designed and administered by MVCC, available only to matriculated students. Interested students must apply through their Academic Associate Dean. There is a fee associated with Credit by Examination.

Credit for Non-Collegiate Instruction

An assessment of credits earned through non-collegiate instruction is available to matriculating MVCC students. Evaluations will be completed by the appropriate Academic Associate Dean. Training certificates or transcripts should be presented at the time of application.

Credit for Experiential Learning

Assessments of applicable Credit for Experiential Learning (CEL) are available only to MVCC matriculated students. CEL materials are available from the Office of Records and Registration and must be submitted through the student's Academic Associate Dean. Refer to the fee table (page 23) for costs associated with CEL.

Transfer Credit

Applicants transferring to MVCC from other accredited institutions may receive whole or partial credit for college courses completed. Acceptance of transfer credit is the prerogative of the appropriate Associate Dean or their designee.

Students who are new to MVCC, and have attended other colleges, must request that an official transcript from those respective institutions be sent to the Admissions Office to complete their application. If a student attempts credit at another institution, while currently enrolled at MVCC, they must send an official transcript from the other institution to the Office of Records and Registration for processing. Only official transcripts from each prior college will be used for transfer evaluation.

Students may also earn credit through articulation agreements signed between MVCC and a specific secondary school. The College maintains these agreements with regional BOCES and local school districts. An original transcript from the regional BOCES or school district will need to be sent to the Admissions Office or Office of Records and Registration for processing.

Transfer credit is awarded for courses with a minimum grade equivalent of a 2.0 on a 4.0 scale. A grade of a "P" or "S" are acceptable only for Physical Education courses, and for College Seminar. Grades of "S" are also acceptable from the Community College of the Air Force. Transfer courses are assigned a grade of "T" and are not used in the calculation of the student's GPA.

Matriculated students may be permitted to "reverse transfer" back credit from other colleges to complete an MVCC degree. A minimum of 25 percent of required program credits must be completed at MVCC to fulfill the residency requirement. More information can be obtained in the University Partners and Transfer Center.

MVCC may grant course credit for passing, at an acceptable level, examinations administered under the AP program and the CLEP. For AP credit, the student must have earned a minimum score of a 3 for credit. For CLEP credit, the student must have the minimum test score recommended by ACE (American Council on Education).

Applicants seeking transfer credit for academic work completed in a foreign educational system should contact the Admissions Office/International Student Services Office.

A veteran applicant must request a Joint Military Transcript (JST) to be sent to the Veterans Education Services Office. Transfer credit may be awarded upon review by the Academic Department Associate Dean or their designee following the recommendations by ACE.

Applications and Processing

To access any of the MVCC applications available from our website, both Domestic and International, applicants can go to:

www.mvcc.edu/application

Hard copy applications for Domestic (non-international) students are available from the Admissions Office, the Rome Campus Student Services Office, and Guidance Offices in most Central New York high schools and are printable from the online site listed above. There is no application fee required to process an MVCC application.

Domestic and International applicants can, if they choose, use any of the application formats available from the State University of New York (SUNY). However, applicants should be aware that they will be responsible for paying any applicable fees to SUNY for the processing of their applications.

A complete application must include:

- An official final high school transcript
OR
- A General Equivalency Diploma (GED) or TASC™ test
OR
- Those who have completed their high school education in a foreign country must supply a copy of the original document and a certified English translation of the diploma or transcript.
AND
- As appropriate for all applicants, an original copy of any/all: AP reports; CLEP exam scores; New York State College Proficiency Exam Scores; DANTES (Defense Activity for Non-Traditional Education Support) score reports; certificates issued for the completion of non-collegiate instruction.
- For home-schooled students, a letter of equivalent education from the home district superintendent.

Transfers

An official transcript for each college from which transfer credit is being requested. If no transfer credit is being requested and/or transcripts are unavailable, you still must report yourself as a transfer for Admission and Financial Aid purposes.

Notice: Applicants who have earned a master's, bachelor's, or an associate degree from an accredited institution need not supply a copy of their high school transcript, diploma, or GED except in the case where the applicant is requesting admission to select programs where specific prerequisites are required for admission. However, on your application, please list your former high school's name, address, and your graduation date or GED and completion date, as appropriate.

Former Matriculated MVCC Students

Contact the Utica Campus Advisement Center, Payne Hall, Room 104B, or the Rome Campus Student Services Office, Plumley Complex, Room 130, for appropriate guidance on re-enrollment.

Application Review Processing

Rolling Admission

MVCC uses a rolling admissions process for accepting students. Applications are reviewed as soon as they are considered complete. Students are notified of their acceptance once the completed application is reviewed. Notifications begin:

- For Fall (September) semester — on Nov. 1 prior to requested term
- For Spring (January) semester — on Oct. 1 prior to requested term

- For Summer (May) semester — on March 1 prior to requested term

Admissions Reservation Form (no-fee deposit)

All accepted applicants receive an Admissions Reservation Form along with their acceptance letter. The Admissions Reservation Form, used in place of an admissions deposit, confirms the fact that an accepted applicant plans to enroll at the college for the semester indicated on their application. This acknowledgement is used by administrators to help plan sufficient class availability for expected students.

The following rules apply:

1. Fall applicants accepted prior to March 15 should return the Admissions Reservation Form as soon as possible, and by April 1. Applicants requesting on-campus housing should return the form as soon as possible after acceptance. The sooner the applicant confirms their plan to attend, the sooner their request will be posted to the Residence Hall on-campus housing request list.
2. Fall applicants accepted after March 15 should return the form within two weeks from the date listed on the acceptance letter.
3. Spring Semester (January) or Summer Semester (May/July) applicants should return the form within two weeks of the date listed on the acceptance letter. Again, applicants interested in Spring Semester on-campus housing should return the form as soon as possible.

Important Notice: Failure to return the Admissions Reservation Form according to the timelines listed above can jeopardize your opportunity for enrollment to a particular major, especially majors in which applications exceed space available, and/or your opportunity to secure an on-campus Residence Hall room for the semester requested.

Pre-Enrollment Notifications

After acceptance to the College, applicants will begin to receive a number of communications from the Enrollment and Retention Services team. Those that will be delivered in letter format will include notification of your MVCC Student Number, your MVCC student email address, information on placement testing and class scheduling, and notification of your MVCC Student Information and Registration System (SIRS) pin number (PIN).

The Admissions Office will supply you with a pre-enrollment information guide and health record forms in your acceptance package. The information guide is provided to assist you through the admissions process with important information that you must do prior to the start of classes for your first semester.

U.S. Army ConAp Program

MVCC has joined the United States Army and over 1,900 participating colleges across the country in the Concurrent Admissions Program (ConAP). The program allows new recruits, who enlist in the Army or the Army Reserves, to enroll in a college or university at the time of their enlistment. These soldiers earn money toward college through the Montgomery G.I. Bill for educational benefits, and are guaranteed admission at a selected college.

Eligible students are permitted to take as little as 25 percent of their courses in residence at MVCC, with the remaining credits available through transfer, independent, or correspondence classes, and credit for specialized training or life experience. MVCC will provide ConAP students with counseling and with program planning assistance and evaluation. For more information about the program, call the MVCC Veterans Education Services Office at 315-792-5488.

Academic Terminology Students Should Know

Academic Year

The College academic year consists of two traditional semesters: Fall and Spring. There are also shorter sessions called terms that are offered in Summer, Intersession, and within semesters.

Adding a Course Once the Semester Begins

Students requesting permission to enroll in courses after the first week of classes must use the Late Enrollment Request Form. Enrollment in courses during the second week of classes requires course instructor permission. Enrollment in courses after the second week of classes requires permission of both the course instructor and the appropriate Academic Associate Dean. These deadlines are prorated for short-term courses.

Advisement

Each matriculated student is assigned an academic advisor with expertise in the student's degree or certificate program. Academic advisors are MVCC faculty or staff members; they can be contacted during their posted office hours or by telephone or email. Academic advisors help students understand program requirements, select appropriate courses, prepare for careers or transfer, and gain access to any special resources needed such as tutoring or counseling. Students are encouraged to see their academic advisor regularly, and especially before priority registration each term. Students can find out who their advisor is through DegreeWorks on SIRS.

Attendance

Attendance is expected at all sessions. The Board recognizes the importance of class attendance to the achievement of student success and completion. Therefore, it is policy that all faculty will establish clear attendance policies for each class and publish the same in their syllabi.

State University of New York regulations require evidence of pursuit of prescribed coursework. Students who fail to satisfy those regulations may be deleted from the class roster on the official census date. (*Board of Trustees approved April 2012*)

Change of Major

Matriculated students wishing to change their program of study should contact the Advisement Center. Changes of Major initiated before the end of the third week of classes are in effect that semester. Changes of Major initiated after the third week of the term go into effect the following semester.

Co-Curricular Transcript

The Student Co-Curricular Transcript provides a listing of a student's involvement in college life that does not appear on their academic transcript. Participation in Diversity and Global View events and tutorials, clubs, activities, leadership experiences (athletic and student organizations), honors, scholarships, and awards will be listed on the co-curricular transcript. This additional information may help students stand out when looking for a job or transfer to a four-year college. For more information, go to the Student Activities Office in either Utica or Rome.

Criminal Background Checks

Criminal background checks and/or drug screening may be required by various agencies in programs that require internships, clinical, or field or student teaching experiences. Please see your program advisor for further information.

Dropping a Course Once the Semester Begins

Students can drop a course any time during the refund period

assigned for the course. No grades are assigned to courses dropped during these times. See the Academic Calendar established by the Office of Records and Registration.

Full-Time Registered Student

One registered for 12 or more credit or equivalent hours in any semester.

Independent Study

Most academic departments offer an Independent Study course (listed as 300 levels in this catalog). These are courses in areas where the College does not currently offer sections. Enrollment in 300 level courses requires registration following academic department approval.

Late Registration

All students (new and continuing/returning) are required to schedule and complete payment for all courses before the semester opens.

Learning-Through-Writing Course Sections with the Designation "LTW"

A learning-through-writing component is incorporated in course sections with the designation "LTW." Students in these sections use writing as a tool for learning and thinking. They write as a means of communication and as a process for acquiring knowledge and deepening their understanding of the subject matter. Writing tasks are related to the content of the course and may include exploratory writing, academic journals, essays, reports, and summaries.

Matriculation

Matriculation is the process by which a prospective student applies for admission, submits all required documentation to support the application, and is officially accepted by the Admissions Office into a degree or certificate program prior to the start of classes. The deadline for matriculation is the end of the last business day prior to the start of classes. Matriculation terminates with graduation, dismissal, deactivation of a program, or lack of registration for four consecutive semesters not including Summers and Intersessions.

As long as a student maintains continuous enrollment, the catalog under which they matriculated will apply. If courses have been eliminated, or if requirements have changed, the administrator in charge of the affected program will work with the student to identify substitute courses. If a student ceases enrollment for four consecutive semesters, that student must meet with an advisor in the Advisement Center to process a re-matriculation form. The course completion requirements will be those that appear for the program in the catalog that is in use at the time (semester) of re-matriculation.

Graduation requirements for a matriculated student are based on the catalog in effect at the time of matriculation, re-matriculation, or change of major into the degree or certificate program.

Non-matriculated

A student who enrolls in either credit or non-credit courses without applying to or being accepted by the College into a degree or certificate program. Non-matriculated students are not eligible to receive State or Federal financial aid. If you wish to enroll as a non-matriculated student, please see Options for Non-Matriculated Student Enrollment on page 9.

Part-Time Registered Student

One registered for fewer than 12 credit or equivalent hours in any semester.

Academic Terminology Students Should Know (continued)

Payment

The process by which a student settles their financial obligation to the College.

Registration

Registration dates are published each semester by the Office of Records and Registration. All financial obligations must be satisfied by the student before he or she may register for a succeeding semester. Registration is not complete until a valid Certificate of Residence is on file and all tuition and fees for the semester are paid and validated. Currently enrolled matriculated students can pre-schedule for classes using a Priority Registration system. Students are assigned their date and time based on the number of credit hours earned at MVCC. Students are notified through their MVCC student email account as to their personal time and date to schedule. During web pre-scheduling, students have an option to place themselves on a waitlist for a particular section through the SIRS system.

Release of Student Information

In releasing information about students, MVCC follows the provisions of the Family Educational Rights and Privacy Act (FERPA). A statement of the College's policy is contained at www.mvcc.edu.

Schedule Cancellation

The process of deleting students' schedules from the database. Students who have not made payment by the due date have their class schedules cancelled. Classes are available on a space-available basis. The College reserves the right to close, cancel, or split classes as appropriate. Instructor assignments listed in the class schedule are subject to change.

Scheduling

The process by which courses are entered into the database under the student identification number.

Section Cancellation Policy

The College makes every effort to run sections as scheduled; however, there is the possibility that a class section may be cancelled through the first meeting time at the College's discretion.

Semester

A semester is a 15-week period that includes both instructional and exam periods. See the Academic Calendar for semester starting dates.

Senior Citizen Audit

Oneida County residents who are 60 years or older can sign up to audit certain courses tuition-free. Audit is on a space-available basis and should be requested no more than two days prior to the start of classes. Classes that cannot be audited are those that are non-credit or laboratory classes that would require additional instructional equipment or supplies, such as in science or culinary classes, and include the fitness center courses. Those auditing classes attend classes without participating in testing. There is no grade or credit received. Textbooks are purchased at the student's expense. MVCC is not responsible for any other expense that may be incurred. All inquiries regarding Senior Citizen Audit should be directed to the Office of Records and Registration at 315-792-5336.

Student Information and Registration System (SIRS)

MVCC uses a web-based Student Information and Registration System (SIRS). The system is available to all students and is accessible through the College's website, www.mvcc.edu. With a

College-issued Personal Identification Number (PIN) students can choose from four options to manage their information:

- Personal Information: Students can revise their PINs, mail and telephone information, email address, and emergency contact information.
- Academic Records: Students can view or print out an unofficial academic transcript, view midterm or final grades, view holds, check degree progress, and apply for graduation.
- Registration: Students can Add/Drop classes (during limited time periods), find their priority date and time for pre-scheduling, view or print class schedules, view or print account summaries, and contact the Office of Records and Registration or the Advisement Center.
- Financial Aid: Students can read messages, check financial aid eligibility, check award information, or contact the Financial Aid Office.

All enrolled students are given an account in Blackboard, a course management software system that allows students and faculty to access course content and interact in a secure online environment asynchronously. Students will need Blackboard to complete the tutorial portion of the Diversity and Global View requirement.

Transcript Request

Official transcripts are produced on security paper and sent by standard U.S. mail in a sealed envelope, or electronically via PDF and secure email. The envelope is stamped "Official Transcript Enclosed" and sealed with a multicolored signature. When the transcript is issued to the student, the transcript is stamped "Issued to Student." Once the envelope is opened, the transcript is no longer considered official. MVCC will issue one official transcript per student at no charge. Each additional transcript is \$10. MVCC has retained Credentials Inc. to accept transcript orders over the internet. Please go to www.mvcc.edu/registrar/transcripts to get the link to request, or you can type the following url in to get directly into the site. Visit www.credentials-inc.com/tpplus/?ALUMTRO002871 to enter your order. If you are uncomfortable placing an order over the internet, you can call Credentials Inc. at 847-716-3005 to place your transcript request. There is an additional operator surcharge for placing orders over the telephone. Financial obligations must be met prior to the release of an official transcript.

Wait List

When a course section is filled to capacity, a student may put her/his name on a Waitlist. If a seat opens in that section, the student is assigned to that section and notified through MVCC student email.

Withdrawal from the College

Students who feel that it is necessary to withdraw from the College must notify the Advisement Center. An exit interview is required in order to constitute official withdrawal. Grades will then be assigned for official withdrawals from the College on the same basis as for official withdrawal from a course.

Withdrawal from a Course

Students who officially withdraw from a course after the third week of classes (for 15-week courses), but prior to the deadline established by the Office of Records and Registration will be assigned a grade of "W." In order to officially withdraw, a student must submit a Drop Form to the Office of Records and Registration. Withdrawal deadlines for courses of length other than 15 weeks will be prorated. See the academic calendar dates posted by the Office of Records and Registration at www.mvcc.edu. Students who do not officially withdraw from a course are not eligible for a grade of "W."

Assessment and Testing Center

Assessment and Placement Testing

MVCC wants every student to be successful at the College. To ensure appropriate course placement, admitted students are required to take placement tests to determine their mathematics skills and English reading and writing proficiency. The tests are not used for the purpose of determining an applicant's eligibility for admission to the College. If it is determined that there is need to take developmental or remedial coursework in preparation for required courses in a program, it may take longer than the time listed in the catalog to complete the degree or certificate. Persons wishing to take courses for personal enrichment (non-matriculated) are also required to take the MVCC assessment test before scheduling a course with a required test score prerequisite.

Students with an associate degree or higher or who have earned 60 semester hours or more with a grade point average of 2.0 or greater from a regionally accredited college or university are not required to take placement tests at MVCC. Should a student, meeting the above criteria, request testing for appropriate placement, testing will be available.

If the student has completed college coursework that is equivalent to MVCC coursework or a required prerequisite for an MVCC course, the student may be exempt from all or part of the MVCC placement testing. To have status assessed:

1. Applicants for matriculation should submit official transcripts to the Admissions Office to document course completion. An assessment of placement testing needs will be completed during the review of the application prior to acceptance. Students who have earned college credit in mathematics but apply for a program requiring a sequence of math courses may still be required to take a placement test in math to determine their course placement.
2. Those seeking to enroll as non-matriculated will need to supply a copy of a grade report or transcript to show proof of equivalent prerequisite or course completion. Applicants are advised to provide a catalog description of the completed course when a course title does not adequately describe the material covered.

Non-native speakers of English may be required to take an English proficiency exam in addition to the placement test.

A schedule of placement testing dates, times, and locations for each semester is available on the College website. All questions concerning placement testing should be directed to our Placement Testing Coordinator, Room 104A, Payne Hall, Utica Campus, telephone 315-731-5802.

Placement Test Waiver Eligibility:

Students may be exempt from taking certain portions of the placement test if they satisfy the following requirements.

** Please be aware that for some majors the first math course required may be of a higher level than you would place into based on the exemption policy. Students in the majors listed below the exemption policy should plan to take the math placement test regardless of their exemption status:

- A student who scores a minimum of 530 or higher on the math section of the SAT or a minimum of 19 or higher on the ACT would be exempt from the math placement test within a three-year period if the student is going to enroll in MA108, MA110, MA115, or MA171. If the student is in a program that requires a higher level math course, then the student will be asked to take the math placement test.
- Programs that require a higher level math include Engineering Science, Computer Science, Chemical Technology,

Environmental Analysis/Chemical Technology, Civil Mechanical Electrical Technologies, Business Administration, selected Liberal Arts Programs, and Nutrition and Dietetics. For the most up-to-date list, visit www.mvcc.edu/admissions/assessment-testing-center/exemption-policy.

- A student who scores a minimum of 560 or higher on the evidence based reading and writing portion of the SAT or a minimum of a 21 on the English section of the ACT will be exempt from our writing placement test. You are automatically placed in EN101 or EN110 as prescribed by your program.
- A student who scores a minimum of 560 or higher on the evidence-based reading and writing portion of the SAT or a minimum of a 21 on the English section of the ACT will be exempt from taking the reading portion of the placement test. Students who have obtained the minimum score are automatically considered ready for credit-bearing courses that typically are considered reading-intensive (EN102, SO101, PY101, HI101, etc.)

Please Note: Students who score below 500 on any section of the SAT will be required to take the MVCC assessment test in those areas where a minimum score was not obtained. Students who have no SAT scores will be asked to take the entire MVCC placement test. If a student has completed previous college coursework in English and math, and obtained a successful grade, then placement testing may not be required.

College Readiness and Financial Aid Support

MVCC offers an Academic Opportunity Assessment (AOA) Test to determine college readiness and financial aid eligibility requirements for New York State's Tuition Assistance Program (TAP) and/or federal financial aid under some circumstances. Students are required to meet established score requirements in math, reading, and writing on College Board ACCUPLACER™ placement test.

Ways to earn a High School Equivalency Diploma

Test Assessing Secondary Completion™ (TASC™) is New York State's national high school equivalency assessment exam. The exam measures five subject areas including: reading, writing, mathematics, science, and social studies. MVCC offers classes to help students prepare for the TASC exam. There are four classes offered that are 90 hours each: science, social studies, English, and math. Students are also able to take the TASC exam at MVCC. Please contact The Education Center at 315-731-5870 for further information.

MVCC High School Equivalency Program (24-Credit Program)

Students who have not earned a high school diploma may be issued a New York State High School Equivalency Diploma (HSED) upon successfully completing 24 college credits. MVCC offers courses necessary to apply for the HSED. Students are required to take 24 credit hours of designated general education courses to meet HSED requirements. Admission to the 24-credit program does not automatically qualify students for state and federal financial aid.

College Resources

College Libraries

The MVCC Libraries strive to provide students, faculty, and staff with access to excellent information resources and services. The primary focus of the collection and staff is to support the teaching, learning, and recreational interests of the college community as well as to promote information literacy. Patrons may communicate with librarians for research assistance in multiple ways, including via chat, text, phone, email, Facebook, and in person. Librarians are available during open hours for individual and group instruction designed to assist students in learning how to conduct research and develop information literacy skills.

Students and faculty can view library holdings and access research databases through the library website: mvcc.edu/library. All books, audiobooks, DVDs, music CDs, and most electronic books are listed in our online catalog. The Libraries' 104 online databases are available to current students, staff, and faculty both on- and off-campus, the latter requiring only logging on with a college username and password. Additionally, the website provides access to research guides (LibGuides), a new acquisitions list, library information, and links to web resources. A list of faculty services also is available.

The libraries on the Utica and Rome campuses have a combined collection of 98,450 print volumes, 4,814 audiovisual items, 461 print periodical titles, 105,147 unique electronic periodical titles, and more than 278,000 electronic books. Students and faculty have access to more than 88,000 audiovisual resources through streaming video platforms.

Available at both campus libraries

- Wi-Fi for students and faculty
- Public computers with Microsoft Office Suite
- Interlibrary loan to obtain items not owned by MVCC Libraries
- Private study rooms
- Copy machine
- Scanner
- Book return boxes located outside the library

Utica Campus Library

- Microfilm/microfiche reader and printer
- Microfilm of the Utica OD and New York Times
- Audiovisual room with TV and DVD/VHS player
- Low vision reading room
- Black and white printers
- Fax

Rome Campus Library

- Color and black and white printers
- Fireplace with a comfy sitting area

Both libraries operate on an abbreviated schedule during vacation periods and summer months, and on an extended schedule during exam periods. Notice of changes in library hours is posted in the libraries as well as on their website and Facebook page. The MVCC Libraries strive to be a vital part of the campus community, enhancing faculty instruction, meeting student research needs, and offering resources for leisure and lifelong learning moments.

Computer Labs

Utica and Rome Campuses

The College maintains 26 PC labs and three Mac labs on its Utica Campus for academic use. There also are 32 open use computers in the library, and an additional 24 computers in the Learning Commons. The Rome Campus has four PC labs, 24 open use computers in the library, and an additional large 42-seat computer lab.

Utica Campus Library phone numbers:

Circulation and Reserve Desk	315-792-5408
Director	315-792-5399
Fax	315-792-5666
Reference Desk	315-792-5561
Interlibrary Loan	315-792-5669

Rome Campus Library phone numbers:

Circulation and Reserve Desk	315-334-7728
Librarian	315-334-7714

Each lab has at least one laser printer, some with scanners and color printers. While all PC labs support the latest Microsoft Office Suite, there are many specialized applications such as AutoCAD, Solidworks, The Adobe Creative Suite, 3D Studio Max, and Microsoft Visual Basic available for specific departmental programs in specific labs. All academic computers at MVCC have high speed internet access via a gigabit Fiber Optic Ethernet backbone.

The College provides network connectivity in every classroom and many have been converted to "Smart Classrooms" where instructors can employ various multimedia presentations including direct access to the internet. MVCC also maintains a wireless network on both the Utica and Rome campuses, which is available for student use. Each student has access to an individual account complete with network storage and email. Students enjoy a dedicated open lab as well as numerous open lab hours in the departmental labs.

MVCC has a comprehensive website that provides a variety of information, including program and course listings, department pages, and the ability to register for courses, check Financial Aid, and make payments online. It also provides access to MV Online, our internet-based distance-learning environment. Visit www.mvcc.edu for the latest information.

Computer Labs: Rome Campus

The Rome Campus provides a 42-seat Open Lab equipped with computers and laser printers. Students on the Rome Campus enjoy the same access to the internet as the Utica Campus and all computer applications required for their specific program. There are an additional two computer labs for instruction and one cybersecurity computer lab located on the second floor.

Learning Commons

Utica Campus

Information Technology Building 129
315-792-5517

Rome Campus

Plumley Complex 102
315-334-7733

The Learning Commons is the integrated hub that combines welcoming learning space, technology, and services to help students achieve their academic goals. In the Learning Commons, students could receive individualized and student-centered tutoring in a wide range of subjects.

Mentored study groups and supplemental instruction provide additional support to help motivated students succeed. Further, librarian support enhances learning in a relaxed and attentive environment. Completion coaches are also available to provide a holistic approach to eliminate any barriers to academic success. Computer workstations, scanners, and printers add to the wealth of resources in the Learning Commons.

Visit www.mvcc.edu/academics/online/tutoring for a complete listing of support services.

General Education

General Education Aims:

General Education at MVCC consists of liberal arts and sciences courses and has a primary focus on the continuing intellectual development of the students. These courses are both general (not program specific) and liberal (not vocational or technical). The principal aim is to present students with courses designed to enable them to demonstrate that they:

A. Can communicate effectively.

Students will:

- Produce coherent texts with common college-level written forms;
- Demonstrate the ability to revise and improve such texts;
- Research a topic, develop an argument, and organize supporting details;
- Develop proficiency in oral discourse; and
- Evaluate an oral presentation according to established criteria.

B. Can use mathematical processes to acquire and convey knowledge.

Students will:

- Interpret and draw inferences from mathematical models such as formulas, graphs, tables, and schematics;
- Represent mathematical information symbolically, visually, numerically, and verbally;
- Employ quantitative methods such as arithmetic, algebra, geometry, or statistics to solve problems;
- Estimate and check mathematical results for reasonableness; and
- Recognize the limits of mathematical or statistical methods.

C. Have a basic knowledge and understanding of the natural world.

Students will:

- Demonstrate understanding of the methods scientists use to explore the natural world, including observation, hypothesis development, measurement and data collection, experimentation, evaluation of evidence, and employment of mathematical analysis; and
- Apply scientific data, concepts, and models in one of the natural sciences.

D. Have a basic knowledge of society, including an understanding of individuals, cultures, and the relationships between them.

Students will:

- Demonstrate understanding of the methods social scientists use to explore social phenomena, including observation, hypothesis development, measurement and data collection, experimentation, evaluation of evidence, and employment of mathematical and interpretive analysis; and
- Demonstrate knowledge of major concepts, models, and issues of at least one discipline in the social sciences.

E. Understand human nature and the human condition as expressed in the humanities.

Students will:

- Demonstrate comprehension of how social, cultural, aesthetic, and intellectual issues are relevant to society.

General Education Component

Liberal Arts and Sciences Courses

As determined by the State Education Department, an A.A.S. degree program requires a minimum of one-third of the credit hours (based on 60 credits) to make up the liberal arts and sciences component; an A.S. degree program requires a minimum of one-half; and an A.A. program requires a minimum of three-quarters. Certificate and A.O.S. programs are not required to include general education courses.

The General Education program at MVCC is divided into five categories. Within the categories are Core General Education courses (designated as bolded courses) which, beside the specific content of the course, incorporate the following elements of common knowledge: (a) an historical overview of the subject area; (b) a general understanding of the nature of the subject area, its object, scope, logic or methodology, and relation to other disciplines; and (c) the use and development of the intellectual skills, thinking, language, and, where appropriate, mathematics.

Students in A.A.S., A.S., and A.A. degree programs must take one Core course in each of the five categories as determined by their program. The number of additional general education courses is prescribed by the degree. (See General Education Quick Reference Guide on page 16.)

SUNY General Education

SUNY has implemented a policy designed to enhance and coordinate general education on all SUNY campuses. Any student graduating with a four-year bachelor's degree from a SUNY campus must complete a minimum of 30 credit hours in coursework from at least seven of the Knowledge and Skill Areas: Mathematics, Natural Sciences, Social Studies, American History, Western Civilization, Other World Civilizations, Humanities, The Arts, Foreign Language, and Basic Communication. SUNY requires that courses from the Mathematics and Basic Communication areas must be included within the general education coursework. In addition, students must demonstrate competence in the skill areas of critical thinking and information management.

Every student graduating from MVCC must complete the General Education courses required by their degree. The student who is planning on transferring to a SUNY campus for a bachelor's degree would find it advantageous to complete as much coursework as possible towards fulfilling the minimum of 30 credit hours from at least seven of the SUNY Areas. In general, if a grade of "C" or higher is earned in a course in a particular Knowledge and Skill Area, that Area is satisfied at every SUNY campus. All MVCC graduates obtaining an A.A. and A.S. will have met the SUNY General Education requirements upon graduation. SUNY has recognized the MVCC courses listed as meeting the criteria for particular Knowledge and Skill Areas within its structure. As students select General Education electives within their chosen programs, they are encouraged to consult with their advisors to compile the most beneficial transfer package. Not doing so may result in transferring students having to spend an additional semester or longer at a SUNY institution in order to meet General Education requirements.

The General Education Course Lists, on pages 16 and 17, indicate all courses at MVCC that have General Education status.

Mohawk Valley Community College
General Education Quick Reference Guide

All AAS, AS, and AA degree programs at MVCC are designed to include a *Core (bolded)* course from each General Education Category. The number of additional general education courses is prescribed by the degree as indicated below. Any student graduating with a baccalaureate degree from a SUNY campus must complete a General Education requirement of no fewer than 30 credit hours specifically designed to achieve the student learning outcomes in seven (7) Knowledge and Skill Areas. SUNY advises that community college students wishing to transfer to a four-year SUNY institution should complete these requirements while earning their associate degree. An MVCC student who is planning on transferring to a four-year SUNY campus should fulfill as many of the 30 hours in the seven (7) SUNY Knowledge and Skill Areas as possible. Students who have not fulfilled the requirements at MVCC, by taking a course or receiving a waiver, are eligible to transfer to a four-year SUNY school, but will need to complete the General Education requirements while at the transfer institution. In all cases, a student who meets the five *Core (bolded)* courses required by the degree will have automatically met five of the SUNY Knowledge and Skill Areas.

Degree Type	Required Hours	Number of General Education Required Hours and Courses	
AAS	20	One <i>Core (bolded)</i> course from each of the 5 Categories	Additional courses needed to meet the minimum number of 20 hours
AS	30	One <i>Core (bolded)</i> course from each of the 5 Categories	Additional courses needed to meet the minimum of 30 hours. The additional courses should be from at least 2 distinct Categories and from at least 2 additional SUNY areas not originally chosen by the <i>Core</i> courses
AA	45	One <i>Core (bolded)</i> course from each of the 5 Categories	Additional courses needed to meet the minimum of 45 hours. The additional courses should be from at least 3 distinct Categories and from at least 2 additional SUNY areas not originally chosen by the <i>Core</i> courses

General Education Course List

Categories

Category 1	Category 2	Category 3				Category 4		Category 5	
Mathematics	Natural Sciences	Social Sciences & History				Humanities & The Arts		Language & Communication	
SUNY* Area 1 Mathematics	SUNY* Area 2 Natural Sciences	SUNY* Area 3 Social Sciences	SUNY* Area 4 American History	SUNY* Area 5 Western Civilizations	SUNY* Area 6 Other World Civilizations	SUNY* Area 7 Humanities	SUNY* Area 8 The Arts	SUNY* Area 9 Foreign Language	SUNY* Area 10 Basic Communication
MA108	BI103	AN101	AC131	HI101	AN102	EN102	EN197	FL101	EN101
MA110	BI105	BM101	HI111	HI102	GE101	EN148	GC244	FL102	EN105
MA115	BI141	GE101	HI112	HI103	HI101	EN198	HU183	FL111	EN106
MA121	BI216	PS101		HI104	HU227	EN240	HU184	FL112	EN102
MA125	CH101	PY101		HU204	HU228	EN241	HU187	FL141	EN110
MA131	CH111	SO101		HU205	SO207	EN248	HU188	FL142	EN147
MA139	CH120	BM110		HU290		EN249	HU204	FL151	EN150
MA150	CH131	BM115		HU295		EN255	HU205	FL152	EN153
MA151	CH141	CI104				EN256	HU210	FL173	EN196
MA172	GL100	ED205				EN265	HU292	FL174	
MA122	GL101	IS100				EN271	PT205	FL300	
MA140	GL102	IS101				EN272	TH193	FR101	
MA152	PH106	PS202				EN280	TH195	FR102	
MA253	PH112	PS203				EN281		FR191	
MA260	PH131	PS204				GC244		FR192	
MA275	PH141	PS205				GC245		FR201	
MA280	PH145	PY201				HU186		FR202	
	PH151	PY202				HU187		FR301	
	PH261	PY203				HU188		FR302	
	WE101	PY204				HU204		GR101	
		PY205				HU205		GR102	
	BI142	PY206				HU210		GR201	
	BI201	PY207				HU289		GR202	
	BI202	PY208				HU290		GR301	
	BI217	PY212				HU291		GR302	
	CH112	SO202				HU292		IT101	
	CH115	SO203				HU295		IT102	
	CH142	SO204				HU296		IT191	
	CH247	SO205				PT205		IT192	
	CH248	SO206						IT201	
	PH113	SS218						IT202	
	PH142							IT301	
	PH152							IT302	
	PH262							SP101	
								SP102	
								SP191	
								SP192	
								SP201	
								SP202	
								SP301	
								SP302	

*See appropriate Academic Associate Dean for SUNY Waiver procedure.

General Education Course List

Course	SUNY Area	Course	SUNY Area	Course	SUNY Area	Course	SUNY Area
AC131	AH	EN281	HU	HU289	HU	PS205	SS
AN101	SS	FL101	FL	HU290	HU, WC	PT205	A, HU
AN102	OW	FL102	FL	HU291	HU	PY101	SS
BI103	NS	FL111	FL	HU292	A, HU	PY201	SS
BI105	NS	FL112	FL	HU295	HU, WC	PY202	SS
BI141	NS	FL141	FL	HU296	HU	PY203	SS
BI142	NS	FL142	FL	IS100	SS	PY204	SS
BI201	NS	FL151	FL	IS101	SS	PY205	SS
BI202	NS	FL152	FL	IT101	FL	PY206	SS
BI216	NS	FL173	FL	IT102	FL	PY207	SS
BI217	NS	FL174	FL	IT191	FL	PY208	SS
BM101	SS	FL300	FL	IT192	FL	PY212	SS
BM110	SS	FR101	FL	IT201	FL	SO101	SS
BM115	SS	FR102	FL	IT202	FL	SO202	SS
CH101	NS	FR191	FL	IT301	FL	SO203	SS
CH111	NS	FR192	FL	IT302	FL	SO204	SS
CH112	NS	FR201	FL	MA108	MA	SO205	SS
CH115	NS	FR202	FL	MA110	MA	SO206	SS
CH120	NS	FR301	FL	MA115	MA	SO207	OW
CH131	NS	FR302	FL	MA121	MA	SP101	FL
CH141	NS	GC244	A, HU	MA122	MA	SP102	FL
CH142	NS	GC245	HU	MA125	MA	SP191	FL
CH247	NS	GE101	OW, SS	MA131	MA	SP192	FL
CH248	NS	GL100	NS	MA139	MA	SP201	FL
CI104	SS	GL101	NS	MA140	MA	SP202	FL
ED205	SS	GL102	NS	MA150	MA	SP301	FL
EN101	BC	GR101	FL	MA151	MA	SP302	FL
EN102	BC, HU	GR102	FL	MA152	MA	SS218	SS
EN105	BC	GR201	FL	MA172	MA	TH193	A
EN106	BC	GR202	FL	MA253	MA	TH195	A
EN110	BC	GR301	FL	MA260	MA	WE101	NS
EN147	BC	GR302	FL	MA275	MA		
EN148	HU	HI101	OW, WC	MA280	MA		
EN150	BC	HI102	WC	PH106	NS		
EN153	BC	HI103	WC	PH112	NS		
EN196	BC	HI104	WC	PH113	NS		
EN197	A	HI111	AH	PH131	NS		
EN198	HU	HI112	AH	PH141	NS		
EN240	HU	HU183	A	PH142	NS		
EN241	HU	HU184	A	PH145	NS		
EN248	HU	HU186	HU	PH151	NS		
EN249	HU	HU187	A, HU	PH152	NS		
EN255	HU	HU188	A, HU	PH261	NS		
EN256	HU	HU204	A, HU, WC	PH262	NS		
EN265	HU	HU205	A, HU, WC	PS101	SS		
EN271	HU	HU210	A, HU	PS202	SS		
EN272	HU	HU227	OW	PS203	SS		
EN280	HU	HU228	OW	PS204	SS		

SUNY General Education Codes for Areas

- A: The Arts
- AH: American History
- BC: Basic Communication
- FL: Foreign Language
- HU: Humanities
- MA: Mathematics
- NS: Natural Science
- OW: Other World Civilizations
- SS: Social Science
- WC: Western Civilizations

Academic Information

Grades

Grades consist of the following:

A	Excellent
B	Good
C	Satisfactory
D	Poor
F	Failure
W	Withdrawn prior to the official last date established by the Office of Records and Registration
S	Satisfactory (midterm only)
U	Unsatisfactory (midterm only)
I	Incomplete (temporary)
AU	Audit
NR	Not a grade, but a symbol indicating that a grade was not submitted.

“W” grades appearing on the record do not affect the student’s grade point average (GPA). “W” grades count in attempted hours. See “Dropping a Course” (Page 11) or “Withdrawal from a Course” (Page 12).

Students expelled from a specific course, or expelled or suspended from the College, will receive a final grade for each course as determined by the faculty member’s grading policy. However, a grade of “Incomplete” is not an option. Any assignments not completed as of the date of suspension (expulsion) will be factored into grade calculations as zeros.

Audit

No formal grade will be assigned and participation in exams is not required. Audited courses do not satisfy graduation, certificate, or license requirements and do not affect GPA. Audited courses are not counted as part of full- or part-time enrollment status for Financial Aid. Audit requests must be made no later than the end of the first week of classes. Changes from credit to audit may not be initiated after the end of the third week of classes for a regular semester. The auditing policy for senior citizens has additional criteria.

Midterm Grades

Midterm grades are not official and do not appear in any permanent record. They are intended to inform students of their progress. Students may view their midterm grades via the Web using SIRS. Students should seek out an academic advisor soon after midterm grades are posted to discuss progress.

Final Grades

Final grades can be viewed on the SIRS. Students may also request a copy of their final grades from the Office of Records and Registration. Please review them carefully. Any alleged errors, including any missing grades, should be reported immediately to the instructor of the course. If the instructor cannot be reached, the appropriate Associate Dean of the course should be contacted. Students have one year from the end of a semester to request, in writing, a correction to their official transcript and must provide appropriatedocumentation to support the request. For Academic Complaints, see the Student Handbook, found at www.mvcc.edu.

GPA Calculation

The College uses quality points as the means to calculate GPA. A=4 quality points, B=3, C=2, D=1, and F=0. The overall GPA is calculated by dividing the total number of quality points earned by the total number of credit hours taken.

Incomplete Grade

An incomplete grade may be assigned when a student has not completed a small portion of a course for reasons beyond their

control. Subject to approval by the Associate Dean, a plan will be established on how the work will be completed. It is the student’s responsibility to meet with the instructor to establish a time limit and the work must be completed no later than the end of the following regular semester. An incomplete grade will convert to an “F” if the instructor submits no grade at the end of the following semester.

Graduation Requirements

In order to graduate, students must meet the following criteria:

- A final high school transcript showing graduation information or GED Certificate must be on file.
- Students must pass all courses required for the program or certificate in which they have matriculated, and must achieve at least a 2.0 program GPA. Courses should be completed as specified in the Catalog including general education requirements.
- All first-time matriculated and re-matriculated students must complete the Diversity/Global View component. Consult an academic advisor for details.
- Residency Requirement: A minimum of 25 percent of the required program credits for graduation must be successfully completed at MVCC.
- Students expecting to have transfer credit to count toward graduation should have all official transcripts on file. All transfer courses must be posted on your official transcript prior to graduation.
- Financial obligations to the College must be fulfilled.
- Students are responsible for satisfying all requirements leading to a degree or certificate for the curriculum in which they are enrolled.
- Matriculation is terminated by graduation. Students intending to pursue another degree or certificate need to matriculate in the new degree or certificate.
- Students must complete ED100; it is suggested this is completed within the first 15 hours of instruction.
- A student must have completed at least 70 percent of the total credits in their degree program or 50 percent of their certificate program before applying for graduation. The Associate Dean must approve any exceptions.
- Commencement ceremonies are held at the end of the Spring and Fall semesters. Students planning to graduate in the Spring, Summer, or Fall semester should submit an application to the Registrar by the published deadlines. Applications for graduation are available at the Office of Records and Registration, or online in your SIRS account and at www.mvcc.edu/graduation-application. Attending the commencement ceremony does NOT guarantee that you will graduate. Check with your Associate Dean to be sure you have completed the degree requirements. If you do not satisfy degree requirements, you must complete a new application for graduation during the semester in which completion is anticipated.

Dual Degree

Providing that all requirements are fulfilled for both programs, including at least a 2.0 GPA in both, a student may concurrently or consecutively undertake a second-degree program at the same level as the first. A second degree will be awarded only in those cases where the second program requires at least 15 semester credit hours of specific courses, which are not part of the requirements of the first.

Physical Education

A passing grade in two credit hours of the instructional program in Physical Education is a graduation requirement for students in most degree-granting programs at MVCC. This requirement applies to all matriculated students. Students with physical limitations or disabilities should consult with a member of the Physical Education faculty to discuss their specific needs. Although physical education courses may be repeated for credit, any given course may be counted only once toward the two-credit requirement. Students having met the physical education requirement for graduation may elect to participate further in the physical education program. The application of elective credits earned in physical education is the prerogative of the degree-granting program in which the student is enrolled. Some physical education courses may have additional fees attached.

DegreeWorks

Together, students and their academic advisors track academic progress and requirements for graduation using DegreeWorks. It contains the course requirements for the student's program, and lists courses completed, pre-scheduled, and in progress. Courses that do not count toward graduation will be found under "courses not applied to program." Students can view their degree progress using SIRS.

Repeating Courses

If a course is repeated, only the highest grade will count in the computation of the GPA.

Honors

MVCC takes great pride in the academic achievements of our students. The following programs reinforce that pride.

Phi Theta Kappa International Honor Society

Phi Theta Kappa, International Honor Society for the Two-Year Colleges, is the largest honor society in American higher education. The purpose of the organization is to recognize and encourage scholarship among two-year college students. The Lambda Beta Chapter at MVCC was formed in 1960 and welcomes new members each semester.

Eligible students are sent an invitation to join the chapter. Membership is offered to currently enrolled students who have an overall GPA of 3.5 or higher with at least 12 credit hours toward an A.A., A.S., A.A.S., or A.O.S. degree. Chapter activities provide opportunities for individual growth and development through participation in honors, leadership, service, and fellowship programming.

Honors Program

The Honors Program at MVCC is designed to motivate exceptional students in all fields of study to develop to their fullest potential. The program is designed to enrich students' learning experiences through independent research, challenging projects, and collaborations with faculty and peers — all while preparing them for further study, a vibrant career, and a lifetime of achievement. The program will emphasize deep learning and support of students in becoming independent, creative, and self-confident learners.

Students must complete three steps to earn the Honors Distinction, which is noted on their transcript and diploma: First, they must take Introduction to Honors (HP101), which will prepare them to conduct an independent research project and help build community among the Honors Program students; second, they must choose either an Honors Independent Research Project or Honors Seminar; and third, complete an Honors Independent Research Project.

Students must meet one of the following criteria to be eligible for the Honors Program:

- A GPA of 3.5 (90) or higher from an accredited high school;
- Top 10 percent standing in graduating class at an accredited high school;
- A GPA of 3.5 or higher with a minimum of 12 credits earned at MVCC or another college.

Applications are available on the Honors Program webpage, www.mvcc.edu/honors, or through the Office of Records and Registration. More Information about the Honors Program also can be found at www.mvcc.edu/honors.

Graduation with Honors

A cumulative GPA of 3.75 is required for Graduation with Honors.

President's and Vice President's Lists

These lists recognize those matriculated students who successfully complete a semester with a term GPA of:

- 3.75 or higher for President's List
- 3.50 - 3.74 for Vice President's List

SPIRE National Honor Society

SPIRE is a National Honor Society dedicated to recognizing adult learners and non-traditional students enrolled in two-year academic institutions. Its purpose is to respect and appreciate the unique achievements of these students as they are highly engaged and motivated to succeed in all aspects of their lives. Membership in SPIRE is offered to students who have a minimum cumulative GPA of 3.0, are involved in at least three campus or community activities, are within 12 months of graduation, and have demonstrated leadership, persistence, and future promise.

Cooperative Programs

CollegeWorks

CollegeWorks is a collaborative educational project between The Arc, Oneida-Lewis Chapter NYSARC and MVCC for individuals with intellectual and developmental disabilities. It is a non-degree, non-credit, two-year, college-based vocational program located on the MVCC Utica and Rome campuses. For more information, or to obtain an application packet, please call 315-792-5465.

Mohawk Valley College Consortium (Cross-Registration)

This is a cooperative effort among the following Mohawk Valley colleges: Empire State College at Utica, Hamilton College, Herkimer County Community College, MVCC, SUNY Polytechnic Institute, SUNY Morrisville, and Utica College. Full-time matriculated students may be eligible to take selected courses (one per term) at other member institutions. Selected courses must be applicable to the student's degree program, and must not be available to the student's home campus during the term of registration. Registrations will be processed on a space-available basis, after all home campus students have had an opportunity to register for the course. Approval of the appropriate home campus official is required.

SUNY-wide Cross-Registration

SUNY policy states that students who are matriculated in a degree program in one SUNY college are eligible to "cross-register" to a different SUNY college to take courses. Please reference the Cross-Registration Policy searchable at www.suny.edu.

Academic Integrity and Standards

Academic Integrity Policy

The College is committed to a spirit of intellectual inquiry rooted in the ethical behavior of its participants. Unethical acts, which affect the integrity of learning, are not permissible. Engaging in dishonest or unethical behavior will result in disciplinary action taken against the student by the instructor, or other appropriate college official.

Following are categories of prohibited behavior in the classroom, studio, laboratory, library, computer labs, internships, online academic sites, or other areas of college learning. *

Aiding and Abetting Academic Dishonesty

This includes intentionally: (a) providing material, information, or other assistance to another person with knowledge that such aid could be used to commit any of the proscribed acts noted above; or (b) providing false information in connection with any inquiry regarding academic integrity.

Bribery

Offering or giving any article of value or service to an instructor in an attempt to receive a grade or other benefits not legitimately earned or not available to other students in the class.

Cheating

Cheating includes, but is not limited to: using unauthorized notes, study aids, or information on an examination, test, assignment, etc.; altering a graded work after it has been returned, then submitting the work for re-grading without the instructor's consent; or allowing another person to do one's work and submitting that work under one's own name. Cheating also includes the possession and/or utilization, without authorization, of copies (in whatever form, e.g. hard copy, electronic, pictures, etc.) of tests, answer sheets, or other materials, however obtained, that could interfere with fair, accurate testing, as well as retaining, possessing, using, or circulating previously given examination materials without authorization.

Collusion

Collusion includes cooperation that results in the work or ideas of others being presented as one's own (e.g., rather than as a group effort). However, ordinary consultation of faculty, library staff, tutors, or others is legitimate unless the instructor has imposed stricter limits for a particular assignment.

Consequences

Academic dishonesty may result in penalties including, but not limited to, lower grades, failing grades, expulsion from the class, or expulsion from the College.

Duplicate Submission of the Same Work

Submitting the same work for more than one course is a violation unless the professor(s) assigning the work gives consent in advance. This includes work first produced in connection with classes at either MVCC or other institutions attended by the student.

False Information and Lying

This includes consciously furnishing false information to other students, faculty members and their representatives, advisors, administrators, or representatives of the college with the intent to mislead. Instances would include but are not limited to misrepresenting activity outside of the classroom (reports on field work, internships, etc.), activity within the classroom (falsifying data, research, etc.), and/or improperly seeking special consideration or privilege (e.g., for postponement of an examination or assignment deadline, etc.).

Falsifying Academic Documentation and Forgery

This includes any attempt to forge or alter academic documentation (including transcripts, letters of recommendation, certificates of enrollment or good standing, registration forms, drop/add forms, withdrawal forms, and medical certification of absence) or to falsify other writing in academic matters (e.g., any documentation provided to instructors) concerning oneself or others.

Plagiarism

The MLA Handbook for Writers of Research Papers defines plagiarism as using "another person's ideas or expressions in your writing without acknowledging the source ..." Common sense as well as ethics should determine what you document. "For example, you rarely need to give sources for familiar proverbs ('You can't judge a book by its cover'), well-known quotations ('We shall overcome'), or common knowledge ('George Washington was the first president of the United States'). But you must indicate the source of any appropriated material that readers might otherwise mistake for your own" (5th Edition, pp. 30, 33).

Plagiarism may range from isolated formulas, sentences, or paragraphs to entire articles copied from books, periodicals, websites, speeches, or the writings of other students. Honesty requires that any work or materials taken from another source for either written or oral use must be acknowledged. Any student who fails to give credit for ideas or materials obtained from another source is guilty of plagiarism. Plagiarism, in any of its forms, whether intentional or unintentional, violates standards of academic integrity.

Plagiarism can occur in written, oral, electronic, and/or creative works. Examples of plagiarism include, but are not limited to:

- Direct quotation of any source material whether published or unpublished without giving proper credit through the use of quotation marks, footnotes and other customary means of identifying sources. This includes complete sentences or paragraphs, or an entire piece of written work;
- Copying another student's essay or test answers;
- Paraphrasing another person's ideas, opinions, or theories from books, articles, websites, etc., without identifying and crediting sources and/or "cutting and pasting" from various sources without proper attribution;
- Borrowing/copying facts, statistics, graphs, diagrams, photographs, or other illustrative or visual materials without identifying and crediting sources;
- Submitting papers written by another person or persons;
- Working together on an assignment and then submitting individual copies of the assignment as one's own individual work without course instructor approval;
- Buying, selling, downloading, or exchanging term papers, examinations, or other written assignments, or any part of them;
- Offering false, fabricated, or fictitious sources for papers, reports, or any other assignment;
- Or any other act of plagiarism as defined by faculty within their syllabus.

Theft, Abuse, and Destruction of Academic Property

This comprises unauthorized removal, retention, mutilation, or destruction of common property of the College that deprives others of equal access to these materials. Such property includes, but is not limited to, library materials, laboratory materials, computers, and computer software. This includes also sequestering library materials for the use of an individual or group; a willful or repeated failure to respond to recall notices from the library; and the removal

or attempt to remove library materials from the library without authorization. The theft, mutilation, or destruction of another student's academic work, including books, notes, computer programs, papers, reports, laboratory experiments, etc., also falls under this type of violation. This also covers the unauthorized recording, sale, purchase, or use of academic lectures, academic computer software, or other instructional materials.

Unauthorized Use of Information Technologies

In the context of the completion of a course and/or assignments (contained within a course), the unauthorized use of computers or the College's computer network (e.g., the unauthorized use of software, access codes, computing accounts, email, and files) or other electronic devices (calculators, personal digital assistants, pagers, etc.) is prohibited. **

* Adapted from Canisius College's Code of Academic Integrity. Adapted and reprinted with the permission of Canisius College.

** MVCC complies with Federal regulations regarding nondiscrimination and equal opportunities for persons with disabilities. Portions of this policy will be waived to meet those regulations as stated in Section 504 of the Rehabilitation Act of 1973.

Academic Standards

All students at MVCC are expected to make reasonable progress toward the completion of their degree or certificate. In order to support students in successfully reaching MVCC's academic standards, the College will review students' academic progress regularly. The student's academic standing* is determined on the basis of the cumulative GPA and total number of hours** according to the following table:

Total hours Attempted	Unsatisfactory Progress Cumulative GPA	Minimum Progress Cumulative GPA
0.50-12.00	0-1.49	1.50
12.5-36.00	0-1.64	1.65
36.5-48.00	0-1.79	1.80
48.5-60.00+	0-1.99	2.00

- The first review will occur at the end of the matriculated student's first semester (Fall, Spring) or term (Summer).
- After the first review, the student's GPA will be reviewed each semester or term that the student is enrolled.
- The student will be assigned one of the following academic standings after each review:
 - Good academic standing
 - Intervention
 - Probation
 - Dismissal
- A student who does not meet the "Minimum Progress" cumulative GPA (as indicated on the table above) will be placed on academic intervention for the next semester.
- A student on academic intervention standing will be placed on academic probation by the College if she/he does not earn a minimum of 1.5 term GPA for the intervention semester or term.
- A student on probation must see an academic advisor before scheduling classes for the upcoming term, and is limited to a semester schedule of no more than 14 hours (which may include developmental courses).
- A student is not excused from academic intervention, probation, or dismissal by changing the program of study.

- A student placed on academic dismissal loses her/his matriculated status.
- A dismissed student may not be re-matriculated for one academic semester (Fall, Spring). However, she/he may register as a non-matriculated student after dismissal for no more than two courses to a maximum of nine hours. (Student is not eligible for financial aid.)
- If a student is re-matriculated after an academic dismissal, she/he will be placed automatically on academic probation.
- Action taken under the Standards of Academic Progress will be automatic unless the Vice President for Learning and Academic Affairs acts to make an exception based on the Academic Department or Advisement Center's recommendation.
- An Academic Appeals Committee will act on appeals from dismissed students.

* Please note that academic standing is calculated differently than financial aid standards of academic progress.

** Total hours include: credits and equivalent credit hours taken at MVCC.

Academic Computer Labs Guidelines

All MVCC electronic communication systems, including, but not limited to, facsimiles, computers, network file servers, network or system peripherals, computer data and program files, email and internet accessibility, as well as software furnished to students are the property of MVCC and are intended for academic use only. Access to the internet and shared system resources is a privilege and not a right.

The following regulations shall apply to all MVCC students regarding the use of the aforementioned systems:

- MVCC prohibits the illegal duplication of software and documentation. Privately owned or non-standardized software may not be installed on any MVCC computer or network without the approval of the instructor and the Executive Director of Information Technology.
- Students are not permitted to use any code or password issued to another student or faculty member in order to access, view, or retrieve information from any computer, network file server, network or system peripheral, email account, internet site, computer, or program file, either inside or outside the College's network system.
- Students shall not gain access to any computer, network file server, network or system peripheral, email account, internet site, computer, or program file, either inside or outside the College's network system without specific authority or rights to such access.
- Students shall have no expectation of privacy regarding computer files, email, or internet usage. MVCC reserves the right to monitor all computer files, email, and internet use without prior notice to the student.
- Students shall not download, view, store, or forward pornographic images or any other obscene or offensive materials.
- MVCC prohibits the use of computers, email, internet access, or any other electronic communication system in ways that are disruptive, offensive, or harmful to others, i.e., sexually explicit messages, cartoons, and jokes. This misuse shall also include, but is not limited to, ethnic slurs, racial comments, off-color jokes, or anything that may be construed as harassment, disrespect of others, or may lead to the creation of a hostile educational environment.
- MVCC prohibits its students from using its electronic communications system for commercial gain or profit or as an

Academic Integrity and Standards (continued)

advertising medium for any non-MVCC interest.

- MVCC does not provide a guarantee of any kind regarding system reliability.
- MVCC does not provide a guarantee or warranty of any kind that any information obtained from its electronic communications system is correct and free of errors.
- MVCC is not responsible for any personal damage as a result of loss of data, inaccuracy of data, delays in processing of data, or non-delivery of data over its electronic

communications system.

- MVCC prohibits the use of its electronic communications system for any illegal activity.

Research Policy

Any research proposal involving human or animal subjects must be forwarded to the Office of Institutional Research and Analysis for review and approval by the Research Review Team.

Religious Holidays

MVCC complies with State regulations regarding religious holidays. State Education Law S224-a: Students unable because of religious beliefs to register or attend classes on certain days.

1. No person shall be expelled from or refused admission as a student to an institution of higher education for the reason that he or she is unable, because of his or her religious beliefs, to register, or attend classes or participate in any examination, study, or work requirement on a particular day or days.
2. Any student in an institution of higher education who is unable, because of his or her religious beliefs, to attend classes on a particular day or days shall, because of such absence on the particular day or days, be excused for any examination or any study or work requirements.
3. It shall be the responsibility of the faculty and of the administrative officials of each institution of higher education to make available to each student who is absent from school, because of his or her religious beliefs, an equivalent opportunity to register for classes or make up any examination, study, or work requirements which he or she may have missed because of such absence on any particular day or days. No fees of any kind shall be charged by the institution for making available to the said student such equivalent opportunity.
4. If classes, examination, study, registration, or work requirements are held on Friday after 4 p.m. or on Saturday, similar or makeup classes, examinations, study or work requirements or opportunity to register shall be made available on other days, where it is possible and practicable to do so. No special fees shall be charged to the student for these classes, examinations, study, or work requirements or registration held on other days.
5. In effectuating the provisions of this section, it shall be the duty of the faculty and of the administrative officials of each institution of higher education to exercise the fullest measure of

good faith. No adverse or prejudicial effects shall result to any student because of his or her availing himself or herself of the provisions of this section.

6. Any student, who is aggrieved by the alleged failure of any faculty or administrative officials to comply in good faith with the provisions of this section, shall be entitled to maintain an action or proceeding in the supreme court of the county in which the institution of higher education is located for the enforcement of his or her rights under this section.
7. It shall be the responsibility of the administrative officials of each institution of higher education to give written notice to students of their rights under this section, informing them that each student who is absent from school, because of his or her religious beliefs, must be given an equivalent opportunity to register for classes or make up any examination, study, or work requirements which he or she may have missed because of such absence on any particular day or days. No fees of any kind shall be charged by the institution for making available to such student an equivalent opportunity.
8. As used in this section, the term "institution of higher education" shall mean any institution of higher education, recognized and approved by the Regents of the University of the State of New York, which provides a course of study leading to the granting of a post-secondary degree or diploma. Such term shall not include any institution which is operated, supervised, or controlled by a church or by religious or denominational organization whose educational programs are principally designed for the purpose of training ministers or other religious functionaries or for the purpose of propagating religious doctrines. As used in this section, the term "religious belief" shall mean beliefs associated with any corporation organized and operated exclusively for religious purposes, which is not disqualified for tax exemption under section 501 of the United States Code.

Tuition, Fees, and Expenses to Attend MVCC

These figures are accurate as of June 1, 2017, and may have changed since that date.

Full-Time Expenses

Full-time tuition is \$4,250 per year for New York State residents with a valid Certificate of Residence, at the rate of \$2,125 for each regular semester. Tuition rates are subject to final approval by the SUNY. Annual tuition for out-of-state residents, and students unable to provide a valid Certificate of Residence from their home county, is \$8,500.

Expenses for Part-time Study

Tuition is \$173 per credit hour or equivalent, as of this printing, for students who have a current Certificate of Residence on file with the Business Office. New York State residents who do not present a Certificate of Residence from their own county will be charged \$346 per credit hour. Part-time students pay an activity fee of \$14 per credit hour.

County Certificate of Residence

To qualify for New York State residency and the in-state tuition rate, a student must be permanently domiciled in New York State for a minimum of 12 months, in accordance with New York State Education law, Section 6305 and permanently domiciled in their home county for a period of six months prior to start of classes.

Instructions for Students to Complete the Certificate of Residence requirement:

Full-time students: (12 credit hours or more)

Oneida County residents only — Certificate of Residence is NOT required if the student is a permanently domiciled legal resident of Oneida County for a minimum of six months AND New York State for 12 months prior to the start of classes. MVCC may request documentation before granting New York State and/or Oneida County residency.

New York State residents from outside of Oneida County — Students are required to provide a Certificate of Residence (SUNY B-81 form) ANNUALLY from their home county Treasurer's office prior to the start of classes, but not earlier than 60 days preceding the start of classes, to avoid double tuition charges. Applications for Certificate of Residence can be downloaded from the College website at www.mvcc.edu to complete and bring to your home county Treasurer's office.

Part-time students: (under 12 credit hours)

Oneida County residents only — Not required as noted above. Herkimer and Lewis County residents only — Each semester, part-time students must complete a short AFFIRMATION/ APPLICATION FOR CERTIFICATE OF RESIDENCE FORM attached to the student Class Selection Form or similar form contained in the MVCC Semester Credit Course booklet. This form can be downloaded from www.mvcc.edu to complete and submit to the Business Office.

Students living in Multiple Counties:

In the event that a student qualified for New York State residency, but has been a resident of two or more counties in the state during the six months immediately preceding his/her application for a Certificate of Residence pursuant to Education Law, Section 6305, the student will be required to submit a SUNY B-81 Form from each of the two or more counties to the MVCC Business Office in accordance with the above instructions.

Living Expenses

Estimates of room and board costs are listed below for the purpose of general financial planning. More detailed information will be provided to students requesting on-campus housing.

All costs are per semester

2017-2018 Room Costs:

Regular Double	\$3,175
Compact Double	\$2,925
Triple Room	\$2,675
Suite Double	\$3,475
Suite Single	\$3,825

Room cost includes all utilities, cable, TV, high-speed internet, and telephone service.

Meal Plan: Four available (\$1,305-\$1,910)

Social Fee: \$25

Residence Hall Orientation: \$45

A security/damage deposit of \$100 must be paid to reserve a room. This will be refunded if the reservation is canceled by May 31 for the Fall semester or Dec. 1 for the Spring semester.

MasterCard/VISA/Discover

The College will accept Discover, MasterCard, and VISA. However, students under 21 years of age also must present a signed statement from their parents authorizing the use of the parents' Discover, MasterCard, or VISA.

Other Payment Options

Payment Plan: MVCC offers a convenient budget plan, called E-Cashier, for students who do not receive financial aid or for whom financial aid is insufficient to cover their tuition and fees. This plan allows students to pay their tuition charges in monthly installments. The plan is available for the Fall and Spring semesters only. Payments are due on the fifth of each month and there is a \$35 nonrefundable enrollment fee due with the initial payment. Enrollment information is available in the Business Office or at www.mvcc.edu.

Employer Deferral: This plan is available to students whose employer will reimburse them after successful completion of their course(s). Students must remit payment within 45 days after the semester ends. It is the student's responsibility to secure reimbursement from their employer. Promissory notes for deferral are available in the Business Office or online at www.mvcc.edu.

Tuition and Fee Schedule

Approximate Costs Per Semester (as of June 1, 2017)

For Full-Time Students — Subject to Change

(Does not include room, board, travel, or personal expenses)

Tuition (full-time, NY residents — per semester)	\$2,125
Tuition (out-of-state, students with no certificate of residence)	\$4,250
Books, Supplies, and Equipment	\$300-\$500
Student Activity fee (full-time, required)	\$145
Student Activity fee (part-time, required)	\$14

Administrative

Credit By Examination/Life Experience per Credit Hour	\$115
Replacement Diploma Fee	\$25
Parking Fines — First Violation	\$5 to \$50
Parking Fine — Handicapped Areas	\$50
Protested/Returned Checks	\$25
Payment Plan Fee (per semester)	\$35

Tuition, Fees, and Expenses to Attend MVCC (continued)

Student Support Fee (part-time/full-time)	\$19/\$35
Transcript Fee	First Copy FREE
Others Paid in Advance	\$10
Fax	\$15

Instructional

Technology Fee (full-time)	\$202/semester
Technology Fee (part-time)	\$17/per hour
AP Nursing Proficiency Exam	\$50
Airframe and Powerplant Lab (3 terms)	\$1,700 per term
Airframe and Powerplant Part-time (up to 11 credit hours)	\$125
Air Frame and Powerplant Student Badge Fee	\$65
Air Frame and Powerplant FAA Makeup Fee	\$30 per hour
NCLEX Prep and Curriculum Support 1st Year	\$562.50
NCLEX Prep and Curriculum Support 2nd Year	\$597
National Student Nurses Association Membership 1st year students only	\$70
Nursing Name/ID Badge	\$6
101 Nursing Lab Fee	\$125
102 Nursing Lab Fee	\$100
103 Nursing Lab Fee	\$100
201 Nursing Lab Fee	\$125
202 Nursing Lab Fee	\$125

Library Fees

Periodical Damage Fee	per issue \$10
Mutilated Book Fee	\$10 (plus replacement cost)
Lost Books	\$10 (plus replacement cost)
Late Fee for Library Reserve Material	\$1/Day

Professional Liability Insurance (Per Semester)

Nursing, Respiratory Care, Health Information Technology, Medical Assistants, Phlebotomy, EKG, Home Health Aide, Human Services Intern, Medical Coding Certificate, Health Unit Coordinator Certificate, Recreational Leadership, Sports Medicine	\$15
Recreation Fee — RE106 only	\$85
Respiratory Lab Fee	\$60
Respiratory Clinical Practicum	\$295
Science Lab Fee	\$25 per person (\$50 cap)
Studio Lab Supply Fee	\$20-\$60
Study Abroad Fee	\$1,500-\$5,000
Field Geology Fee	\$300 to \$2,000
Welding Fee	\$35 per course

Student Services

ID Card Replacement	\$5
ID Proximity Card Replacement	\$10
Health Services Fee — Full-time per semester	\$22
Health Services Fee — Part-time per semester	\$12
Student Accident Insurance Part-time Allied Health	\$9
International Student Health Insurance (annual)	\$1,301
International Student Health Insurance (annual-Fall only/mandatory)	\$542.50
International Student Health Insurance (annual-Spring only/mandatory)	\$542.50
International Student Health Insurance (Spring/Summer/mandatory)	\$759.50
International Student Health Insurance (Summer/mandatory)	\$325.50
Study Abroad Trip Health Insurance (16-day rate)	\$23.95

Part-time Students Only

Tuition with NYS Certificate of Residence	\$173/credit hour
Tuition for non-Oneida County residents without Certificate of Residence	\$346/credit hour
Student Activity fee (required)	\$14 per credit hour
Health Service Fee (mandatory)	\$12

All financial obligations must be satisfied before students may register for a succeeding term. In addition, transcripts and diplomas will be withheld until all financial obligations are met, including all fees enumerated above, and those associated with on-campus housing/meals. Students who incur a debt to the school will be responsible for all fees associated with the collection of that debt, including collections costs that will be a minimum of 33.5 percent of the debt plus attorney and court costs. Students have one year from end of any semester in which to appeal charges for tuition and fees. All fees are non-refundable once classes begin.

Tuition and Fee Refund Policies

Refund Percentage Withdrawal Date (Last Day of Attendance)

Prior to start of classes

9-15 Week Term — 100%; 8 Week or Less Term — 100%

During the first calendar week of classes

9-15 Week Term — 75%; 8 Week or Less Term — 25%

During the second calendar week of classes

9-15 Week Term — 50%; 8 Week or Less Term — 0%

During the third calendar week of classes

9-15 Week Term — 25%; 8 Week or Less Term — 0%

After the third calendar week of classes

9-15 Week Term — 0%; 8 Week or Less Term — 0%

All Students Receiving Title IV Federal Financial Aid

Per Section 484B of the Higher Education Act, there is no longer a separate Federal Refund Policy of Tuition and Fees for students receiving Title IV Federal Financial Aid. Title IV Federal Financial Aid includes Pell Grants, Supplemental Educational Opportunity Grants, Perkins, Loans, and Direct Loans. Title IV Aid is based on student attendance. Not until week 10 (60 percent of term) will Title IV Aid be fully earned and disbursed to a student account.

Example: If a student attends nine days of a 75-day term, the federal government will only pay 12 percent of the total Federal Aid package to cover any student liability. A \$3,000 aid package will now be changed to \$360.

No money shall be refunded unless application for the refund is made within one year after the end of term for which the tuition requested to be refunded was paid to the College. The first day that classes are offered, as scheduled by the College, shall be considered the first day of the semester, quarter, or other term, and the first week of classes for purposes of this section, shall be deemed to have ended when seven calendar days, including the first day of scheduled classes, have elapsed.

Outstanding Financial Obligations

Students who defer tuition on Financial Aid and who then become ineligible to receive that aid or any portion of it, are not relieved of the obligation for payment of tuition, fees, and disbursements. MVCC reserves the right to use a collection agency to collect any outstanding debt. Should an account be turned over to a collection agency, the total outstanding debt may include collection costs, which will be a minimum of 33.5 percent of the debt, plus attorney and court fees.

How to Pay for College

How to Apply for Financial Aid

Step 1: Obtain an FSA ID before Completing a FAFSA (Free Application for Federal Student Aid)

If you do not already have a Federal Student Aid ID (FSA ID), apply for one at fsaid.ed.gov. This will be your electronic signature for your FAFSA and student loans. It also will allow you to check the status of your FAFSA, and to make any necessary changes electronically. If a parent is required to provide information on the FAFSA, then they should also apply for an FSA ID.

When you apply for the FSA ID electronically, you will be given the opportunity to choose your own four-digit PIN; if you do so, it will be activated immediately, and you can use it to sign your FAFSA. If you do not choose your own PIN at this time, it will be mailed to you within one to five days. Your FSA ID is confidential and should not be shared. It does not expire.

Step 2: Completing the FAFSA form

There is a worksheet available at www.fafsa.gov, which many applicants find helpful to complete before actually completing the FAFSA online.

There is no fee to complete the FAFSA; if you are on a site that states a charge for completion, it is not the official Department of Education website (www.fafsa.gov). When you go to the website select "Start Here" and follow the instructions. Be sure you apply for the correct academic year. The MVCC federal school code is 002871.

If you do not sign electronically with your FSA ID, print out the signature page, sign (parent signature if needed), and mail. Your application cannot be processed by the Department of Education until the signature is obtained (electronically or through the mail). If the signature page is mailed, it will delay the processing time.

When you have completed the application, please review it carefully, make any necessary changes if needed. When you are ready, click "Submit My FAFSA Now" on the last page. Once you have submitted your application, you will be taken to a Confirmation Page that shows your Confirmation number, and the Estimated Family Contribution (EFC). You should print a copy of this page for your records.

Please note: The FAFSA must be filed for each academic year; for Financial Aid purposes the academic year begins with the summer semester, and ends after the following Spring semester.

Step 3: After the FAFSA is Submitted

You will receive an electronic Student Aid Report (SAR) in approximately five to seven days if you provide an email address on your FAFSA. If you do not list an email address, the SAR will be mailed to you within approximately two weeks of filing the FAFSA. The colleges listed on your FAFSA will receive your information at this time also.

Step 4: New York State TAP Grant

A full-time student (minimum of 12 credit hours), who is a resident of New York State, may be eligible for the Tuition Assistance Program (TAP) through the New York State Higher Education Services Corporation (HESC). When the FAFSA has been completed, students can link to the TAP on the web form from the Confirmation page. The form will be pre-filled with the FAFSA data that was provided by the student. If TAP on the Web is not completed at this time, the student will be sent a notice from HESC with instructions how to establish a HESC PIN and how to complete the online application. The MVCC New York State school code is 2105.

The HESC website is www.hesc.ny.gov, and the telephone number to reach them is 1-888-697-4372.

Students with less than 12 hours, but at least six credit hours

may be eligible for a part-time TAP award. The Aid for Part-Time Study application is available on the MVCC website, and must be completed by the first day of classes.

Step 5: Financial Aid Award Letter

When the College has received and reviewed the electronic information, as well as any requested documents, an award letter will be sent. This will indicate any estimated eligibility for financial aid funds. Financial aid awards are based on full-time enrollment status and will be adjusted at the time of payment according to the number of credit hours the student is attending.

Step 6: Extenuating Circumstances

The FAFSA uses the prior two years family income to determine eligibility. If a family has experienced circumstances beyond their control — loss of employment, significant decrease in income, death in family, separation/divorce, etc. — it may be possible for the Financial Aid office to make adjustments. The MVCC Special Condition form can be found on the MVCC website, and is available in the office. It should be completed as thoroughly as possible with any supporting documentation attached.

FEDERAL PROGRAMS

Federal PELL Grant: This is a grant program, which does not need to be paid back. Students must be matriculated in a degree or certificate program to be eligible, and must not have received a bachelor's degree, or be in default of a student loan. The awards are need-based, that is, based on family income, assets, number in household, cost of education, etc.

Federal Supplemental Education Opportunity Grant (FSEOG): FSEOG are grants that do not have to be repaid; they are based on need as defined by the Department of Education (see above). The student must be PELL eligible to qualify. Funding is limited and priority is given to early applicants.

Federal William D. Ford Direct Subsidized/Unsubsidized Stafford Loans: As of July 1, 2017, the current rate on subsidized and unsubsidized loans is 4.45 percent. Interest rates may change on July 1 of each year. No interest is charged on the loan while the student is in school, or during the grace period, however, to qualify for the subsidized loan there must be a financial need as outlined above. There are no payments due while the student is in school at least part-time. There is a grace period before repayment begins of six months after completing a degree or certificate program, or after the student has fallen below part-time.

PLUS (Parent) Loans: The current interest rate as of July 1, 2017, is 7.00 percent. Payments on the loan may be deferred while the student is in school, however, interest accrues beginning with the disbursement of the loan. PLUS loans are credit-based. The loan cannot exceed the cost of attendance, and takes into account any other financial aid resources the student may have.

Loan Limits: Dependent students for first-year students: annual combined subsidized and/or unsubsidized loan of \$3,500, plus an additional \$2,000 unsubsidized. Total available: \$5,500.

Dependent Students for Second-Year Students (30 cumulative hours): Annual combined subsidized and/or unsubsidized loan of \$4,500, plus an additional \$2,000 unsubsidized. Total available: \$6,500.

Independent Students (per Federal criteria): First-year students: annual combined subsidized and/or unsubsidized loan of \$3,500, plus an additional \$6,000 unsubsidized. Total available: \$9,500.

Independent Students (per Federal criteria): Second-year students (30 cumulative hours): annual combined subsidized and/or unsubsidized loan of \$4,500, plus an additional \$6,000 unsubsidized. Total available: \$10,500.

How to Pay for College (continued)

Total Combined Loan Limits:

Dependent Undergraduate Students: Subsidized Loans:

\$23,000

Total Subsidized & Unsubsidized: \$31,000

For additional information on Federal Student Loans, including current interest rates, log on to www.studentloans.gov.

Independent Undergraduate Students: Subsidized Loans:

\$23,000

Total Subsidized & Unsubsidized: \$57,500

Interest Rates on Student Loans

Congress has passed and the President has signed the Bipartisan Student Loan Certainty Act of 2013, which ties federal student loan interest rates to financial markets. Under this Act, interest rates will be determined each spring for new loans being made for the upcoming award year, which runs from July 1 to the following June 30. Each loan will have a fixed interest rate for the life of the loan. Further Information regarding interest rates on Federal Student Loans can be found on: www.studentloans.gov.

Perkins Loans: Federal Perkins Loans are available to students as funds allow. Unlike other Federal Loan programs, funds may be limited. Students are encouraged to file FAFSAs early if they wish to be considered. The loan has a fixed rate of 5 percent, and the student must have a financial need as determined by the Department of Education. There is a nine-month grace period for the Perkins loan.

PLEASE NOTE: The Federal Government sets the eligibility amount for student loans. The student cannot exceed the cost of attendance at MVCC with the combination of grants, loans, and other resources. Students must be in good academic standing to receive a student loan.

Loan Contact Information

General Information

1-800-433-3243

www.studentloans.gov

Information on Repaying Your Loan

Borrower Services

Direct Loan Servicing Center

1-800-848-0979

www.studentaid.ed.gov

Direct Loan Consolidation Center

1-800-557-7392

www.studentaid.ed.gov

Applying For a Student Loan

1. Complete the FAFSA online.
2. Submit all requested documents to the Financial Aid Office.
3. Accept the loans online through SIRS.
4. Complete online entrance counseling.
5. Complete the online Master Promissory Note (MPN).

Parent PLUS loan applications can be found at www.mvcc.edu or obtained at the Financial Aid Office. Students are urged to consider loans carefully, and not borrow more than is needed.

Completing the Master Promissory Note (MPN)

MVCC cannot disburse a student loan until this entire process has been completed. All borrowers are required to electronically sign the MPN. By signing, the student is agreeing to pay back any loan funds received for educational expenses. You will complete the MPN only once while a student at MVCC; it will be used for any additional borrowing while you are student here.

The MPN can be accessed at www.studentloans.gov, click on Complete New MPN for Student Loans, select the Subsidized/Unsubsidized option, and click on Proceed to MPN login. Students will need their FSAID to sign electronically, this is the same FSAID used to sign the FAFSA electronically. If the FSAID is not remembered, go to fsaid.ed.gov and request a duplicate FSAID.

Completing the MPN takes approximately 30 minutes. All nine steps must be completed and a confirmation page received. Once the session is completed, an electronic confirmation will be sent to MVCC; this may take up to four days.

Entrance Counseling

Before receiving a student loan for the first time, borrowers must complete an online Entrance Counseling Session. This session provides useful tips and tools regarding loan responsibilities, interest rates, and payment options. Students can access the session at www.studentloans.gov, click, read, and complete the links on the main section of this page. The session takes approximately 20 to 30 minutes; the session must be completed, and a confirmation message received. Unless the session has been completed, the electronic confirmation will not be sent to MVCC. As this is a federal requirement, the loan cannot be paid without this confirmation.

Exit Counseling

When you have completed your studies, you will be required to receive exit counseling. This will give you an overview of your rights and responsibilities as a borrower, as well as information regarding payment options. After leaving school (or studying less than part-time), you will be notified by the loan servicer that holds the loans. The notification will include payment options, where to send payments, and contact information. For further information, contact the Financial Aid Office at MVCC.

NEW YORK STATE PROGRAMS

NYS Tuition Assistance Program (TAP): The NYS Tuition Assistance Program (TAP) grant is available to NYS residents enrolled full time in a degree/certificate program of study. As a grant, it does not have to be repaid. The amount of TAP is based on the NYS budget guidelines, the tuition charges of the school, and the documented net taxable income. Information provided on the FAFSA, along with income tax information is used to calculate the award. After NYS HESC makes the calculation; the school's responsibility is to verify the following:

- Full-time enrollment status of 12 hours or more.
- Matriculation into an approved program.
- Student is meeting of the State Standards of Progress.

After filing the FAFSA, complete the TAP application through the link to the HESC website; paper applications will no longer be mailed. If you do not complete the TAP application online, you will be sent a reminder postcard from HESC with instructions. The HESC website is www.hesc.ny.gov, and the telephone number to reach them is 1-888-697-4372.

Please review the following items regarding TAP payments:

- Notification of an award amount from HESC does not automatically mean you will receive the grant; the school must certify your eligibility for the award.
- To be eligible for the payment of the award, you must be in attendance of all classes. In other words, if you have one late starting class, the award cannot be paid until the class has started.
- If you have late start classes, at least one three-credit hour class must be a full-term (15-week) class.

- TAP awards are limited to eight semesters of study. Six of these semesters can be used at a two-year college such as MVCC. If you are planning to continue your education at a four-year institution, plan carefully so you do not exhaust your TAP eligibility. Check with the Financial Aid Office for additional information.

Part-time TAP: A part-time TAP award may be available if you have a documented disability. The Financial Aid Office, as well as the Accessibility Resources Office, can provide additional information.

Aid for Part-time Study: This award is available if you are taking fewer than 12 credit hours, but at least six credit hours in a semester. You must be matriculated in a degree or certificate program, be a NYS resident, have tuition of at least \$100 per year, and be in good academic standing.

Applications are available online, or in the Financial Aid Office, and must be submitted no later than the first day of class; a copy of your NYS Tax Return must accompany the application. MVCC will determine your eligibility based on mid-term grades. Individual awards are based on the amount of funding available to the school, and the number of applicants eligible.

Other NYS Programs:

- Veterans Tuition Awards (VTA)
- Persian Gulf Veterans Tuition Awards
- Regents Awards for children of deceased or disabled veterans
- Regents Awards for children of deceased police officers and firefighters
- SUNY World Trade Center Memorial Scholarship

For additional information, please contact NYS HESC at 1-888-697-4372, or visit their website at www.hesc.ny.gov.

Standards of Academic Progress apply to all NYS awards.

Funding is also available through the NYS Office of Vocational and Educational Services for Individuals with Disabilities (VESID). For additional information, please contact the Office of Accessibility Resources at MVCC.

Repeated Courses: If a course is repeated in which the grade was acceptable to the degree or certificate program, it cannot be used as a part of your full-time status to determine TAP eligibility for the semester. For example, if you have a total of 12 credit hours for a semester, and three of the hours are a class being repeated to achieve a higher grade, that class cannot be used in determining full-time status for a TAP award. If the class being repeated was an "F," or your program of study requires a grade higher than a "D," it can be counted. Academic departments reserve the right to determine if course content is no longer current, thereby making it necessary for the student to repeat the course so it will be relevant to their degree or certificate program. The student, however, must meet all other eligibility criteria.

Audits

Audited courses cannot be counted as part of a student's full- or part-time enrollment status for financial aid.

STANDARDS OF ACADEMIC PROGRESS FOR FINANCIAL AID

Federal: Students are responsible to maintain eligibility for Financial Aid funding. If a student is having academic difficulties, there are alternatives: ask instructors for help, contact the Learning Commons for information on tutors, talk to an academic advisor. Federal requirements for financial aid requires colleges to look at three areas to determine if a student can continue to receive financial aid, including Subsidized and Unsubsidized Direct Stafford student loans, Perkins loans, and grants (PELL, SEOG Work Study). The three areas are:

- The Qualitative Standard: this is the GPA that is determined at the end of each semester.
- The Quantitative Standard (Pursuit of Program): students must be earning passing grades toward their degree or certificate according to the chart on page 28.
- Maximum Time Frame: in order to retain eligibility for federal financial aid, students must complete their programs of study within a maximum time frame of 150 percent of the length of the program.

Please note: The Total Credits Attempted include all courses including failures and withdrawals. The GPA is calculated according to the College's published academic policies. All transfer hours accepted at MVCC are also included in calculations. If you are not meeting the guidelines the following will occur:

1. Financial Aid Warning: (No Appeal Required)

- A. If you have attempted 15 credit hours or less (per your MVCC transcript), and have not met the standards of academic progress, you will be placed on Financial Aid Warning for the following semester. If you receive notification from the Financial Aid Office that you are on Financial Aid Warning, federal aid will automatically be reinstated, and you do not need to file a financial aid appeal.
- B. If you are a student who has not attended MVCC for two years, and did not meet the standards of academic progress when you last attended, you are automatically placed on financial aid warning.

2. Financial Aid Probation (Approved Appeal Required)

If you have attempted a total of 16 hours or more (per your MVCC transcript), and do not meet the standards of academic progress, you will be placed on Financial Aid Probation. If you receive notification from the financial aid office that you are on financial aid probation, you must file an appeal requesting that federal financial aid be reinstated for the probationary semester. The appeal must include the circumstances that prevented you from succeeding, the semester in which this occurred, and what has changed. The College reserves the right to request an academic plan for students on probation who are requesting an appeal, or to limit the number of credit hours while on probation. Please note: approvals are not guaranteed.

Requesting a Federal Financial Aid Appeal: Financial aid appeals can be considered when a student does not succeed because of extenuating circumstances that caused an extended and prolonged disruption to the semester:

- The death of a relative of the student.
- An injury or illness of the student or close family member.
- Other special circumstances out of the student's control.

The Financial Aid Office may ask for documentation, however, appeals will not be automatically approved. Lack of written documentation reduces the chance that the appeal will be granted, however, the appeal may be submitted without documentation.

If a student continues to make progress, but still does not meet the standards of progress, additional waivers will be considered, as long as all courses have received passing grades.

Maximum Timeframe:

- Associate Degree students will be eligible to receive federal aid through the semester in which they attempt their 99th credit hour as long as academic progress has been consistent.
- Certificate program students will be eligible to receive federal aid through the semester in which they attempt credit hours equal to 150 percent of the length of the program.

Students who exceed the maximum timeframe as stated above and on the progress chart are no longer eligible to receive federal financial aid funds (loans or grants) and cannot be appealed

How to Pay for College (continued)

unless there are mitigating circumstances. Situations that would be considered include:

- Students in programs that require prerequisites and generally take longer than most programs.
- Students who return after not having attended for two or more years.
- Students in a dual degree program who can demonstrate they will complete both degrees within two semesters, as evidenced by the student's advisor.
- Students who can demonstrate the degree will be completed in the following semester and must be verified by the individual student's advisor.

Please note: The above circumstances do not guarantee the approval of an appeal.

Procedure for Filing a Federal Financial Aid Appeal:

You will be notified by MVCC if you have lost eligibility for federal financial aid via your college email; the status can also be viewed through your SIRS account. This will occur after the Office of Records and Registration has processed grades.

The notice you receive will contain a due date for the appeal to be filed, appeals after that date will not be considered.

As much information and support documentation should be submitted with the appeal; decisions will be available for viewing on SIRS within approximately 72 hours of submission of the request, and all supporting documentation.

Standards of Academic Progress for Financial Aid:

State: New York State aid includes the TAP, Aid for Part Time Studies (APTS), and VTA. With all programs, standards of academic progress apply. However, be aware that they differ from the Federal standards.

Additional differences are as follows:

- A total of eight semesters of TAP is available for undergraduate studies; six of those semesters can be used at a two-year college; if the six semesters have been used, there is no appeal available to regain eligibility.
- Only one appeal is allowed for New York State aid.

If you have attempted this many credit/remedial hours	You must pass this many credit/remedial hours	And achieved a cumulative GPA of not less than
3	0	.00
6	3	1.50
12	6	1.50
18	10	1.65
24	14	1.65
30	18	1.65
36	25	1.65
42	29	1.80
48	33	1.80
54	37	2.00
60	42	2.00
66	46	2.00
72	50	2.00
78	54	2.00
84	58	2.00
90	63	2.22
96	67	2.00
99	69	2.00

Standards prior to 2010-2011

Associate Program: this standard applies to students whose first payment of a TAP award was prior to the 2010-2011 financial aid year.

(OLD STANDARDS Prior to 2010-2011)

Before Being Certified for This Payment	1st	2nd	3rd	4th	5th	6th
• A student must have accrued at least this many credits:	00	03	09	18	30	45
• With at least this cumulative GPA:	.00	.50	.75	1.3	2.0	2.0
• And must have finished this many semester's credits:	0.0	6.0	6.0	9.0	9.0	12

Standards beginning 2010-2011

Associate Program: this standard applies to students whose first payment of a TAP award began in the 2010-2011 financial aid year.

(NEW STANDARDS beginning 2010-2011)

Before Being Certified for This Payment	1st	2nd	3rd	4th	5th	6th
• A student must have accrued at least this many credits:	00	06	15	27	39	51
• With at least this cumulative GPA:	.00	1.3	1.5	1.8	2.0	2.0
• And must have finished this many semester's credits:	0.0	6.0	6.0	9.0	9.0	12

MVCC Scholarships

The MVCC Foundation awards more than \$320,000 annually in scholarships to more than 460 MVCC students. Awards range in size from \$100 to full tuition. All may be used for tuition. Many may be used for books, fees, and other purposes. Each of the more than 100 scholarship funds has unique eligibility criteria, and nearly every student will find one or more scholarships for which they qualify! Scholarships are available to incoming freshmen, second-year students, and part-time students.

Students graduating in the top 10 percent of Oneida County high school classes qualify for the full-tuition (less TAP and up to \$500 of PELL) Presidential Scholarship. A limited number of students graduating in the top 10 percent of high school classes outside of Oneida County may qualify for the Exceptional Student Scholarship, (less TAP and up to \$500 of PELL). Several other scholarships offer full-tuition, less aid, and many others offer awards of \$1,000 or more. All prospective students are encouraged to inquire further. For more information, contact the Office of Institutional Advancement at 315-792-5555, or visit www.mvcc.edu/scholarships.

Refunds

Registered part-time students who withdraw from one or more

courses during the refund period may be granted a partial refund. Full-time students who drop below 12 credit hours or the equivalent during the refund period are eligible for a refund only if they have their registration changed to part-time status at that time. The official date of withdrawal from the College is the date the Counseling Office receives notification from the student. The official date of withdrawal from a course is the date the change of student class schedule form (drop/add) is received by the Office of Records and Registration. See chart titled "Tuition and Fee Refund Policies" on page 24 for details.

Refund of Residence Hall Payments

The Residence Hall Room and Board Agreement is financially binding for the full academic year, or in the event of mid-year admission, the remaining portion thereof. All Residence Hall-related costs will appear on the College bill and are due by the official payment date prior to each semester. Residence Hall Room and Fee Reductions are limited to the first three weeks of a student's first semester of occupancy, unless the student is granted a Room and Board Agreement Release. Meal Plan fee reduction for a first semester student will equal the number of full days left in the semester, less a \$20 service charge for processing the meal plan cancellation.

Other Opportunities for High School Students

Mohawk Valley Upward Bound

Mohawk Valley Community College's Upward Bound is a federally funded, academic enrichment program for students at T.R. Proctor High School, grades 9-12. Upward Bound provides fundamental support to participants in their preparation for college entrance, including opportunities for participants to succeed in their pre-college performance and in their higher education pursuits. Upward Bound serves high school students from low-income families, and high school students from families in which neither parent holds a bachelor's degree. The goal of Upward Bound is to increase the rate at which participants complete secondary education and enroll in and graduate from institutions of postsecondary education. Activities include tutoring, college visits, financial literacy workshops, mentoring, career exploration workshops, and cultural and social events. Students are paid stipends for participation in the program.

Utica GEAR UP

MVCC's Utica GEAR UP (Gaining Early Awareness and Readiness for Undergraduate Programs) is a federally funded partnership six-year matching grant designed to increase the number of low-income students who are prepared to enter and succeed in postsecondary education. These grant and matching funds are designed to provide services to the Utica City School District's graduating class of 2017, with services beginning in the seventh grade through high school graduation. Services include, tutoring, mentoring, career and financial literacy workshops, and cultural and social events. Being a partnership grant, community partners actively provide services to GEAR UP parents, as well.

Science and Technology Entry Program

The Science and Technology Entry Program (STEP) is designed to foster seventh- through 12th-graders' interest in the fields of math, science, health, technology, and licensed professions. The program goals include fostering academic excellence, nurturing students in their preparation for college, cultivating students' independence, and providing opportunities for historically underrepresented populations to flourish in the aforementioned fields of study. Program activities include tutoring, job shadowing, research projects, workshops, seminars, college visits, and educational field trips.

Dual Credit Courses

High school juniors and seniors with an 80 or above high school

average may enroll in college courses through the MVCC Dual Credit Program. Dual credit courses cover the same content as those taught on the college campus but, because they are taught in the high schools, offer convenience and accessibility. Dual credit courses are offered to students in Oneida and Madison County school districts. Since dual credit course offerings vary by high school, interested students should consult their guidance counselors to help select appropriate courses.

College Connection

MVCC offers opportunities for high school students to receive college credit as part-time students by allowing eligible juniors and seniors to take one or two courses per semester (Fall, Spring, and Summer semesters only). Oneida and Madison county high school students who have maintained a minimum of 80 or higher high school average and who have the high school counselor's recommendation may take courses on either MVCC campus. Guidance counselors work closely with the Director of Student Engagement and Outreach to select courses that are transferable to the college of choice while fulfilling high school requirements. Students in participating districts may qualify for tuition scholarships, with only minimal fees and book purchases to be covered by students.

High School-College Bridge (part-time or full-time)

High school students, usually seniors, can begin to sample college courses on a part- or full-time basis by "bridging." Students who wish to bridge must have a minimum high school average of 80 and receive school counselor approval to participate. Unless specifically stated, there is no financial aid to those enrolled as bridge students.

Magnet Bridge (full-time, Proctor High School-Utica only)

Magnet Bridge is a scholarship program open to T.R. Proctor students through an application process during the spring of their junior year of high school. Sponsored by the Utica City School District and MVCC, this program provides funding of tuition and fees for accepted students to attend MVCC as full-time college students throughout their senior year of high school. Students are carefully advised to take courses that complete their high school requirements while giving them a start in their chosen college majors. Interested students should contact the Proctor Guidance Office or the Office of Student Engagement and Outreach.

Corporate and Community Education

The Center for Corporate and Community Education (CCED) at MVCC is the Mohawk Valley's first choice for education, personal enrichment, and professional development. CCED is committed to providing a comprehensive array of programs and services that meet the needs of all members of the community by providing opportunities for individual growth, employee skill upgrades, entrepreneur development, employer business enhancement, and more. From training sessions that serve individuals seeking to expand their strengths, to intensive workforce development programs that support major career shifts, CCED provides top-quality programs and services to help community members achieve their goals. Programs are available at our Utica and Rome campuses, online, at client training sites, and a variety of locations throughout the community for people of all ages seeking flexible learning options.

Customized Training and Workforce Development

Training designed to meet the needs of companies throughout the Mohawk Valley include:

- Vocational and technical education programs such as Welding, CNC, Machining, HVAC, Carpentry/Masonry, Advanced Manufacturing, Technology, Electronics, and Surveying;
- Certification and retraining courses in Insurance, Real Estate, Security Guard and Health Care;
- Consulting Services for Manufacturing, Health Care, Telecommunications, Technology, and more.

Professional Development

A sample of courses offered to develop employees and the area's workforce:

Business and Management

- Computer Applications
- Continuing Education for Insurance, Engineering, and Accounting
- Customer Service
- Grant Writing
- Paralegal Training
- Real Estate Salesperson Qualifying Course
- Security Guard Training
- Supervisory and Leadership
- Workplace Success Training Programs

Education

- Child Abuse Recognition and Reporting
- Dignity for All Students
- School Violence Prevention

Health Care

- Barrier Precaution/Infection Control
- Certified Nursing Assistant
- Dental Assistant
- Dialysis Technician
- EKG Cardiographic Technician
- First Aid, CPR, AED
- Home Health Aide
- Medical Administrative Assistant
- Personal Care Assistant
- Personal Trainer Certification

- Pharmacy Technician
- Phlebotomy
- Physical Therapy Aide
- Veterinary Assistant

Hospitality

- ServSafe Certification

Skilled Trades

- OSHA including 10 and 30
- Lead Safe Training
- Tractor Trailer CDL Licensing
- Welding Certification

Advanced Institute for Manufacturing (AIM)

The Advanced Institute for Manufacturing (AIM) is a non-profit manufacturing consulting organization that has been designated as the NIST Manufacturing Extension Partnership (MEP) center for the Mohawk Valley Region. AIM offers training and manufacturing certification programs in Process Improvement, Quality Management Systems, Safety Training, Food Safety Planning, Strategic Business Services, Sales and Marketing Training, Environmental Compliancy, Design and Prototyping, and Cybersecurity and Customized Workforce Development programs. AIM provides these services to the manufacturers in the six-county Mohawk Valley Region including: Oneida, Herkimer, Fulton, Montgomery, Schoharie, and Otsego Counties.

TASC Prep

MVCC offers TASC prep classes for individuals looking to earn a high school equivalency diploma. Classes are offered in the four main subject areas: math, science, social studies, and English. Each individual class is 90 hours. Classes are held on the Utica and Rome campuses and at off-site locations. TASC testing is available on the Utica Campus. Please call 315-731-5871 for additional information.

Ways to earn a High School Equivalency Diploma

TASC is New York State's national high school equivalency assessment exam. The exam measures five subject areas including: reading, writing, mathematics, science, and social studies. MVCC offers classes to help students prepare for the TASC exam. There are four classes offered which are 90 hours each; science, social studies, English, and math. Students are also able to take the TASC exam at MVCC. Please contact The Education Center at 315-731-5870 for further information.

College for Kids and Teens

Through the College for Kids and Teens, children in grades K-12 can enrich their education, explore a career, and experience a college setting through a variety of programs including summer and school break career camps, literacy and STEM courses, and exam prep classes.

Leisure Learning, Health and Wellness; and Aquatics Programming and Classes

These non-credit classes teach the Mohawk Valley community new skills through fun and exciting courses that are hands-on and educational. Programs such as exercise, art, languages, history, and dance are offered in a wide array of times, both days and evenings.

Certificate Programs

Program	HEGIS (a)	Credit Hours	Page
Administrative Assistant	5005	30	98
Airframe and Powerplant Technician (Rome Campus)	5302	42	98
Allied Health Care	5214	32.5	98-99
Carpentry and Masonry (Elizabeth Street facility)	5317	39-41	99
Chef Training (Rome Campus)	5404	30	99
CNC Machinist Technology	5104	35	99
Coaching	5506.10	26	99-100
Computer-Aided Drafting	5304	35-36	100
Criminal Justice: Law Enforcement	5505	34.5	100
Cybersecurity	5199	24	100
Electronic Technician	5310	29	101
English as a Second Language	5611	25	101
Entrepreneurship	5001	30	101
Finance	5003	31	101
Heating and Air Conditioning	5317	32	101-102
Individual Studies: Business & Industry	5099	30+	102
Industrial and Commercial Electricity	5317	28	102
Insurance	5004	30	102
Mechatronics	5311	31	102
Media Marketing and Management	5004	30	102
Photography	5007	28	103
School Facilities Management	5317	30	103
Small Business Management	5004	30	103
Surgical Technician	5211	38	103
Welding	5308	34	104

(a) HEGIS-A standard federal identification for Higher Education General Information Survey.

(b) These programs are undergoing review and are not currently offered.

Student aid awards are based on enrollment in approved programs. Enrollment in programs other than those registered, or otherwise approved, by the New York State Education Department may jeopardize a student's eligibility for certain student aid awards.

Credit Degree Programs

Program	HEGIS (a)	Degree	Hours	Page
Administrative Assistant	5005	AAS	64	33
Advertising: Media Marketing & Management	5004	AAS	64	34
Advertising: Photography	5012	AAS	64	35
Air Conditioning Technology-Refrigeration	5317	AOS	64	36
Business: Accounting	5002	AAS	62	37
Business Administration	5004	AS	64	38
Business Management	5004	AAS	62	39
Chemical Dependency Practitioner	5506	AAS	64	40
Chemical Technology	5305	AAS	60-61	41
Civil Engineering Technology	5309	AAS	64	42
Computer Aided Drafting (CAD)	5303	AOS	64	43
Computer Applications Programming	5103	AAS	63-64	44
Computer Information Systems: Microcomputer Applications Support	5103	AAS	64	45
Computer Science	5101	AS	62-63	46
Computer Science: Cybersecurity	5199	AS	63	47
Criminal Justice	5505	AAS	61-63	48
Criminal Justice	5505	AS	64	49
Criminal Justice: Law Enforcement	5505	AAS	62.5	50
Culinary Arts Management (Rome Campus)	5404	AOS	64	51
Digital Animation	5012	AAS	64	52
Educational Sign Language Interpretation	5599	AAS	62	53
Electrical Engineering Technology	5310	AAS	64	54
Electrical Service Technician, Electrical Maintenance	5317	AOS	63-65	55
Emergency Medical Services/Paramedic	5299	AAS	63	56
Engineering Science	5609	AS	66-67	57
Financial Services Management	5003	AAS	64	58
Fine Arts	5610	AS	64	59
Fire Protection Technology	5507	AAS	63	60
Food Service Administration: Restaurant Management	5010	AAS	64	61
Geospatial Technology	5399	AAS	64	62
Graphic Communication: Graphic Arts Technology	5012	AAS	64	63
Graphic Communication: Graphic Design	5012	AAS	64	64
Graphic Communication: Illustration	5012	AAS	64	65
Health Information Technology	5213	AAS	64	66
Health Studies: Radiologic Technology	5207	AAS	72	67-68
Hotel Technology: Meeting Services Management (Rome Campus)	5010	AAS	62-63	69
Human Services	5501	AAS	64	70
Individual Studies	5699	AA,AS,AAS,AOS	60	71
Liberal Arts & Sciences				
Adolescence Education	5649	AS	61-64	72
Childhood Education	5649	AS	61-61.5	73-75
General Studies	5649	AS	62	76
Humanities & Social Science	5649	AA	64	77
International Studies	5622	AA	62	78
Mathematics & Science	5649	AS	60-64	79-81
Psychology	5620	AS	64	82
Public Policy	5508	AS	64	83
Theater	5610	AA	64	84
Mechanical Engineering Technology	5315	AAS	64	85
Mechanical Technology: Aircraft Maintenance	5302	AAS	64	86
Nursing	5208.10	AAS	62-63	87
Nutrition & Dietetics	5613	AS	64	88
Recreation & Leisure Services	5506.10	AAS	64	89
Remotely Piloted Aircraft Systems	5302	AAS	64	91
Respiratory Care	5215	AAS	65	92-93
School Facilities Management	5317	AAS	64	94
Semiconductor Manufacturing Technology	5311	AAS	63-63.5	95
Web Development and Information Design	5104	AAS	64	96
Welding Technology	5308	AOS	61-62	97

(a) HEGIS-A standard federal identification for Higher Education General Information Survey.

(b) These programs are undergoing review and are not currently offered.

Student aid awards are based on enrollment in approved programs. Enrollment in programs other than those registered, or otherwise approved, by the New York State Education Department may jeopardize a student's eligibility for certain student aid awards.

Administrative Assistant

Associate in Applied Science Degree

This program prepares students to meet the growing need for office technology skills in business, industry, and government. The program is designed to provide students with the necessary background in word processing, databases, spreadsheets, business communications, and office administration for positions in technologically advanced offices. One high school mathematics course or its equivalent is recommended.

- (a) Electives should be selected with approval of the advisor. Choose from AA, AC, BM, IS (except AA107 and IS100), HC, or MR provided the prerequisite has been completed.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
AA111 Keyboarding - Basic	3
BM129 Business Mathematics	3
EN101 English 1: Composition	3
IS101 Computers and Society	3
Core GE Social Science	3
Physical Education	.5

Second Semester

AA106 Business Communications	3
AA112 Keyboarding - Intermediate	3
EN102 English 2: Ideas & Values in Literature	3
IS130 Desktop Publishing for Business	3
Core GE Mathematics	3
Physical Education	.5

Third Semester

AA208 Office Administration	3
AA214 Keyboarding - Advanced	3
IS200 Spreadsheet Concepts & Applications	3
IS210 Database Design & Management	3
Core GE Natural Science	4
Physical Education	.5

Fourth Semester

AA203 Machine Transcription	3
BM254 Human Resource Management	3
EN150 Effective Speech	3
Restricted Elective (a)	3
GE Elective	3
Physical Education	.5

Advertising: Media Marketing and Management

Associate in Applied Science Degree

This program provides the skills and knowledge required to sell advertising space in print media and time for commercials in the broadcast media; to analyze and plan media strategies; to assess media costs and budgets; and to evaluate the uses of media. Graduates will be prepared to enter the fields of newspaper and magazine publishing, broadcasting, outdoor and supplementary media, and advertising. One high school mathematics course or its equivalent is required.

- (a) Acceptable electives include BM100 Introduction to Business, BM150 Principles of Entrepreneurship, IS130 Desktop Publishing for Business, IS250 Web Development, MD152 Print Media & Production, MD161 Visual Communication, BM264 Professional Selling, MD253 Broadcast Media and Production, and MD254 Media Planning.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
BM120 Principles of Marketing	3
EN101 English 1: Composition	3
FA100 Creativity in Art	3
FA105 Foundation Design	3
MD140 Principles of Advertising	3
Physical Education	.5

Second Semester

EN102 English 2: Ideas & Values in Literature	3
IS101 Computers and Society	3
MD141 Digital Video & Copy Writing	3
MD151 Fundamentals of Media	3
PT127 Creative Photography	3
Physical Education	.5

Third Semester

EN150 Effective Speech	3
GD145 Digital Applications	3
IS125 Introduction to Multimedia Applications for Business	3
MA110 Elementary Statistics	3
BM/IS/MD Elective (a)	3
Physical Education	.5

Fourth Semester

BM101 Survey of Economics	3
CG214 Motion Graphics	3
PT106 Multimedia Photography	3
Core GE Natural Science	4
BM/IS/MD Elective (a)	3
Physical Education	.5

Advertising: Photography

Associate in Applied Science Degree

This program prepares students for a career in photography. Graduates find employment in a variety of areas, including freelance photography, newspaper and magazine journalism, industrial photography, and sales.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
EN101 English 1: Composition	3
FA100 Creativity in Art	3
PT101 Photography 1	3
PT205 History of Photography 1	3
PT207 Digital Photography Practice	3
Physical Education	.5

Second Semester

EN102 English 2: Ideas & Values in Literature	3
PT105 Publishing Techniques for Photography	3
PT106 Multimedia Photography	3
PT202 Alternative Processes	3
PT206 History of Photography 2	3
Physical Education	.5

Third Semester

PT103 Video and Narrative	3
PT104 Studio Techniques	3
PT201 Photojournalism	3
PT208 Advanced Photography and Digital Printmaking	3
PH112 Science of Light 1	4
Physical Education	.5

Fourth Semester

PT204 Photography Seminar	3
PT210 Portrait and Fashion Photography	3
Core GE Social Science	3
Core GE Mathematics	3
GE Elective	3
Physical Education	.5

Air Conditioning Technology, Refrigeration

Associate in Occupational Studies Degree

The Air Conditioning Technology, Refrigeration program is designed to prepare students to meet the growing needs of the residential, commercial, and industrial air conditioning, heating, and refrigeration industries. This program prepares students for careers as heating and cooling service technicians, installers, lab technicians, and facilities maintenance mechanics. Coursework in the areas of air conditioning, heating, electricity, electronics, design, installation, and troubleshooting are reinforced with hands on laboratory practicum. A scientific calculator, digital multi-meter, electronic breadboard, and hand tools are required.

(a) Restricted Elective Courses: ET107 Solar Thermal Systems, ET123 Proper Refrigerant Usage, ET127 Modern Industrial Practices, or ET167 Introduction to Photovoltaics.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
ET105 Computer Control Fundamentals	2
ET108 Refrigeration 1	4
ET111 Electrical Systems	4
MA105 Technical Mathematics 1	4
Physical Education	.5

Second Semester

ET104 Systems Diagrams	3
ET209 Refrigeration 2	5
ET220 Air Conditioning Principles	4
Restricted Elective (a)	3
Physical Education	.5

Third Semester

EN110 Oral & Written Communication	3
ET221 Air Conditioning Systems	5
ET223 Transport Refrigeration	4
ET234 Electrical Wiring and Codes 1	3
Physical Education	.5

Fourth Semester

BM150 Principles of Entrepreneurship	3
ET222 Systems Design	3
ET224 Modern Hydronic Systems	3
ET226 HVAC Diagnostics	3
ET230 AC Motors and Controls	5
Physical Education	.5

Business: Accounting

Associate in Applied Science Degree

Students are prepared for employment in general accounting and cost accounting positions — including positions requiring microcomputer skills — in business, government, and non-profit institutions, and are provided with sufficient knowledge to assume financial management positions after a reasonable training period with an organization or institution. In addition, MVCC accounting graduates have excellent success in transferring their credits to four-year institutions, and find the Accounting program a sound basis for further education in the field. One high school mathematics course or its equivalent is required.

- (a) Excluding BM101 Survey of Economics.
- (b) If the student has sufficient background, the student may select any higher level mathematics course. MA108, MA110, and MA171 are not acceptable.
- (c) Any AC, BM, or IS course other than those already required in the program EXCEPT AC110, BM100, BM101, or IS100. BM294 Business Internship substitutes for two business electives. CI142 Computer Forensics is also acceptable as a three-credit business elective.

Total Credit Hours: 62

First Semester

ED100 College Seminar	1
AC115 Financial Accounting	3
AC131 Business Law 1	3
EN101 English 1: Composition	3
IS101 Computers and Society	3
Core GE Social Science (a)	3

Second Semester

AC116 Managerial Accounting	3
BM115 Principles of Macroeconomics	3
EN102 English 2: Ideas & Values in Literature	3
IS200 Spreadsheet Concepts & Applications	3
MA115 Intermediate Mathematics (b)	4
Physical Education	.5

Third Semester

AC127 Computerized Accounting Systems	3
AC230 Financial Management	3
AC243 Cost Accounting	3
BM110 Principles of Microeconomics	3
Core GE Natural Science	4
Physical Education	.5

Fourth Semester

AC201 Intermediate Accounting 1	3
MA110 Elementary Statistics	3
Business Elective (c)	3
Business Elective (c)	3
Physical Education	1

Business Administration

Associate in Science Degree

This program is for students whose educational goal is a bachelor's degree in business. It prepares students to transfer into a four-year college program in business administration. The complete program is available at the Utica and Rome campuses. Two high school mathematics courses or their equivalent, plus one year of laboratory science are required.

- (a) Excluding BM101 Survey of Economics.
- (b) MA139 and MA140, or MA150 and MA140, or MA150 and MA151.
- (c) Students must take two of the following: BI141, BI142, CH141, CH142, GL101, GL102, PH141, PH142, PH151, or PH152.
- (d) Elective based on an individual's transfer goals, normally liberal arts courses taken with permission of advisor. SUNY transfers are encouraged to take an HU or FA elective.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
AC115 Financial Accounting	3
EN101 English 1: Composition	3
IS101 Computers and Society	3
Mathematics Elective (b)	4
Physical Education	.5

Second Semester

AC116 Managerial Accounting	3
BM115 Principles of Macroeconomics	3
EN102 English 2: Ideas & Values in Literature	3
Mathematics (b)	4
Core GE Social Science (a)	3
Physical Education	.5

Third Semester

BM110 Principles of Microeconomics	3
BM120 Principles of Marketing	3
Core GE Natural Science (c)	4
Restricted Elective (d)	3
GE Social Science	3
Physical Education	.5

Fourth Semester

AC131 Business Law	3
MA110 Elementary Statistics	3
Natural Science Elective (c)	4
Restricted Elective (d)	3
Restricted Elective (d)	3
Physical Education	.5

Business Management

Associate in Applied Science Degree

This program provides students with the appropriate business and computer skills to assume entry-level managerial responsibilities, and to progress through the managerial ranks of business organizations. Students are provided the opportunity to focus on one or more areas of study. One high school mathematics course or its equivalent is required.

- (a) MA110 Elementary Statistics or any AC, BM, or IS course other than those already required in the program EXCEPT AC110, BM100, BM101, or IS100. BM294 Business Internship substitutes for two business electives. CI142 Computer Forensics is also acceptable as a three-credit business elective.
- (b) Excluding BM101 Survey of Economics.

Student Options:

(Please consult with your advisor for proper course selection in these options.)

Marketing

Recommended electives:

- See (a) above

International Business

Recommended electives:

- See (a) above

Human Resources Management

Recommended electives:

- See (a) above

Computer Applications

Recommended electives:

- See (a) above

Recreation Management

Recommended electives:

- RE100 Introduction to Recreation
- RE102 Recreation Safety and Liability
- RE210 Recreation Program and Facility Management

Total Credit Hours: 62

First Semester

ED100 College Seminar	1
AC115 Financial Accounting	3
BM108 Personal Finance	3
EN101 English 1: Composition	3
IS101 Computers and Society	3
Core GE Social Science (b)	3

Second Semester

AC116 Managerial Accounting	3
BM115 Principles of Macroeconomics	3
BM120 Principles of Marketing	3
MA115 Intermediate Mathematics	4
Physical Education	1

Third Semester

EN102 English 2: Ideas & Values in Literature	3
BM110 Principles of Microeconomics	3
BM251 Organizational Behavior	3
IS200 Spreadsheet Concepts & Applications	3
Area of Study Elective (a)	3
Physical Education	.5

Fourth Semester

AC131 Business Law 1	3
EN150 Effective Speech	3
Core GE Natural Science	4
Area of Study Elective (a)	3
Area of Study Elective (a)	3
Physical Education	.5

Chemical Dependency Practitioner

Associate in Applied Science Degree

This curriculum helps to develop specific skills required for effective individual and group intervention counseling for people affected by alcoholism, substance abuse, and addiction. Students completing this program fulfill all of the education and training requirements of the NYS Office of Alcoholism and Substance Abuse Services (OASAS) to become a Credentialed Alcoholism and Substance Abuse Counselor (CASAC). Four courses are required in this area of concentration after successful completion of HS241 Chemical Dependencies. The two counseling courses are AS201 Introduction to Alcoholism/Substance Abuse Counseling and HS233 Group Counseling Skills. The individual and group counseling courses introduce the skills required to assess and treat an addicted individual or family, and to recognize the effectiveness of the individual and group modalities. AS202 Alcoholism/Addiction and Family Systems provides an understanding of co-dependency, the characteristics of healthy and dysfunctional families, and treatment of the family versus the individual. Students are encouraged to begin formative thinking in family systems concepts. The final course is AS204 Special Topics in Alcoholism and Substance Abuse Treatment Programs. The populations include adolescents, the elderly, and women, as well as individuals with multiple problems or disabilities. Special attention is devoted to ethnic and cultural differences that require different responses from the treatment community. Students in their second year may select either counseling or prevention track. One high school mathematics course or its equivalent is required.

- (a) The prerequisite of this course is HS241 Chemical Dependencies.
- (b) The prerequisite of this course is AS201 Introduction to Alcoholism/Substance Abuse Counseling.
- (c) The prerequisite of this course is AS206 Prevention Principles for ATOD.

Internship requirements:

HS251 and HS252 internship — For placement in a chemical dependency setting, students must have successfully completed or be enrolled in both HS231 Ethics, Policy, and Law and AS201 Introduction to Alcoholism/Substance Abuse Counseling.

Alcoholism and Substance Abuse Courses

* OASAS required course. Students must maintain a C average in the course for certification.

Program Electives

AS207 Prevention Practice for ATOD* (c)	3
AS208 Pathological Gambling* (b)	3
HS232 Counseling Techniques*	3

Psychology Electives

ED205 Child Development	3
PY201 Learning Behavior Analysis	3
PY204 Social Psychology	3
PY205 Adulthood and Aging	3
PY206 Theories of Personality	3
PY208 Death, Dying, and Bereavement	3
PY209 Forensic Psychology	3
PY213 Human Sexuality	3

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
BI103 Human Life Science 1	4
EN101 English 1: Composition	3
HS101 Introduction to Human Services	3
PY101 Introduction to Psychology*	3
SO101 Introduction to Sociology	3
Physical Education	.5

Second Semester

EN102 English 2: Ideas & Values in Literature	3
HS241 Chemical Dependencies*	3
MA108 Concepts in Mathematics	3
OR	
MA110 Elementary Statistics	3
PY203 Abnormal Psychology	3
PY210 Evaluation, Research, and Measurement in Behavioral Science	3
Physical Education	.5

Third Semester

AS201 Introduction to Alcoholism/Substance Abuse Counseling* (a)	3
AS202 Alcoholism/Addictions and Family Systems*	3
AS206 Prevention Principles for ATOD* (a)	3
HS231 Ethics, Policy, and Law*	3
HS251 Internship 1*	3
Physical Education/CPR	.5

Fourth Semester

AS204 Special Topics in Alcoholism and Substance Abuse Treatment Programs* (a)	3
HS233 Group Counseling Skills*	3
HS252 Internship 2*	3
Psychology Elective*	3
Program Elective*	3
Physical Education/CPR	.5

Chemical Technology

Associate in Applied Science Degree

This program prepares students to work as technicians in chemical, environmental, and related laboratories. The laboratory technician, as a trained professional, uses experimentation to obtain the information upon which chemical decisions may be made. Two high school mathematics courses or their equivalent and chemistry are required.

- (a) Laboratory Science Restricted Electives: BI141, BI142, BI202, CH101, CT232, GL101, PH112, PH113, PH114, PH152.
- (b) Social Science Restricted Electives: AN101 Biological Anthropology, BM101 Survey of Economics, PY101 Introduction to Psychology, SO101 Introduction to Sociology.
- (c) Restricted Electives may be chosen from the following: BI141, BI142, BI202, CT151, CT232, GL101, PH112, PH113, PH114, PH152.

Restricted Electives:

(Approval by Department Advisor)

CH101 Physical Science
BI141 General Biology 1
BI142 General Biology 2
BI201 Microbiology
BI202 Ecology
EV100 General Industrial Safety
PH152 General Physics 2
CT121 Statics
CT232 Environmental Engineering
PH112 Science of Light 1
PH113 Science of Light 2
PH114 Digital Imaging Science
GL101 Physical Geology

Total Credit Hours: 60-61

First Semester

ED100 College Seminar	1
CH141 General Chemistry 1	4
CI121 Microcomputer Techniques for Science	3
EN101 English 1: Composition	3
MA125 College Algebra and Trigonometry	4
Physical Education	.5

Second Semester

CH142 General Chemistry 2	4
EN102 English 2: Ideas & Values in Literature	3
PH151 General Physics 1	4
Laboratory Science Restricted Elective (a)	4
Physical Education	.5

Third Semester

CH247 Organic Chemistry 1	5
Laboratory Science Restricted Elective (a)	4
Social Science Restricted Elective (b)	3
Restricted Elective (c)	3
Physical Education	.5

Fourth Semester

CH246 Quantitative Analysis	5
CH248 Organic Chemistry 2	5
Restricted Elective (c)	3-4
Physical Education	.5

Civil Engineering Technology

Associate in Applied Science Degree

This program prepares students to start a career in the Civil Engineering Technology field or transfer to a higher education institution concentrating in Civil Engineering Technology. Coursework addresses the planning, design, and/or construction phase of civil engineering projects including aspects such as highways, transportation, bridges, dams, buildings, environmental, hydraulic, and hydrology. Instruction occurs in classroom, field, and laboratory settings. The program includes the use of MicroStation, the Computer Aided Drafting and Design (CADD) platform used currently in the Civil Engineering field, which reflects the workplace of a civil engineering technician. A capstone project taken from industry is completed using knowledge gained in the program. This program is accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org.

(a) Restricted Social Science Electives: AN101 Biological Anthropology, BM101 Survey of Economics, PS101 American National Government, PY101 Introduction to General Psychology, or SO101 Introduction to Sociology.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
EN101 English 1: Composition	3
CT102 Engineering Drawing and MicroStation CAD	3
CT141 Intro to Civil Engineering Technology	2
CT265 Introduction to GIS	3
MA121 Fundamentals of College Mathematics 1	4
Physical Education	.5

Second Semester

EN102 English 2: Ideas & Values in Literature	3
CT121 Statics	3
MA122 Fundamentals of College Mathematics 2	4
PH151 General Physics 1	4
Social Science Restricted Elective (a)	3
Physical Education	.5

Third Semester

CT151 Surveying 1	4
CT221 Strength of Materials: Civil	4
CT222 Soil Mechanics & Foundations	4
CT231 Transportation Engineering	3
Physical Education	.5

Fourth Semester

CT225 Structural Steel Design	3
CT226 Reinforced Concrete Design	3
CT232 Environmental Engineering	3
CT243 Construction Management	2
CT299 Capstone Design Project - Civil	3
Physical Education	.5

Computer Aided Drafting (CAD) (Architectural-Mechanical)

Associate in Occupational Studies Degree

This program of study prepares the student to be a drafting technician capable of working with professionals in the many facets of the technical drawing and solid modeling design fields. Emphasis is placed on architectural and mechanical drafting along with related courses for technical comprehension of the subject. The development of problem solving skills is stressed. Topics include conventional drafting methods and computer-aided drafting (CAD) systems such as AutoCAD, MicroStation, and Solidworks. With the addition of ED100 College Seminar and Physical Education, the Computer-Aided Drafting certificate constitutes the first year of this program. At least one year of high school mathematics or equivalent, including algebra, is recommended.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
CT265 Intro to Geographic Information Systems	3
MA105 Technical Mathematics 1	4
MT140 Drafting and Design Using AutoCAD	3
EN101 English 1: Composition	3
OR	
EN110 Oral & Written Communication	3
Physical Education	.5

Second Semester

EN102 English 2: Ideas & Values in Literature	3
OR	
EN147 Report Writing	3
MA106 Technical Mathematics 2	4
MT112 Architectural Drafting	3
CT266 Capstone Geographic Information Systems	3
MT251 Advanced AutoCAD	3
Physical Education	.5

Third Semester

CT102 Engineering Drawing and MicroStation CAD	3
MT114 Manufacturing Processes	3
MT155 Introduction to Solid Modeling	3
MT221 Tolerance-Assembly Drafting	4
MT229 Building Systems Drafting	3
Physical Education	.5

Fourth Semester

CT243 Construction Management	3
MT222 Tool & Design Drafting	4
MT223 Electrical-Electronic Drafting	3
MT242 Advanced MicroStation CAD	3
MT256 Advanced Solid Modeling	3
Physical Education	.5

Computer Applications Programming

Associate in Applied Science Degree

The objectives of this curriculum are to prepare students for entry-level programming positions in a technical (non-business) environment or to transfer to a four-year college program. This curriculum requires more mathematics than the Computer Information Systems curriculum, but less than the Computer Science curriculum. One high school mathematics course or its equivalent is required.

(a) Any 200-level CI course not already in the program.

Total Credit Hours: 63-64

First Semester

ED100 College Seminar	1
EN101 English 1: Composition	3
CI110 Principles of Programming	3
CI121 Microcomputer Techniques for Science	3
Core GE Mathematics	3-4
Core GE Social Science	3
Physical Education	.5

Second Semester

EN102 English 2: Ideas & Values in Literature	3
CI130 Programming in C++	3
GE Social Science	3
GE Mathematics	3
PH115 Science of Multimedia	4
Physical Education	.5

Third Semester

CI230 Data Structures	3
CI285 Systems Operations & Management	3
PH114 Science of Digital Imaging	4
Core GE Natural Science	4
Computer Language Elective	3
Physical Education	.5

Fourth Semester

CI256 Intro to Programming for the Internet	3
CI271 Database Design & Implementation	3
CI272 Visual Basic	3
Computer Science Elective (a)	3
Physical Education	.5

Computer Information Systems: Microcomputer Applications Support

Associate in Applied Science Degree

A microcomputer application support specialist must possess technical expertise in computer systems, application software, business operations, and communications. Computer systems knowledge includes hardware, operating systems, networking and information systems. Application software proficiency should extend across word processing, spreadsheets, database, graphics, and business systems. Business operations expertise includes knowledge of management and accounting. Communication skills are important in training, making presentations, writing, and using the internet as an information resource. A microcomputer resource person can assist computer users with software installation and customization, training, networking, data communications, and system operations. One high school mathematics course or its equivalent is required.

- (a) It is recommended that students take PY101 Introduction to Psychology.
- (b) Any AC, BM, or IS course other than those already required in the program EXCEPT AC110, BM100, BM101, or IS100. BM294 Business Internship substitutes for two business electives.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
AC110 Principles of Accounting	3
OR	
AC115 Financial Accounting	3
BM120 Principles of Marketing	3
EN101 English 1: Composition	3
IS101 Computers and Society	3
Core GE Social Science (a)	3
Physical Education	.5

Second Semester

EN102 English 2: Ideas & Values in Literature	3
IS102 Computer Applications & Concepts 2	3
IS120 Computer Operating Systems & Environments	3
IS201 Principles of Computer Security	3
MA110 Elementary Statistics	3
Physical Education	.5

Third Semester

IS125 Intro to Multimedia Applications for Business	3
IS200 Spreadsheet Concepts & Applications	3
IS210 Database Design & Management	3
IS240 Networking Essentials	3
Core GE Natural Science	4
Physical Education	.5

Fourth Semester

EN153 Practical and Professional Written Communications	3
IS220 Visual Basic with Business Applications	3
IS250 Web Development 1	3
Business Elective (b)	3
Business Elective (b)	3
Physical Education	.5

Computer Science

Associate in Science Degree

This program is appropriate for students who intend to transfer to a four-year college and continue their studies in the field of computer science. Two high school mathematics courses or their equivalent are required.

- (a) Depending upon the school to which they plan to transfer, students should choose a two-course sequence in General Physics or Engineering Physics.
- (b) To be chosen with permission of your advisor.

Total Credit Hours: 63

First Semester

ED100 College Seminar	1
CI110 Principles of Programming	3
CI130 Programming in C++	3
EN101 English 1: Composition	3
MA151 Calculus 1	4
Core GE Social Science	3
Physical Education	.5

Second Semester

CI230 Data Structures	3
EN102 English 2: Ideas & Values in Literature	3
MA152 Calculus 2	4
PH115 Science of Multimedia	4
GE Social Science	3
Physical Education	.5

Third Semester

Physics Elective (a)	4
CI245 Java Programming	3
CI285 Systems Operations & Management	3
MA275 Discrete Algebraic Structures	4
Physical Education	.5

Fourth Semester

CI260 Microcomputer Programming	3
CI271 Database Design & Implementation	3
Physics Elective (a)	4
Elective (b)	3
Physical Education	.5

Computer Science: Cybersecurity

Associate in Science Degree

This program combines the study of criminal justice and computer-technology to address current needs in the cybersecurity field. It prepares students to identify vulnerabilities and threats that affect corporate and government computer networks; to protect critical information in cyberspace; and to effectively design, implement, and support security policies for a large-scale enterprise network. Students examine a wide variety of security analysis/defensive tools and concepts, and then attempt to circumvent them. This program prepares students to transfer to upper division cybersecurity programs or assume entry-level positions in the cybersecurity industry.

- (a) Students take one of the following sequences: CH141 General Chemistry 1 and CH142 General Chemistry 2, or PH151 General Physics 1 and PH152 General Physics 2. A Natural Science sequence should be selected in consultation with your advisor to ensure appropriate transferability.
- (b) Students select from one of the following Program Electives depending on their desired area of study: CJ216 Selected Topics in Criminal Justice, CI132 Unix Operating System & Security, or CI204 Software Support Strategies. An appropriate elective should be selected in consultation with your advisor.

Total Credit Hours: 63

First Semester

ED100 College Seminar	1
CI104 Introduction to Cybersecurity	3
EN101 English 1: Composition	3
HI101 History of Civilization 1	3
SO101 Introduction to Sociology	3
CJ101 Introduction to Criminal Justice	3
OR	
PS102 Introduction to Public Policy	3
Physical Education	.5

Second Semester

CI112 Networking Fundamentals	3
CJ106 Ethics in Criminal Justice	3
EN102 English 2: Ideas & Values in Literature	3
IS120 Computer Operating Systems and Environments	3
MA110 Elementary Statistics	3
Physical Education	.5

Third Semester

CI110 Principles of Programming	3
CI142 Computer Forensics	3
MA150 Precalculus	4
Core GE Natural Science Elective (a)	4
Physical Education	.5

Fourth Semester

CI130 Programming in C++	3
CI212 Internet Security	3
CI232 Security Policies	3
Natural Science Elective (a)	4
Program Elective (b)	3
Physical Education	.5

Criminal Justice

Associate in Applied Science Degree

The Criminal Justice curriculum prepares students to enter a range of occupations in the criminal justice system and to continue their education. The core courses form a foundation for understanding the operation of the criminal justice system, the causes of crime and delinquency, the history and application of criminal justice and constitutional law, and the ethical bases of criminal justice decision-making. Electives address the diverse issues facing the criminal justice system and encourage students to gain more specialized knowledge of policing, juvenile justice, corrections, and the private sector. Input from the Criminal Justice Advisory Committee and the opportunity to participate in a one-semester internship provide links to criminal justice practice. One high school mathematics course or its equivalent is required.

(a) Students must take two restricted electives, to be chosen in consultation with the student's academic advisor.

Total Credit Hours: 61 – 63

First Semester

ED100 College Seminar	1
CJ101 Introduction to Criminal Justice	3
CJ107 Juvenile Delinquency	3
EN101 English 1: Composition	3
SO101 Introduction to Sociology	3
PS101 American National Government	3
Physical Education	.5

Second Semester

CJ106 Ethics in Criminal Justice	3
CJ108 Criminal Law	3
EN102 English 2: Ideas & Values in Literature	3
PY101 Introduction to Psychology	3
CH101 Physical Science	4
OR	
BI105 Environmental Science	4
Physical Education	.5

Third Semester

CJ202 American Constitutional Law	3
CJ204 Criminology	3
MA110 Elementary Statistics	3
Restricted Elective (a)	3-4
Criminal Justice Elective	3
Physical Education	.5

Fourth Semester

CJ214 Criminal Justice Communications	3
SS218 Methods of Research	3
Criminal Justice Elective	3
Restricted Elective (a)	3-4
Physical Education	.5

Criminal Justice

Associate in Science Degree

This program provides students who plan to transfer to a bachelor-level program with a comprehensive foundation in criminal justice. The core courses form a foundation for understanding the operation of the criminal justice system, the causes of crime and delinquency, the history and application of criminal justice and constitutional law, and the ethical bases of criminal justice decision-making. Electives address the diverse issues facing the criminal justice system and encourage students to gain more specialized knowledge of policing, fraud, corrections, law, and the private sector. Students interested in advanced degrees in criminal justice-related fields will find this program to be a beneficial way to begin exploring the field while meeting the majority of their general education requirements.

- (a) Any Criminal Justice course not already required in the program.
- (b) Any Foreign Language course or any course in the SUNY General Education Quick Reference Guide on page 16 under Category 4, Area 8 "The Arts."

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
CJ101 Introduction to Criminal Justice	3
CJ107 Juvenile Delinquency	3
EN101 English 1: Composition	3
SO101 Introduction to Sociology	3
PS101 American National Government	3
Physical Education	.5

Second Semester

CJ106 Ethics in Criminal Justice	3
CJ108 Criminal Law	3
EN102 English 2: Ideas & Values in Literature	3
PY101 Introduction to Psychology	3
Core GE Natural Science	4
Physical Education	.5

Third Semester

AN102 Cultural Anthropology	3
CJ202 American Constitutional Law	3
CJ204 Criminology	3
SS218 Methods of Research	3
MA108 Concepts in Mathematics	3
OR	
MA110 Elementary Statistics	3
Physical Education	.5

Fourth Semester

Criminal Justice Elective (a)	3
HI101 History of Civilization 1	3
HI111 American History 1492 - 1850	3
OR	
HI112 American History 1850 - Present	3
Foreign Language (b)	3
GE Mathematics	3
OR	
Natural Science Elective	3
Physical Education	.5

Criminal Justice: Law Enforcement

Associate in Applied Science Degree

This degree program is designed to prepare students for careers in law enforcement. The 32 hours of Law Enforcement coursework enables students to complete Phase I of basic police training under the direction of the New York State Division of Criminal Justice Services. Although the program does not guarantee employment into a police department, all academic, practical, and physical fitness requirements will be met. This will give students a competitive edge over other applicants, as their qualifications will offer savings to hiring departments and agencies.

Total Credit Hours: 62.5

First Semester

ED100 College Seminar	1
CJ101 Introduction to Criminal Justice	3
EN101 English I: Composition	3
MA110 Elementary Statistics	3
SO101 Introduction to Sociology	3
PE154 Fitness Center	1

Second Semester

CJ204 Criminology	3
EN102 English 2: Ideas & Values in Literature	3
PY101 Introduction to Psychology	3
SS218 Methods of Research	3
Core GE Natural Science	4

Third Semester

LE118 Police Procedures - Basic	5
LE119 Police Procedures - Intermediate	5
LE120 Police Procedures - Advanced	5
PE155 Police Fitness Training	.5
PE162 Self-Defense	.5

Fourth Semester

LE121 Principles of Law for Police Officers	7.5
LE122 Techniques of Investigation	6
LE123 Policing in the Community	3

Culinary Arts Management

Associate in Occupational Studies Degree

This program prepares students for positions in the food service industry, including skills and knowledge in food preparation, baking, and catering. With experience and additional training, students may be qualified for positions leading to sous chef, executive chef, and/or kitchen (production) manager or catering manager. Instruction in this program takes place primarily at the Rome Campus.

(a) Core GE Mathematics Options: MA108 Concepts in Mathematics or MA110 Elementary Statistics.

(b) Restricted Program Electives: AC131 Business Law 1, FS202 Menu & Facilities Planning, FS242 Beverage & Bartending Management, or HT211 Convention Services Management.

See Certificate Programs section for related certificate instruction.

Students in the Culinary Arts Management program are required to be in full uniform in each laboratory class. The uniform consists of a double-breasted, long-sleeved white chef's coat, black-and-white checked pants, chef's hat, and a white apron. Shoes are to be of firm leather with a slip resistant sole. Beards and mustaches are to be neatly trimmed.

Student Option:

Baking & Pastry Arts focus area

Replace: (17-18 credit hours)

FS112 Food Preparation 2	3
FS210 Food Preparation 3	4
BI151 Nutrition & Dietetics 1	3
FS204 Banquet & Catering Management	4
Restricted Program Elective	3-4

Add: (17 credit hours)

FS205 Baking 2	4
FS202 Menu & Facilities Planning	3
FS213 Cake Decorating	3
FS225 Advanced Bread Baking	3
FS245 Pastry Techniques & Practices	4

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
FS111 Food Preparation 1	4
FS121 Baking 1	4
FS150 Safety & Sanitation	3
FS160 Dining Room Service	3
Physical Education	.5

Second Semester

EN101 English 1: Composition	3
FS112 Food Preparation 2	3
FS131 Food, Beverage & Labor Cost Control	3
FS141 Purchasing for the Hospitality Industry	3
HT101 Introduction to the Hospitality Industry	3
Physical Education	.5

Third Semester

BI151 Nutrition & Dietetics 1	3
FS210 Food Preparation 3	4
FS230 Food Service Practicum	3
HT215 Supervisory Leadership in Hospitality	3
IS101 Computers and Society	3
Physical Education	.5

Fourth Semester

BM129 Business Mathematics	3
FS204 Banquet & Catering Management	4
FS233 Principles of Food Marketing	3
Mathematics Elective (a)	3
Restricted Program Elective (b)	3
Physical Education	.5

Digital Animation

Associate in Applied Science

Digital animators create graphics for entertainment, advertising, special effects, education, science, information technologies, and the internet. Animators entertain, inform, and communicate. For television, film, video, presentation graphics, and the internet, animators are creating new ways to understand and enjoy the world. The contemporary opportunities to animate are boundless. Traditional animation techniques, including cell animation, Claymation, paper graphics, scratch-on, and puppet animations, are being used in the profession. New digital animation effects, software, and hardware are developed every year. Animators must learn about and master these new technologies. Before graduation, students in Digital Animation must develop proficiency in both traditional and digital animation techniques. Team-building and professional portfolio development prepares students for the digital workplace. One high school mathematics course or its equivalent is required.

(a) Acceptable Humanities Electives include: HU186 Music Appreciation, HU187 Art Appreciation, and HU188 Film Appreciation, HU204 History of Art 1, HU205 History of Art 2, or other art history courses (which must have General Education status) with permission of the Associate Dean of the Art Department.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
FA100 Creativity in Art	3
FA101 General Drawing	3
CG133 Introduction to Animation	3
EN101 English 1: Composition	3
GD145 Digital Applications 1	3
Physical Education	.5

Second Semester

FA103 Figure Drawing 1	3
CG134 Digital Applications for the Animator	3
CG144 Digital Animation 1	3
CG147 Sculptural Procedures for the Animator	3
EN102 English 2: Ideas & Values in Literature	3
Physical Education	.5

Third Semester

CG145 Digital Animation 2	3
CG146 Storyboarding	3
CG231 Advanced Animation Techniques	3
MA108 Concepts in Mathematics	3
GE Course	3
Physical Education	.5

Fourth Semester

CG233 Animation Production Workshop	3
CG234 Professional Practices for the Animator	3
GE Humanities Elective (a)	3
Core GE Natural Science	4
Core GE Social Science Elective	3
Physical Education	.5

Educational Sign Language Interpretation

Associate in Applied Science Degree

This program provides a solid foundation of the theory and skill sets required for sign language interpreters, develops a strong foundation for students who choose to transfer to bachelor's programs in educational sign language interpretation, and begins the critical preparation required for practitioners seeking to sit for national level certification exams. The program is founded on best practice for sign language interpreters and provides a template for application of skills in a variety of settings. Completion of this program provides comprehensive knowledge and practice for students desiring to continue their education in this field.

- (a) Mathematics Elective: Students should select from MA108, MA110, MA115, MA121, MA125, MA131, MA139, MA150, MA151, or MA172.
- (b) Natural Science Elective: Students should select from BI103, BI105, BI141, BI216, CH101, CH111, CH120, CH131, CH141, GL100, GL101, GL102, PH106, PH112, PH141, PH145, PH151, PH261, or WE101.
- (c) Arts Elective: Students should select from EN197, GC244, HU183, HU184, HU187, HU188, HU204, HU205, HU210, HU292, PT205, TH193, or TH195.

Total Credit Hours: 62

First Semester

ED100 College Seminar	1
AL101 American Sign Language 1	3
AL102 American Sign Language 2	3
EI101 Introduction to Education & Educational Interpreting	5
EN101 English 1: Composition	3
Mathematics Elective (a)	3
Physical Education	.5

Second Semester

AL201 American Sign Language 3	3
EN102 English 2: Ideas & Values in Literature	3
PY101 Introduction to Psychology	3
SO210 Deaf Culture and Community	3
Mathematics Elective (a)	3
Physical Education	.5

Third Semester

AL202 American Sign Language 4	3
EI120 Processing Skills & Discourse Analysis	4
HI101 History of Civilization 1	3
Natural Science Elective (b)	4
Physical Education	.5

Fourth Semester

EI201 Introduction to Consecutive Interpreting	4
EI250 Practical and Ethical Applications of Interpretation	3
EI205 Transliteration	3
Arts Elective (c)	3
Physical Education	.5

Electrical Engineering Technology

Associate in Applied Science Degree

This program prepares students to fill careers in specialized fields of electronics, including electrical machinery, control systems, digital and microprocessors, telecommunications, and for continued study at the baccalaureate level in engineering technology. The program is accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org. Purchase of a scientific calculator, digital multi-meter, basic hand tools, and electronic breadboard is required for this program.

Elective courses may be included in this program to match students' interests and to focus on career or continuing education goals.

Preparation for this program should include:

- Two high school mathematics courses, or the equivalent.
 - One laboratory science (physics and chemistry are recommended).
 - Students well prepared in mathematics may substitute a higher mathematics sequence with the approval of the Department Associate Dean.
- (a) Social Science Restricted Electives: AN101 Biological Anthropology, BM101 Survey of Economics, PS101 American National Government, PY101 Introduction to General Psychology, or SO101 Introduction to Sociology.
- (b) Acceptable Electives: ET141 Programmable Logic Controllers, ET167 Introduction to Photovoltaics, or ET282 Digital Electronics 2.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
EN101 English 1: Composition	3
ET151 Circuits 1	4
ET153 Introduction to Electronics	2
ET154 Computer Programming	2
MA121 Fundamentals of College Mathematics 1	4
Physical Education	.5

Second Semester

EN102 English 2: Ideas & Values in Literature	3
ET152 Circuits 2	4
ET161 Linear Electronics	3
ET181 Digital Electronics 1	3
MA122 Fundamentals of College Mathematics 2	4
Physical Education	.5

Third Semester

ET262 Operational Amplifiers	4
ET274 Telecommunications Concepts	4
Social Science Restricted Elective (a)	3
ET Elective (b)	3
Physical Education	.5

Fourth Semester

ET283 Microprocessor Fundamentals	4
ET284 Design & Layout	3
ET285 Motors & Controls	4
PH151 General Physics I	4
Physical Education	.5

Electrical Service Technician, Electrical Maintenance

Associate in Occupational Studies Degree

The Electrical Service Technician program is a curriculum of sequential technical courses encompassing the field of industrial and commercial services. A scientific calculator, a digital multi-meter, electronic breadboard, and hand tools are required. Small electronic components may be needed with an outlay of \$150 being typical. Students with more than the basic mathematics ability should continue from where they place on the placement exam. One high school mathematics course or its equivalent is recommended.

(a) Restricted Elective Courses: ET127, ET142, ET167, ET245, ET251, ET257, ET289, MT107, MT149, or MT155.

Total Credit Hours: 63-65

First Semester

ED100 College Seminar	1
BM150 Principles of Entrepreneurship	3
EN110 Oral & Written Communication	3
ET105 Computer Control Fundamentals	2
ET111 Electrical Systems	4
MA105 Technical Mathematics 1	4
Physical Education	.5

Second Semester

ET104 Systems Diagrams	3
ET131 Electrical Machinery and Controls 1	4
MA106 Technical Mathematics 2	4
ET235 Digital Logics	4
OR	
MT139 Mechanical Systems	4
Physical Education	.5

Third Semester

ET141 Programmable Logic Controllers	3
ET233 Industrial Electronics	5
ET234 Electrical Wiring and Codes 1	3
Restricted Elective (a)	3
Physical Education	.5

Fourth Semester

ET244 Electrical Wiring and Codes 2	4
ET246 Industrial Computer Applications	5
ET251 Mechatronics Systems AND	3
Restricted Elective (a)	3-4
OR	
ET232 Electrical Machinery and Controls 2	5
Physical Education	.5

Emergency Medical Services/Paramedic

Associate in Applied Science Degree

This program is a partnership between MVCC, Faxton-St. Luke's Healthcare EMS Center, and SUNY Polytechnic Institute. It is for individuals who are certified Emergency Medical Technicians. It provides the education and hands-on training necessary to function in and out of the hospital setting as an Emergency Paramedic. The paramedic course of study consists of a minimum of 722 hours of academic and clinical instruction provided by the Faxton-St. Luke's Healthcare EMS Center. MVCC equates this instruction and certification to 36 hours of transfer credit. The student is required to take an additional 37 credit hours of coursework at MVCC leading to the A.A.S. degree. This program supplements the basic EMT certificate by providing an opportunity for students to pursue their A.A.S. degree and continue their studies at SUNY Polytechnic Institute for a bachelor's degree in the Health Services Management curriculum. This program is ideal for firefighters, ambulance attendants, and law enforcement personnel. Individuals interested in this degree program who do not meet the prerequisites for Chemistry and Mathematics may take these courses at MVCC. The basic EMT course leading to certification can be obtained at Faxton-St. Luke's Healthcare EMS Center.

Total Credit Hours: 63

First Semester

ED100 College Seminar	1
BI216 Human Anatomy & Physiology 1	4
EN101 English 1: Composition	3
IS101 Computers and Society	3
PY101 Introduction to Psychology	3
OR	
SO101 Introduction to Sociology	3

Second Semester

BI217 Human Anatomy & Physiology 2	4
EN102 English 2: Ideas & Values in Literature	3
MA110 Elementary Statistics	3
HC100 Introduction to Health Care	3
OR	
MR115 Law in Health Care	3

Third Semester

EM200 EMS/Paramedic 1	12
EM201 EMS/Paramedic Clinical & Field Internship 1	6

Fourth Semester

EM202 EMS/Paramedic 2	12
EM203 EMS/Paramedic Clinical & Field Internship 2	6

Engineering Science

Associate in Science Degree

This program prepares students for transfer, as juniors, into baccalaureate engineering programs, including civil, mechanical, chemical, electrical, aerospace, petroleum, industrial, and nuclear engineering. Two high school mathematics courses or their equivalent, and one year of a laboratory science are required. Chemistry and Physics are recommended.

- (a) AN101 Biological Anthropology, BM101 Survey of Economics, HI101 History of Civilization 1, PS101 American National Government, or SO101 Introduction to Sociology.
- (b) Acceptable electives include CH142 General Chemistry 2, ES281 Thermodynamics, ES292 Electrical Circuits 2, MA280 Linear Algebra, or PH265 Modern Physics and Thermodynamics.

Total Credit Hours: 66-67

First Semester

ED100 College Seminar	1
CH141 General Chemistry 1	4
CI140 Computer Programming for Engineers and Scientists	3
EN101 English 1: Composition	3
ES151 Introduction to Engineering	2
MA151 Calculus 1	4
Physical Education	.5

Second Semester

BM101 Survey of Economics (a)	3
EN102 English 2: Ideas & Values in Literature	3
ES175 Engineering Science Design	3
MA152 Calculus 2	4
PH261 Engineering Physics 1	4
Physical Education	.5

Third Semester

ES271 Engineering Statics	3
ES291 Electrical Circuits 1	4
MA253 Calculus 3	4
PH262 Engineering Physics 2	4
PY101 Introduction to General Psychology (a)	3
Physical Education	.5

Fourth Semester

MA260 Differential Equations	3
ES261 Mechanics of Materials	3
ES272 Engineering Dynamics	3
Restricted Elective (b)	3-4
Physical Education	.5

Financial Services Management

Associate in Applied Science Degree

This program prepares students for responsible positions within the personal, commercial, trust, or administrative functions of financial institutions or for positions in the sales, underwriting, or claims departments of insurance companies or agencies. One high school mathematics course or its equivalent is required.

- (a) Excluding BM101 Survey of Economics.
- (b) Any AC, BM, or IS course other than those already required in the program EXCEPT AC110, BM100, BM101, or IS100. BM294 Business Internship substitutes for two business electives. CI142 Computer Forensics is also acceptable as a three-credit business elective.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
AC115 Financial Accounting	3
AC131 Business Law 1	3
BM120 Principles of Marketing	3
EN101 English 1: Composition	3
BM129 Business Mathematics	3
Physical Education	.5

Second Semester

AC116 Managerial Accounting	3
IS101 Computers and Society	3
BM115 Principles of Macroeconomics	3
EN102 English 2: Ideas & Values in Literature	3
Core GE Mathematics	3
Physical Education	.5

Third Semester

BM240 Personal Lines Insurance	3
BM230 Money and Banking	3
AC230 Financial Management	3
OR	
BM108 Personal Finance	3
BM110 Principles of Microeconomics	3
IS200 Spreadsheet Concepts & Applications	3
Physical Education	.5

Fourth Semester

BM243 Casualty Insurance	3
BM251 Organizational Behavior	3
Core GE Social Science (a)	3
Core GE Natural Science	4
Business Elective (b)	3
Physical Education	.5

Fine Arts

Associate in Science Degree

This program is designed to aid students in acquiring or refining the traditional technical skills for creating art. It prepares students for transfer to a Bachelor's of Fine Arts program. In the first year, students take foundation courses in two-dimensional design, three-dimensional design, color theory, and drawing. Students are then introduced to painting, sculpture, and figure drawing, and are encouraged to study each before choosing an area of focus. Fine Arts electives are also offered to allow students to further their artistic experience. Students are encouraged to present a portfolio to their advisor during the first week of classes to assist in advisement. A copy of the portfolio recommendations can be obtained through the MVCC Admissions Office or the Art Department's webpage.

The selection of studio courses will be contingent upon the availability of specialized facilities. As necessary, MVCC will rent appropriate space. The College reserves the right in any given semester to schedule electives and other courses as the College may deem appropriate.

- (a) Acceptable electives include: HU227 World Art, HU228 World Architecture, HU295 Survey of Western Philosophy, HU296 Topics in Philosophy, or other art history courses (must have General Education status) with permission of the Associate Dean of the Art Department.
- (b) General Education Elective: can be a course from one of these general studies areas: natural science, language or mathematics.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
EN101 English 1: Composition	3
FA100 Creativity in Art	3
FA101 General Drawing	3
FA105 Foundation Design	3
FA108 Three-Dimensional Design	3
Physical Education	.5

Second Semester

EN102 English 2: Ideas & Values in Literature	3
FA103 Figure Drawing 1	3
FA106 Color Theory	3
FA113 Figure Sculpture 1	3
HU205 History of Art 2	3
Physical Education	.5

Third Semester

FA104 Figure Drawing 2	3
FA209 Painting 1	3
HU204 History of Art 1	3
Core GE Social Science	3
Core GE Mathematics	3
Physical Education	.5

Fourth Semester

Core GE Natural Science	4
Core GE Social Science	3
Fine Arts Elective	3
GE Humanities Elective (a)	3
GE Elective (b)	3
Physical Education	.5

Fire Protection Technology

Associate in Applied Science Degree

The Fire Protection Technology program is a collaborative effort between MVCC and the Utica Fire Academy. The program is for individuals who are working in, or preparing to work in, the areas of fire prevention and protection. The program provides the education and training necessary to function in the delivery of emergency fire service and fire protection and safety. The student is required to take 38 credit hours of coursework at MVCC and successfully complete a rigorous 500+ hours of training at the Utica Fire Academy. Students must meet the criteria established by the Utica Fire Academy prior to being accepted into this program. Students also will be responsible for passing national and state credentialing exams. The two-year degree program is appropriate for advancement opportunities in the field of municipal and industrial fire protection. The Academy is located at 1320 Bleecker St., once an active firehouse in Utica, offering comprehensive training of New York State career fire department recruits. The recruits live and train at this Academy for approximately 15 weeks.

Total Credit Hours: 63

First Semester

ED100 College Seminar	1
EN101 English 1: Composition	3
HC100 Introduction to Health Care	3
SO101 Introduction to Sociology	3
PY101 Introduction to Psychology	3
MR115 Law in Health Care	3
OR	
PS203 State and Local Government	3

Second Semester

CH101 Physical Science	4
EN102 English 2: Ideas & Values in Literature	3
IS101 Computers and Society	3
MA108 Concepts in Mathematics	3
OR	
MA110 Elementary Statistics	3
PY207 Life-Span Developmental Psychology	3
OR	
Social Science Elective	3

Utica Fire Academy*

FP101 Firefighter 1	5
FP102 Firefighter 2	1.5
FP103 Incident Command System	1.5
FP105 Hazardous Materials	3.5
FP107 Rescue Technician - Basic	1.5
FP108 Firefighter Assist and Search Operations	1
FP109 Firefighter Survival	.5
FP110 Accident Victim Extrication	.5
FP111 Truck Company Operations	1.5
FP112 Apparatus Operations - Emergency Vehicle	4
FP115 Code Enforcement	4.5
FP116 Code Enforcement	3
FP119 Physical Training	2
FP120 Live Fire Training	1

* Admission granted by the Utica Fire Academy

Food Service Administration: Restaurant Management

Associate in Applied Science Degree

This program prepares students for middle management and supervisory positions in the field of restaurant and hospitality operations. These positions require special skills and knowledge of food, business, service, and human relations. The program is strengthened by courses in general education, which allows students to develop wide-ranging interests. Instruction in this program takes place primarily at the Rome Campus. Students are required to be in full uniform in each laboratory class. The uniform consists of a double-breasted, long-sleeved chef's coat, black-and-white checked chef's pants, chef's hat, and white apron. Shoes are to be of firm leather with a slip-resistant sole. Beards and mustaches must be neatly trimmed.

- (a) Core General Education Mathematics Options: MA108 Concepts in Mathematics, MA110 Elementary Statistics, MA115 Intermediate Mathematics, or MA139 College Algebra.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
EN101 English 1: Composition	3
FS111 Food Preparation 1	4
FS150 Safety & Sanitation	3
HT101 Introduction to the Hospitality Industry	3
Physical Education	.5

Second Semester

EN102 English 2: Ideas & Values in Literature	3
FS112 Food Preparation 2	3
FS131 Food, Beverage & Labor Cost Control	3
FS141 Purchasing for the Hospitality Industry	3
Core GE Mathematics (a)	3
Physical Education	.5

Third Semester

AC110 Principles of Accounting	3
FS210 Food Preparation 3	4
IS101 Computers and Society	3
Core GE Natural Science	4
Core GE Social Science	3
Physical Education	.5

Fourth Semester

EN150 Effective Speech	3
FS202 Menu & Facilities Planning	3
FS204 Banquet & Catering Management	4
FS242 Beverage & Bartending Management	3
HT215 Supervisory Leadership	3
Physical Education	.5

Geospatial Technology

Associate in Applied Science Degree

This program is for individuals entering the diverse field of geospatial technology. Geographic Information Systems (GIS) is a powerful computer mapping application that involves storing, editing, analyzing, and viewing geospatial data. Geospatial technology is used in various industries, including transportation, environmental studies, utilities planning, asset management, surveying, urban planning and management, epidemiology and health care, engineering, marketing, fleet dispatching, and homeland security. Geospatial technology incorporates remote sensing, global positioning systems, and GIS. Emphasis is on field and laboratory experience in addition to theory including topics using ArcGIS Global Positioning Systems, Remote Sensing, and database development.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
CT151 Surveying 1	4
CT265 Intro to Geographic Information Systems	3
EN101 English 1: Composition	3
IS101 Computers and Society	3
MA121 Fundamentals of College Mathematics 1	4
Physical Education	.5

Second Semester

CT263 Digital Mapping	3
GE101 Essentials of World Geography	3
IS200 Spreadsheet Concepts & Applications	3
MA110 Elementary Statistics	3
EN102 English 2	3
Physical Education	.5

Third Semester

CT253 Global Positioning & High Order Controls	4
CT267 Advanced GIS	3
IS210 Database Design & Management	3
CT102 Engineering Drawing & MicroStation CAD	3
MT140 Drafting and Design Using AutoCAD	3
Physical Education	.5

Fourth Semester

CT232 Environmental Engineering	3
CT266 Capstone GIS	3
GL101 Physical Geology	4
IS220 Visual Basic with Business Applications	3
Physical Education	.5

Graphic Communication: Graphic Arts Technology

Associate in Applied Science Degree

Graduates of this program connect the technology of the computer with the printing press. The world of digital graphics requires people who can make the connection between graphic design and printing. Graphic arts technologists understand design and can communicate in the language of the designer. They understand how jobs are printed and what technical requirements are necessary to meet the client's expectations. Combining technology and creativity, graphic arts technology is a combination of electronic pre-press and graphic design. The degree leads to careers in printing technology, printing marketing and sales, digital pre-press, and presswork. Tools used in the program are required, costing approximately \$100. See the Certificate Programs section for related certificate instruction. One high school mathematics course or its equivalent is required.

(a) MA108 does not meet RIT mathematics requirements. Please take MA110, MA139, or MA140.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
FA100 Creativity in Art	3
FA105 Foundation Design	3
GD121 Digital Typography	3
GD145 Digital Applications 1	3
GT124 Commercial Screen Printing	3
Physical Education	.5

Second Semester

EN101 English 1: Composition	3
GT122 Digital Prepress	3
GT221 Prepress Procedures	3
PT127 Creative Photography	3
GD146 Digital Applications 2	3
Physical Education	.5

Third Semester

EN102 English 2: Ideas & Values in Literature	3
GD221 Typography 1	3
GT123 Offset Presswork	3
GT125 Dye Sublimation and Vinyl Graphics	3
MA108 Concepts in Mathematics (a)	3
Physical Education	.5

Fourth Semester

GT222 Printing Production	3
Core GE Social Science	3
Core GE Natural Science	4
GE Elective	3
GE Elective	3
Physical Education	.5

Graphic Communication: Graphic Design

Associate in Applied Science Degree

Graphic designers give form to the world of information. In magazines, newspapers, advertising, books, packaging, exhibitions, corporate graphics, signage, film, and video, graphic designers communicate it all. They are the caretakers of information. Students in graphic design discover a world that has been revolutionized by the computer. Work that until recently had been done by hand is now conceived and executed digitally. New occupations — web page designer, game designer, multimedia designer, and more — emerge every year. This program prepares students, with high tech tools and a hands-on environment, to enter this digital workplace. Graduates use technology to inform, and they understand the responsibilities of that indispensable role in business, industry, and society. Tools used in the program are required, costing approximately \$100. See Certificate Programs section for related certificate instruction. One high school mathematics course or its equivalent is required.

(a) Acceptable Electives include HU186 Music Appreciation, HU187 Art Appreciation, HU188 Film Appreciation, HU204 History of Art 1, or other art history courses (which must have General Education status) with permission of the Associate Dean of the Art Department.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
EN101 English 1: Composition	3
FA100 Creativity in Art	3
FA101 General Drawing	3
FA105 Foundation Design	3
GD121 Digital Typography	3
Physical Education	.5

Second Semester

FA103 Figure Drawing 1	3
FA106 Color Theory	3
HU205 History of Art 2	3
GD145 Digital Applications 1	3
PT127 Creative Photography	3
Physical Education	.5

Third Semester

EN102 English 2: Ideas & Values in Literature	3
GD146 Digital Applications 2	3
GD221 Typography 1	3
MA108 Concepts in Mathematics	3
GE Humanities Elective (a)	3
Physical Education	.5

Fourth Semester

CG214 Motion Graphics	3
GD218 Graphic Design Seminar	3
GD222 Typography 2	3
Core GE Natural Science	4
Core GE Social Science	3
Physical Education	.5

Graphic Communication: Illustration

Associate in Applied Science Degree

Illustrators use a variety of media to create a personal expression. The media may be paint and brush, pencil, or pixel, but the purpose is the same: to interpret a portion of the world pictorially. Illustrators are visual creators who stress communication. The illustrator's subject may be comic or serious, political or interpretative. Each person brings his or her own perspective, talent, and skill to the canvas or computer screen. The result is art that communicates in advertising, newspapers, books, the internet, CD-ROM, film, and magazines. Tools used in the program are required, costing approximately \$100.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
FA100 Creativity in Art	3
FA101 General Drawing	3
FA103 Figure Drawing 1	3
FA105 Foundation Design	3
EN101 English 1: Composition	3
Physical Education	.5

Second Semester

FA104 Figure Drawing 2	3
GD145 Digital Applications 1	3
HU205 History of Art 2	3
IL106 Sequential Art 1: Figure Illustration	3
EN102 English 2: Ideas & Values in Literature	3
Physical Education	.5

Third Semester

FA209 Painting 1	3
IL201 Conceptual Illustration	3
IL208 Sequential Art 2: Book Illustration	3
GD146 Digital Applications 2	3
HU204 History of Art 1	3
Physical Education	.5

Fourth Semester

FA210 Digital Painting	3
IL209 Sequential Art 3: The Graphic Novel	3
MA108 Concepts of Mathematics	3
Core GE Social Science	3
Core GE Natural Science	4
Physical Education	.5

Health Information Technology

Associate in Applied Science

Health Information Technology (HIT) is the profession that focuses on health care data, validity, and the management of health care information in a variety of different health care settings. The Health Information Technology (HIT) program prepares students to enter the profession as Health Information Technicians who use knowledge and skills from disciplines such as medicine, information management, and computer technology. Upon completion of this CAHIIM-accredited HIT program, graduates are eligible to sit for the national accreditation examination offered by the American Health Information Management Association (AHIMA). Students who pass the AHIMA exam receive the Registered Health Information Technician (RHIT) credential.

Program Prerequisites:

All applicants must meet or be working toward the completion of the following prerequisites at the time of application:

Minimum

- High school diploma complete, OR in progress, OR its equivalent

AND

The most recent of the following:

- Current overall college GPA of 2.0
- High school average of 75

Math

- SAT math score of 500 or higher
- OR
- ACT math score of 19 or higher
- OR
- Appropriate MVCC Mathematics Placement test result,
- OR
- Grade of "C" or better in a college level mathematics taken within seven years.

Science

High school biology with lab or college-level biology or human biology completed within seven years;

Recommended

- Chemistry (not required);
- Keyboarding and Microsoft Office Professional (not required).

IMPORTANT NOTICE TO ALL APPLICANTS: If a student has legal charges pending or has been convicted of a felony and/or misdemeanor, certification may be delayed or denied by the applicable national certification board. Students may be subject to criminal background checks and/or blood screening tests at their own cost. Applicants should understand that they may be required to obtain these documents for future gainful employment, and if unable to successfully obtain properly documented immunizations and background clearance, their opportunities for employment within the health care industry may be limited.

PROFESSIONAL PRACTICE EXPERIENCE (PPE): HIT students are required to participate in a nonpaid Professional Practice Experience (PPE) externship as part of their program, and PPE arrangements are made in consultation with students. Students are not a substitute for paid staff during completion of PPEs, and students are expected to receive appropriate supervision during completion of all tasks. The PPE allows students to gain

Total Credit Hours: 64

First Semester

BI216 Human Anatomy & Physiology 1	4
ED100 College Seminar	1
EN101 English 1: Composition	3
HM100 Medical Terminology for Health Professionals	3
HM101 Health Information Management Introductory Concepts	3
IS101 Computers and Society	3

Second Semester

BI217 Human Anatomy & Physiology 2	4
HM120 Pharmacology & Pathophysiology	3
HM121 ICD-10-CM and ICD-10-PCS Coding	4
HM122 Legal and Ethical Aspects of Health Information Management	3
MA110 Elementary Statistics	3

Third Semester

EN102 English 2: Ideas & Values in Literature	3
HM201 CPT and HCPCS Level II Coding	3
HM202 Health Data and Quality Management	3
HM203 Electronic Health Record Management	3
HM204 Alternate Care Health Information Management	3

Fourth Semester

IS210 Database Design & Management	3
HM220 Health Information Management Leadership	3
HM221 Reimbursement Methodologies	3
HM230 HIT Professional Practice Experience	3
PY101 or SO101 Social Science Elective	3

inside knowledge and professional experience in preparation for entering the health information management field. Students have one semester in which to complete the uncompensated minimum 100-hour, on-site requirement at a hospital or other health care facility with adequate facilities to provide varied work experiences in health information management. Students also complete online assignments and projects, which are assessed by college faculty. As there may be flexibility in the days and hours worked, it should be understood that many sites operate during normal business hours of Monday-Friday, 8 a.m.-5 p.m. Travel outside the Utica/Rome area may also be a requirement to complete the PPE. Students are required to submit a health physical form to the health care organization that contains vaccination documentation and lab results, dated within three months of their PPE start date. Students may be required to participate in a health care organization's orientation program, which may include CPR certification.

GRADUATION REQUIREMENTS: Students are required to earn a grade of at least a "C" or better in each BI and HM prefix courses prior to graduation from the HIT program. Part-time students are required to successfully complete general education courses prior to taking health information technology (HM) courses.

Health Studies: Radiologic Technology

Associate in Applied Science Degree

This program provides students with the knowledge and skills necessary to perform radiologic technologist services. The radiologic technologist is a health professional who administers ionizing radiation (x-rays) to produce images for diagnostic, therapeutic, and research purposes. The radiologic technologist operates imaging equipment, provides patient care and radiation protection, positions the patients for examination, selects technical factors for image acquisition, and maintains quality control and patient records. The radiologic technologist is in demand in hospitals, physicians' offices, clinics, government, education, industry, and research. Graduates of the A.A.S. Health Studies: Radiologic Technology program are eligible to sit for the examination of the American Registry of Radiologic Technologists for certification and New York State (NYS) licensure. Passing the credentialing exam is necessary to receive a license to practice as an entry-level radiologic technologist in NYS. Graduates may continue their education in areas such as sonography, nuclear medicine, cardiovascular interventional services, computed tomography (CT), magnetic resonance imaging (MRI), mammography, quality assurance management, research, education, radiation therapy, bone densitometry, and positron emission tomography (PET). The Radiologic Technology program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 N. Wacker Drive, Suite 2850, Chicago, IL 60606-3182; phone: 312-704-5300. The JRCERT is recognized by the United States Department of Education as the national accreditation agency of programs for radiologic technology.

Admission to this program is conditional upon meeting medically required clearance of the Allied Health essential functions.

- An interview is required for admission; please contact the Health Professions Department.
- Students are required to meet the pre-requisites prior to taking the first Radiologic Technology (RT) course. Students must have a GPA of 2.80 or greater in order to be considered for admission into the Radiologic Technology Student Handbook and Clinical Guide. Students who deviate from the objectives of the Health Studies: Radiologic Technology Program as outlined in the Program Student Policy Handbook and Program Clinical Policy Handbook will be dismissed from the Health Studies: Radiologic Technology Program and ineligible to return to the program.
- A minimum RT didactic grade of 80 or better is required, a minimum RT clinical freshman grade of 80, and a minimum RT clinical senior grade of 85 are required to remain in the Radiologic Technology program. If the student receives less than a "B" grade in the RT courses they will be dismissed from the program. Any student who has been unsuccessful in one radiology course with a grade of "C," "D," "F," or "W" will be dismissed and are not eligible to reapply to the radiology program at MVCC. This does not include applicants who had a break in sequence due to medical leave. A minimum grade of "C," 70 or higher, is required in all other non-Radiologic Technology courses.
- Students who are unsuccessful in Anatomy & Physiology 1 and 2 (BI216 and BI217) while in the radiology program will be dismissed from the radiology program and are not eligible to reapply to the radiology program.
- Clinical assignments may include rotations that require travel within and outside the Utica/Rome area. A driver's license is required. Students must provide their own transportation to

Total Credit Hours: 72

First Semester

ED100 College Seminar	1
BI216 Human Anatomy & Physiology 1	4
MA110 Elementary Statistics	3
RT100 Patient Care I/Ethics	1
RT101 Fundamentals of Radiography	2
RT102 Radiographic Procedures/Pathology 1	3
RT103 Clinical Education Fundamentals	3

Second Semester

BI217 Human Anatomy & Physiology 2	4
RT104 Patient Care II/Pharmacology & IV Therapy	1
RT105 Image Production & Evaluation I	2
RT106 Radiographic Procedures/Pathology II	3
RT107 Clinical Education Intermediate I	5

Summer Semester

RT108 Clinical Education Intermediate II	8
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Fourth Semester

EN101 English 1: Composition	3
PY101 Introduction to Psychology	3
RT109 Radiation Biology I	2
RT200 Advanced Procedures/Sectional Anatomy	1
RT201 Image Production & Evaluation II	2
RT202 Clinical Education Advanced	6

Fifth Semester

EN102 English 2: Ideas & Values in Literature	3
RT203 Radiographic Physics	2
RT204 Radiation Biology II	2
RT205 Advanced Imaging Procedures/Pathology	1
RT207 Clinical Education Mastery	7

and from assigned health care agencies for clinical.

- Professional liability and accident insurance, available through the College, is required and payable at registration.
- Students are required to purchase a photo ID to be worn at all times during clinical.
- Students must follow the uniform code requirement outlined in the Clinical Policy Handbook. Identified items (nametag, photo ID, uniform, hemostat, bandage scissors, and radiation monitor badge) are required for clinical sessions.
- Credit by examination and/or Credit for Experiential Learning are not options for students who have been unsuccessful in any RT or Human Anatomy and Physiology course.
- Students may be subject to criminal background checks and/or blood screening tests at their own cost.
- Upon successful completion of the Health Studies: Radiologic Technology Program and additional requirements, students may be eligible to take the American Registry of Radiologic Technologist (ARRT) Certification Examination. Graduation from the Health Studies: Radiologic Technologist program does not guarantee success on credentialing exams.
- Students are responsible for fees associated with application for licensure.
- Passing the ARRT credentialing exam is necessary to receive

Health Studies: Radiologic Technology (continued)

Associate in Applied Science Degree

a license to practice as an entry-level radiologic technologist in NYS.

- If an applicant has charges pending or a felony and/or misdemeanor, a license may be delayed or denied by the applicable state licensing board.

Prerequisites

Minimum qualifications:

- High school diploma or its equivalent AND

The most recent of the following:

- A current overall college GPA of 2.80 (minimum of 12 or more credits)
- High school average of 85
- Math: An SAT math score of 500 or higher OR an ACT math score of 19 or higher OR an appropriate math placement test score OR a grade of "C" or better in MVCC MA090, MA091, MA110, MA108, MA115, or comparable mathematics course taken within seven years.
- Chemistry: High school chemistry with a lab and a final grade of 70 or higher taken within seven years OR a grade of "C" or better in CH111 and CH112 or CH131 or equivalent taken within seven years.
- Biology: High school biology with a lab and a final grade of 70 or higher taken within seven years OR a grade of "C" or better in an equivalent college biology course with a lab taken within seven years.

Please note: If you have successfully completed BI216 or BI217 at MVCC with a grade of "C" or higher or completed an approved college-level Anatomy & Physiology course taken within seven years at another college, you may be exempt from the Biology requirement for consideration of entry in to the Radiology Program.

IMPORTANT NOTE: Applicants may have no more than one repeat ("D," "F," or "W") in any of the above prerequisite college courses within five years of applying to the Radiology Program.

Applicants who have received a "D", "F", or "W" for any of the following courses at MVCC or at any other college will be ineligible to apply to the radiology program.

- BI216 Human Anatomy & Physiology 11
- BI217 Human Anatomy & Physiology 2
- Any Radiology course

Any student who has been unsuccessful in one radiology course or Human Anatomy & Physiology 1 and 2 will be dropped from the program. Any student who has been unsuccessful at another college/radiology program will not be eligible for admission to the Radiology Program.

Prerequisites can be taken at other colleges. Consult the Radiology Program Coordinator or Clinical Coordinator to find out if those classes meet the minimum criteria.

IMPORTANT NOTE: Applicants may have no more than one repeat (F, D or W) in any of the above prerequisite college courses within five years of applying to the Radiology Program.

Transfer or Returning Students

Transfer application deadline is March 1 for Fall term radiology courses and Oct. 1 for Spring term radiology courses.

Transfer Applicants are applicants with transfer credit for Radiology Course(s) from another college and must apply, meeting all program and prerequisite criteria, and will be considered on an individual basis.

Readmission Applicants

Readmission only includes applicants who had a break in sequence due to medical leave.

Readmission Application Deadlines: March 1 for Fall term radiology courses and Oct. 1 for Spring term radiology courses

Readmission into the Radiology Program and/or Radiology Course(s) requires approval of the Program Coordinator, and is on a space-available basis.

1. Notify Program Coordinator in writing requesting readmission indicating course and semester for which readmission is sought. Send letters to: Mary Kate LaPaglia, MAE, RT (R) (M), Payne Hall 350A, 1101 Sherman Drive, Utica, NY 13501.
2. Radiology students who were unsuccessful (F, D, or W) in any radiology course must re-apply using the Radiology Program Application.
3. Science credits earned more than seven years prior to the start of the students first Radiology semester will not satisfy program or prerequisite course requirements.

Hotel Technology: Meeting Services Management

Associate in Applied Science Degree

This program deals with one of the fastest growing careers in the hospitality field. It provides relevant education for those who wish to enter the industry or for persons currently employed within the industry who wish to upgrade their skills. Coursework includes management, marketing, human resources, accounting, business law, and computer applications. In addition to the general academic requirements, a minimum of 225 documented hours is required of hospitality-related internship experience. Upon completion of the associate degree program, graduates are qualified for entry-level supervisory positions in hotel and corporate convention and meeting services. The flexibility of the program allows students to choose options in front office management, hotel food and beverage management, or housekeeping management. Another option may be continuing education, receiving junior year status in a bachelor of science hospitality program with four-year colleges and universities, established through articulation agreements. One high school mathematics course or its equivalent is recommended.

- (a) Mathematics Elective Options: MA108 Concepts in Mathematics, MA110 Elementary Statistics, MA115 Intermediate Mathematics, or MA139 College Algebra.

Total Credit Hours: 62 – 63

First Semester

ED100 College Seminar	1
EN101 English 1: Composition	3
FS111 Food Preparation 1	4
FS150 Safety & Sanitation	3
HT101 Introduction to the Hospitality Industry	3
Physical Education	.5

Second Semester

AC110 Principles of Accounting	3
BM120 Principles of Marketing	3
EN102 English 2: Ideas & Values in Literature	3
HT105 Front Office Procedures	3
Core GE Social Science	3
Physical Education	.5

Third Semester

AC131 Business Law	3
EN150 Effective Speech	3
HT205 Housekeeping/Property Management	3
IS101 Computers and Society	3
Core GE Natural Science	4
Physical Education	.5

Fourth Semester

BM251 Organizational Behavior	3
HT201 Internship/Co-op	3
HT211 Convention Service Management	3
HT215 Supervisory Leadership	3
Mathematics Elective (a)	3-4
Physical Education	.5

Human Services

Associate in Applied Science Degree

This program provides the skills needed to begin working in a variety of helping professions. Working with an advisor, students plan a course of study around their career interests. The counseling area of study helps to develop the knowledge and interpersonal skills required to help those in need solve problems in living. Human Services students must complete two semesters of professionally supervised internship experiences in a setting related to their career direction. Students who choose to continue their education will find opportunities to transfer into baccalaureate programs in social work, psychology, therapeutic recreation, occupational therapy, child life, and related areas. One high school mathematics course or its equivalent is required.

Program Electives

(Choose two; must be entered in plan by advisor):

HS216 Introduction to Disabilities
 HS231 Ethics, Policy & Law
 HS233 Group Counseling Skills
 HS245 Case Management 1
 Developmental Psychology Electives (choose one)
 PY202 Childhood and Adolescence
 PY205 Adulthood & Aging
 PY212 Adolescent Psychology
 Psychology Electives (choose one)
 PY201 Learning: Behavior Analysis
 PY204 Social Psychology
 PY208 Death, Dying & Bereavement
 PY209 Forensic Psychology
 PY213 Human Sexuality

OR

A second Developmental Psychology Elective
 Sociology Electives (choose one)
 SO202 Marriage & Family Living
 SO203 Urban Sociology
 SO204 Contemporary Issues in Society
 SO205 Racial & Ethnic Minorities
 SO206 The Social Significance of Gender
 SO207 Sociology: Comparative Religion (b)
 SO208 Sociology of Aging
 SO210 Deaf Culture and Community

(a) General Education Elective: Consult with advisor for a list of courses. If transferring to a SUNY college, complete an American History, Western Civilization, Arts, or Foreign Language. Take SO207 Sociology: Comparative Religion and a SUNY General Education course to fulfill seven areas.

(b) Fulfills SUNY General Education Other World Civilizations.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
EN101 English 1: Composition	3
BI103 Human Life Science 1	4
PY101 Introduction to Psychology	3
SO101 Introduction to Sociology	3
HS101 Introduction to Human Services	3
Physical Education	.5

Second Semester

EN102 English 2: Ideas & Values in Literature	3
MA108 Concepts in Mathematics	3
OR	
MA110 Elementary Statistics	3
HS241 Chemical Dependencies	3
PY203 Abnormal Psychology	3
PY210 Evaluation, Research & Measurement in Behavioral Science	3
Physical Education	.5

Third Semester

HS251 Internship 1	3
HS222 Theories of Counseling Program	3
Program Elective (Restricted)	3
Developmental Psych Elective	3
Psychology Elective	3
Physical Education	.5

Fourth Semester

HS232 Counseling Techniques	3
HS252 Internship 2	3
Program Elective (Restricted)	3
Sociology Elective	3
General Education Elective (a)	3
Physical Education	.5

Individual Studies

Due to the multiple degree types available through Individual Studies, students planning on enrolling at the College for the first time should consult with the Admissions Office before filing an application for admission.

Degree Program:

Some students have needs and goals different from those of traditional students who often are continuing their education directly from high school. Many have jobs and families, both of which influence their education. First, there is the need for specifically job-related courses. Then, when a level of competence has been gained, the student often feels the need for a basic college education and the resulting degree. The structured programs designed for full-time students have less relevance for the part-time student. Often these students do not plan to transfer to an upper-division curriculum or need the broader knowledge of an extensive technology curriculum. Usually they need only courses demanded by the immediate promotion needs of the job. The College has established a curriculum in Individual Studies that includes the following:

General Requirements:

1. The curriculum requires a minimum of 60 credit hours or their equivalent, plus two credit hours of Physical Education and one credit hour of College Seminar.
2. Prior to a formal request for degree candidacy, the student must have completed a detailed plan of study.
3. The student will submit a detailed plan of study when applying for degree candidacy. This plan will include a summary of all past educational credits which the student wishes to have accepted toward completion of the curriculum. This plan is to be submitted as part of the degree candidacy process, and will be reviewed and approved by the appropriate Department depending on the student's area of concentration. Changes may be made by the student later, with the approval of the appropriate Associate Dean.
4. The plan will include a projected body of work to be known as the student's area of concentration. This area is to be a cohesive body of knowledge which the student can justify as having both educational and personal relevance. It is anticipated that this area, which will include a minimum of 20 credits, may cut across Department lines.

Associate in Occupational Studies in Individual Studies

The student will complete a six-credit-hour requirement in English that includes EN110 Oral & Written Communication and EN147 Report Writing. The student will complete an eight-hour sequence in Mathematics that includes MA105 Technical Mathematics 1 and MA106 Technical Mathematics 2. The student may make substitutions of other higher level English and Mathematics courses with the approval of the Individual Studies advisor.

Associate in Science in Individual Studies

In addition to the general requirements, the following are required:

1. The student must submit a comprehensive plan of study clearly designating a block of 18 credits identifiable as an area of concentration. Of these, nine credits must be in addition to the general education, mathematics, and science units specified in the SUNY General Education Quick Reference Guide on pages 16-17.
2. General Education courses as prescribed by the AS degree requirements.

Associate in Applied Science in Individual Studies

In addition to the general requirements, the following are required:

1. The student must submit a comprehensive plan of study

clearly designating a block of 18 credits identifiable as an area of concentration. The credits included in this portion of the student's program may not be included in the general studies portion listed in the SUNY General Education Quick Reference Guide on page 16-17.

2. The distribution and minimum content requirements of general education, liberal arts and sciences, must be at least 20 credit hours.
3. General Education courses as prescribed by the AAS degree requirements.

Associate in Arts in Individual Studies

In addition to the general requirements, the following are required:

1. The student must submit a comprehensive plan of study clearly designating a block of 18 credits identifiable as an area of concentration, of which at least nine credits must be in addition to the general education, mathematics, and science units specified in the SUNY General Education Quick Reference Guide on pages 16-17.
2. The distribution and minimum content requirements of general education, liberal arts and sciences, must be at least 60 credit hours.
3. General Education courses as prescribed by the AA degree requirements.

Certificate in Individual Studies: Business & Industry

The Individual Studies Certificate updates the education of people who have work experience or degrees/training in the industrial/business environment. This certificate allows the student to choose appropriate coursework to strengthen their knowledge at their present job or for a potential job opening. This certificate is designed to allow entry workers to have specific exposure to technical and business topics for immediate employment. This certificate can be applied toward an AOS or AAS degree in business, technology, the trades, or several other subjects.

General Requirements:

The certificate requires a minimum of 30 credit hours or their equivalent. Prior to a formal request for candidacy, the student must have completed a detailed plan of study. The student will submit a detailed plan of study when applying for certificate candidacy. This plan will include a summary of all past educational credits that the student wishes to have accepted toward completion of the certificate. This plan is to be submitted as part of the certificate candidacy process, and will be reviewed and approved by the appropriate department depending on the student's area of concentration. Changes may be made later, with the approval of the appropriate Associate Dean. The plan will include a projected body of work to be known as the student's area of concentration. This area is to be a cohesive body of knowledge that the student can justify as having educational and personal relevance. It is anticipated that this area, which will include a minimum of 15 credits, may cut across Department lines. In addition to the general requirements, the student must submit a comprehensive plan of study that includes three credits of mathematics, three credits of English, and 15 credits of an identified area of concentration. These courses are to be chosen with the aid of an advisor, based upon future educational or occupational goals.

Liberal Arts & Sciences: Adolescence Education

Associate in Science Degree

This program is the first step for students seeking teacher certification. The program is appropriate for Adolescent Education (grades 7-12). In order to earn teacher certification, students must transfer and complete an appropriate bachelor's and master's degree. As part of the first two years of that process, students in this program complete all 10 of the general education areas required by SUNY for a bachelor's degree. They complete six credit hours of professional courses (ED150 and PY212), which include at least 30 hours of classroom observation. Students complete 15-18 credit hours in their area of study (Mathematics, English, history/social studies, biology, physics, geology, or chemistry). Specific courses taken depend on the area of study, the type of certification being sought, and the transfer institution. It is important for students to contact the school to which they may transfer in order to plan their curriculum. In some cases, it may require careful planning for students to complete a bachelor's degree in four years.

Student Options

** Please consult with your advisor for proper course selection in these areas of study.

Available areas of study include:

Biology

** BI141 General Biology 1, BI142 General Biology 2, BI201 Microbiology, CH141 General Chemistry 1, CH142 General Chemistry 2.

Chemistry

** CH141 General Chemistry 1, CH142 General Chemistry 2, CH247 Organic Chemistry 1, CH248 Organic Chemistry 2, MA151 Calculus 1, MA152 Calculus 2.

Students in the Chemistry area of study do not need to take ED211.

Earth Science

** CH141 General Chemistry 1, CH142 General Chemistry 2, GL101 Physical Geology, BI105 Environmental Science, GL102 Historical Geology.

English

** EN48 American Literature 1, EN271 British Literature 1, EN249 American Literature 2, EN272 British Literature 2.

History/Social Studies

** BM110 Microeconomics, PS101 American National Government, BM115 Macroeconomics, HI102 History of Civilization 2, HI112 American History 1850-present.

Mathematics

** MA151 Calculus 1, MA152 Calculus 2, MA253 Calculus 3, MA275 Discrete Algebraic Structures, MA280 Linear Algebra.

Physics

** MA151 Calculus 1, MA152 Calculus 2, CH141 General Chemistry 1, MA253 Calculus 3, PH151 General Physics 1, PH152 General Physics 2.

Natural Science Electives for students in English, History, and Mathematics areas of study: BI105, BI141, BI142, BI216, BI217, CH101, CH131, CH141, CH142, CH247, CH248, GL101, GL102, PH131, PH141, PH142, PH151, PH152

Total Credit Hours: 62

First Semester

ED100 College Seminar	1
Natural Science Elective	4
ED150 Social & Philosophical Foundations of Education*	3
EN101 English 1: Composition	3
PY101 Introduction to Psychology	3
Foreign Language (a)	3
Physical Education	.5

Second Semester

EN102 English 2: Ideas & Values in Literature	3
Area of study required course**	4
HI111 American History 1492-1850 or HI112 American History 1850-Present	3
Fine Arts Elective (c)	3
Foreign Language (b)	3
Physical Education	.5

Third Semester

Area of study required course**	4
Area of study required course**	4
HI101 History of Civilization 1	3
PY212 Adolescent Psychology	3
Physical Education	.5

Fourth Semester

Area of study required course**	4
ED211 Introduction to Exceptionalities*	3
MA110 Elementary Statistics (e)	3
Literature Elective (d)	3
Physical Education	.5

- (a) The language requirement consists of a two-course sequence in the same foreign language. American Sign Language counts as a foreign language in education programs within the SUNY system. Regents level 4 foreign language in high school (or level 3 with a score of 90 or better) allows students to take one semester of that language at a level of 191 (Review) or higher to satisfy this requirement.
- (b) In the case where students are exempt from the language requirement, the language credits must be replaced with courses approved by an advisor. Those attending Utica College must select ED206 Child Development as their replacement course.
- (c) Fine Arts: HU187, HU204, HU205, or GC244
- (d) Literature Electives: EN248, EN249, EN255, EN256, EN271, EN272.
- (e) MA110 is required except for students in the areas of study of Math, Chemistry, and Physics (refer to electives listed at left).

*Students are required to earn a minimum grade of "C" in these courses to meet the graduation requirements.

Liberal Arts & Sciences: Childhood Education

Associate in Science Degree

This program is the first step for students seeking teacher certification in Childhood Education (grades 1-6), Early Childhood/Childhood Education (Birth-6th grade), or Childhood Special Education. In order to earn teacher certification, students must transfer to and complete an appropriate bachelor's and master's degree at a transfer institution. As part of the first two years of that process, students in the Childhood Education (grades 1-6) program complete all 10 of the general education areas required by SUNY for a bachelor's degree and up to nine hours of professional courses which include at a minimum 30 hours of classroom observation. They must also complete 15-18 credit hours in an area of study (English, history/social studies, or science). Specific courses depend on the area of study and the transfer institution. Students in the Early Childhood/Childhood Education (Birth-6th grade) degree program complete 28 credits in pre-professional and professional courses in addition to the General Education requirements. These students select a concentration when they enter the transfer institution. Students interested in Special Education may enroll in either the Birth-6th grade or 1st-6th grade degree program depending on which transfer institution is selected. It is important for students to contact the college to which they may transfer in order to plan their curriculum. In some cases, it may require careful planning for students to complete a bachelor's degree in four years. Individuals interested in becoming a Teacher's Assistant in a public school are encouraged to complete the Birth-6th grade degree program to meet the Federal guidelines regarding educational requirements for a classroom Teacher Assistant.

Student Options

** Please consult with your advisor for proper course selection in these areas of study.

Available areas of study include:

English

** EN248 or EN249, EN271, or EN272, two Literature Electives could include EN271, EN272, EN255, EN256.

General Science

** Four Natural Science Electives: Choose four courses that must include two of the following two-course sequences: BI141/BI142, CH141/CH142, GL101/GL102, PH141/PH142, PH151/PH152.

History

** GE101, HI102, HI111, HI112, and HI214.

For English and History, students will take four 3-credit required courses, and general science students will take three 4-credit required courses.

Total Credit Hours: 61

First Semester

ED100 College Seminar	1
ED150 Soc & Phil Found of Education*	3
EN101 English 1: Composition	3
MA171 Foundations of Mathematics 1	3
PY101 Introduction to Psychology	3
Foreign Language (a)	3
Physical Education	.5

Second Semester

ED205 Child Development*	3
EN102 English 2: Ideas & Values in Literature	3
HI101 History of Civilization I	3
MA172 Foundations of Mathematics 2	3
Foreign Language (b)	3
Physical Education	.5

Third Semester

HI111 American History 1492-1850 or HI112 American History 1850-Present	3
Area of study required course	3
Area of study required elective	3
Natural Science Elective (c)	4
Physical Education	.5

Fourth Semester

Area of study required elective	3
ED211 Introduction to Exceptionalities*	3
EN240 Children's Literature	3
Area of study required course	3
Fine Arts Elective (d)	3
Physical Education	.5

- The language requirement consists of a two-course sequence in the same foreign language. American Sign Language counts as a foreign language in education programs within the SUNY system. Regents level 4 foreign language in high school (or level 3 with a score of 90 or better) allows students to take one semester of that language at a level of 191 (Review) or higher to satisfy this requirement.
- In the case where students are exempt from the language requirement, the language credits must be replaced with courses approved by an advisor. Those attending Utica College must select ED206 Child Development as their replacement course.
- Natural Science electives include BI105, BI141, BI142, BI216, BI217, CH101, CH131, CH141, CH142, CH247, CH248, GL101, GL102, PH131, PH141, PH142, PH151, PH152.
- Fine Arts: HU187, HU204, HU205, or GC244.

* Students are required to earn a minimum grade of "C" in these courses to meet the graduation requirements.

Liberal Arts & Sciences: Childhood Education

Associate in Science Degree (Jointly Registered with SUNY Oneonta)

This unique program provides area students the opportunity to earn New York State Teacher Certification for grades one through six. Students begin by enrolling in the MVCC Associate in Science Degree, comprised of introductory education classes and an array of liberal arts courses, which fulfill all 10 of the general education areas required by SUNY for the bachelor's degree. Students who graduate with the associate degree from MVCC and earn a minimum GPA of 3.0 are automatically accepted into the bachelor of science portion of the jointly registered program, which is offered on the MVCC campus. Upon completion of the bachelor's level coursework, students will have earned a degree in Liberal Arts & Sciences: Childhood Education, conferred by SUNY Oneonta and, assuming successful results on New York State Teacher Certification examinations, will be eligible for teacher certification.

Important procedures for enrolling in the joint program are as follows:

Students apply to MVCC for admission and choose the joint program plan. Students are assigned an MVCC advisor and will be contacted by the SUNY Oneonta staff representative to review transcript materials and requirements of the Oneonta program.

Requirements for admission to the Oneonta program:

MVCC graduates will be guaranteed admission to the final two years of the program, provided they have completed the prescribed coursework in the Associate of Science Degree in Liberal Arts & Sciences — General Studies/Childhood Education with a cumulative GPA of 3.0 or higher. No grade below a "C" will be accepted for transfer to SUNY Oneonta. Students have the option of taking upper-level courses offered by SUNY Oneonta at MVCC or taking all courses at Oneonta to complete the B.S. program.

At the time of SUNY Oneonta matriculation, education and educational psychology courses may not be more than five years old. All other degree requirement courses may not be more than 10 years old.

- (a) For Core GE Western Civilization, choose from the following:
HI101 History of Civilization 1, HI102 History of Civilization 2, HI103 History of Civilization: Early Civilization to 1453, HI104 History of Western Civilization 1453 to Present, HU204 History of Art I, HU205 History of Art 2, HU290 Interdisciplinary Studies in the Humanities: Medieval & Early Renaissance, or HU295 Survey of Western Philosophy.
- (b) The language requirement consists of a two-course sequence in the same foreign language. American Sign Language counts as a foreign language in education programs within the SUNY system. Regents level 4 foreign language in high school (or level 3 with a score of 85 or better) allows students to take one semester of that language at a level of 191 (Review) or higher to satisfy this requirement. In the case where students are exempt from the language requirement, the language credits must be replaced with courses approved by an advisor.
- (c) English Literature Electives: EN240 Children's Literature, EN248 American Literature 1, EN249 American Literature 2, EN255 World Literature 1, EN256 World Literature 2, or EN265 African-American Literature: A Survey.
- (d) HU186 Music Appreciation, HU187 Art Appreciation, HU204 History of Art 1, or HU205 History of Art 2, or HU205 History of Art 2.

Total Credit Hours: 63

First Semester

ED 100 College Seminar	1
EN 101 English 1 – Composition	3
Natural Science Elective (e)	4
MA171 Foundations of Math 1	3
ED150 Social & Philosophical Foundations of Education	3
ED151 Prevention & Safety Issues for the Classroom Teacher	1
Physical Education	.5

Second Semester

EN102 English 2: Ideas & Values in Literature	3
MA172 Foundations of Math 2	3
CORE GE Western Civilization (a)	3
PY101 Intro to General Psychology	3
PS101 American National Government	3
Physical Education	.5

Third Semester

GL202 Earth Science for Childhood Ed	4
Foreign Language (b)	3
English literature Elective (c)	3
ED205 Child Development	3
HI111 American History 1492-1850 or HI112 American History 1850-Present	3
Physical Education	.5

Fourth Semester

HI214 NYS History	3
Foreign Language (b)	3
GE101 World Geography	3
ED211 Intro to Exceptionalities	3
Humanities Elective (d)	3
Physical Education	.5

- (e) Natural Science Electives: BI105 Environmental Science, BI141 General Biology 1, BI142 General Biology 2, BI216 Human Anatomy & Physiology 1, BI217 Human Anatomy & Physiology 2, CH101 Physical Science, CH131 College Chemistry, CH141 General Chemistry 1, CH142 General Chemistry 2, CH247 Organic Chemistry 1, CH248 Organic Chemistry 2, GL101 Physical Geology, GL102 Historical Geology, PH131 Physics Fundamentals, PH141 Astronomy: The Solar System, PH142 Astronomy: Stars, Galaxies, and the Universe, PH151 General Physics 1, PH152 General Physics 2.

Liberal Arts & Sciences: Childhood Education

Utica College Birth-6th Grade Certification Program

Associate in Science Degree

This program is the first step for students seeking teacher certification in Childhood Education (grades 1-6), Early Childhood/Childhood Education (Birth-6th grade), or Childhood Special Education. In order to earn teacher certification, students must transfer to and complete an appropriate bachelor's and master's degree at a transfer institution. As part of the first two years of that process, students in the Childhood Education (grades 1-6) program complete all 10 of the general education areas required by SUNY for a bachelor's degree and up to nine hours of professional courses which include a minimum 30 hours of classroom observation. They must also complete 15-18 credit hours in an area of study (English, history/social studies, or science). Specific courses depend on the area of study and the transfer institution. Students in the Early Childhood/Childhood Education (Birth-6th grade) degree program complete 28 credits in pre-professional and professional courses in addition to the General Education requirements. These students select a concentration when they enter the transfer institution. Students interested in Special Education may enroll in either the Birth-6th grade or 1st-6th grade degree program, depending on which transfer institution is selected. It is important for students to contact the college to which they may transfer in order to plan their curriculum. In some cases, it may require careful planning for students to complete a bachelor's degree in four years. Individuals interested in becoming a Teacher's Assistant in a public school are encouraged to complete the Birth-6th grade degree program to meet the Federal guidelines regarding educational requirements for a classroom Teacher Assistant.

- a) Students must complete two semesters of foreign language. Students transferring to Utica College or SUNY Cortland may take American Sign Language for the requirement. Students who have achieved a high school average of 90 or higher in all three years of high school level language OR students who have completed an 80 or higher high school average in all four years of high school level language are exempt from this requirement, however they must select two courses (six credits, minimum) in their chosen area of study to replace the foreign language courses and meet the 64-credit hour requirement for the program.
- (b) Natural Science: Electives include BI105, BI141, BI142, BI216, BI217, CH101, CH131, CH141, CH142, CH247, CH248, GL101, GL102, PH131, PH141, PH142, PH151, or PH152. CH101 is a required course for students transferring to SUNY Cortland.
- (c) Fine Arts Elective: HU187, HU204, or HU205.

* Students are required to earn a minimum grade of "C" in these courses to meet the graduation requirements.

Notice: Students transferring to Utica College must earn a 3.0 GPA for acceptance.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
ED150 Social & Philosophical Foundations of Education*	3
EN101 English 1: Composition	3
MA171 Foundations Mathematics 1	3
PY101 Introduction to Psychology	3
Foreign Language (a)	3
Physical Education	.5

Second Semester

ED205 Child Development*	3
EN102 English 2: Ideas & Values in Literature	3
HI101 or HI102 History of Civilization 1 or 2	3
MA172 Foundations Mathematics 2	3
Foreign Language	3
Physical Education	.5

Third Semester

ED201 Introduction to Early Childhood Education*	3
ED203 Early Childhood Methods & Materials*	3
EN240 Children's Literature	3
Natural Science Elective (b)	4
Fine Arts Elective (c)	3
Physical Education	.5

Fourth Semester

ED204 Infant/Toddler Development*	3
ED206 Language & Literacy in Childhood*	3
ED207 Observation & Assessment*	3
ED211 Introduction to Exceptionalities*	3
HI111 or HI112 American History 1 or 2	3
Physical Education	.5

Liberal Arts & Sciences: General Studies

Associate in Science Degree

This flexible program allows a greater choice of electives than many others. Under the guidance of an advisor, students begin initial coursework in one or two career fields in which they are interested. At the same time, they complete General Education courses required for transfer to upper-division colleges. They decide their future educational objectives: internal transfer to another MVCC program, or external transfer to a four-year college in their chosen field. This program is ideally suited to students who are unsure of their goals or those who wish to explore career options. Any student admitted to MVCC who is not admitted to a particular curriculum, or who does not elect to enroll in a specific curriculum, will be matriculated as a General Studies student. If students are not ready to enter courses because they lack the necessary background, they are asked to take developmental courses first.

- (a) Students choose among the core (bolded) General Education Social Science electives in the General Education Quick Reference Guide on pages 16 and 17.
- (b) Students choose one core (bolded) mathematics course and one other General Education mathematics course in the General Education Quick Reference Guide on pages 16 and 17.
- (c) Students choose from any course EXCEPT PE. All electives must be approved officially by the student's faculty advisor.
- (d) Students choose from any 200-level course as long as course prerequisites are met. All electives must be approved officially by the student's faculty advisor.

Total Credit Hours: 62

First Semester

ED100 College Seminar	1
EN101 English 1: Composition	3
Core GE Social Science (a)	3
MA Mathematics (b)	3
Elective (c)	3
Elective (c)	3
Physical Education	.5

Second Semester

EN102 English 2: Ideas & Values in Literature	3
Social Science Elective (a)	3
MA Mathematics (b)	3
Elective (c)	3
Elective (c)	3
Physical Education	.5

Third Semester

Science Elective	4
EN150 Effective Speech	3
HI101 History of Civilization 1	3
Elective (d)	3
Physical Education	.5

Fourth Semester

Science Elective	4
Humanities Elective	3
HI102 History of Civilization 2	3
Elective (c)	3
Elective (d)	3
Physical Education	.5

Liberal Arts & Sciences: Humanities & Social Sciences

Associate in Arts Degree

Students in this program develop the skills of learning, thinking, and communicating for the purpose of deepening their knowledge of the humanities and broadening their knowledge of the other disciplines. In keeping with these aims, the students use writing as a means for thinking about and understanding subject matter. The program may serve as an initial preparation for entry into the professions, such as education and law. The complete program is available on the Utica and Rome campuses. Prerequisites for program acceptance are two high school mathematics courses or their equivalent, and one year of a laboratory science.

- (a) MA108 Concepts in Mathematics, MA110 Elementary Statistics, or higher, except MA171 and MA172.
- (b) AN101 Biological Anthropology, BM101 Survey of Economics, GE101 Essentials of World Geography, PS101 American national Government, PY101 Introduction to General Psychology, SO101 Introduction to Sociology.
- (c) Any course from the MVCC General Education Course List not already specified in the curriculum except MA171, MA172, or EN 110.
- (d) Any 200-level course with a prefix of EN, HU, or HI, or Foreign Language course not already stipulated in the curriculum.
- (e) Select from SA300 Study Abroad, HU280 Introduction to Ethics, and HU295 Survey of Philosophy.
- (f) For students in this program, the foreign language consists of a six-hour sequence within the same language. Students who have completed four years of the same language in high school, have completed three years of the same language in high school with a grade of A or over 90%, or those with other appropriate language experience are exempt from this requirement. For those who are not exempt from the requirement, placement in language and level is determined at the beginning of the academic year. Those who are exempt must replace language credits with six credits of MVCC General Education electives.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
EN101 English 1: Composition	3
HI101 History of Civilization 1	3
Core GE Mathematics (a)	3
Core GE Social Science (b)	3
Foreign Language (f)	3
Physical Education	.5

Second Semester

EN102 English 2: Ideas & Values in Literature	3
HI102 History of Civilization 2	3
HU204 History of Art I	3
Core GE Social Science (b)	3
Foreign Language (f)	3
Physical Education	.5

Third Semester

EN150 Effective Speech	3
HU205 History of Art II	3
General Education Elective	3
Core GE Natural Science	4
Restricted Elective	3
Physical Education	.5

Fourth Semester

HI, HU Elective	3
General Education Elective (c)	3
Restricted Elective (d)	3
Restricted Elective (d)	3
EN, HI, HU Elective (e)	3
Physical Education	.5

Liberal Arts & Sciences: International Studies

Associate in Arts Degree

This program prepares for transfer to a four-year program in business, social sciences, or humanities with an international orientation. Along with providing a coherent liberal arts base, it provides access to instruction in French, German, Italian, and Spanish. Two high school mathematics courses or the equivalent, and one year of a laboratory science are required; two years of a foreign language are recommended.

Restricted Electives

Business Electives include:

BM212 International Marketing
IS101 Computers and Society

Social Science Electives:

SO101 Introduction to Sociology
PY101 Introduction to Psychology
AN101 Biological Anthropology

Humanities Electives:

HU204 History of Art 1
HU205 History of Art 2
HU220 Studies in Mexican Culture (other)
HU292 Approved courses listed as "Topics in Humanities"
HU186 Music Appreciation
HU187 Art Appreciation
HU188 Film Appreciation
EN280 Dramatic Literature 1
EN281 Dramatic Literature 2
HU289 Interdisciplinary Studies in the Humanities 1
HU290 Interdisciplinary Studies in the Humanities 2
HU291 Interdisciplinary Studies in the Humanities 3
HU295 Survey of Western Philosophy
HU296 Topics in Philosophy
SA300 Study Abroad (b)
Additional foreign language study

- (a) A minimum of two semesters in the same language will be required. The student will meet with the Associate Dean for Humanities and the Coordinator of International Studies to assess existing foreign language competency in order to determine proper placement or possible exemption. In the case of an ESL student, for example, English may satisfy the foreign language requirement.
- (b) SA300 requires permission of the student's Associate Dean and the Coordinator of International Studies. Students must fulfill the general education requirements described on pages 15-17. To ensure that you will fulfill these requirements for graduation, you must meet with your advisor as you plan each semester at MVCC.

Total Credit Hours: 62

First Semester

ED100 College Seminar	1
EN101 English 1: Composition	3
MA108 Concepts in Mathematics	3
HI101 History of Civilization	3
Foreign Language 1 (a)	3
PS202 Comparative Politics	3
Physical Education	.5

Second Semester

EN102 English 2: Ideas & Values in Literature	3
MA110 Elementary Statistics	3
HI102 History of Civilization 2	3
Foreign Language 2 (a)	3
AN102 Cultural Anthropology	3
Physical Education	.5

Third Semester

EN255 World Literature 1	3
Core GE Natural Science	4
BM101 Survey of Economics	3
EN150 Effective Speech	3
Restricted Elective	3
Physical Education	.5

Fourth Semester

EN256 World Literature 2	3
GE Natural Science	4
PS205 International Politics	3
Restricted Elective	3
Physical Education	.5

Liberal Arts & Sciences Mathematics & Science

Associate in Science Degree

This curriculum is designed to serve the interests of students with goals and strengths in the mathematics and science fields while broadening their knowledge in allied disciplines and clarifying career objectives. In collaboration with a faculty advisor, students can plan a program of study that will prepare them to transfer to a baccalaureate program. Areas of study available:

- Biology, Chemistry, Environmental Studies, Environmental Science, and General Science — Mathematics and Natural Science Department.
- Geology and Physics — Physical Sciences, Engineering and Applied Technologies Department.
- Physical Education and Sports Medicine — Physical Education and Athletics Department.

General requirements:

- At least six of these 30 credits shall be from Language and Humanities, to include EN101 and EN102.
- At least six of these 30 credits shall be from the following social science areas: BM101 Survey of Economics, PY101 Introduction to General Psychology, SO101 Introduction to Sociology, AN101 Biological Anthropology, or PS101 American National Government.
- At least six of these 30 credits shall be in mathematics, at a level approved by the Department administering the program.
- At least eight of these 30 credits shall be in laboratory science, at a level approved by the Department administering the program.
- The remaining four of these 30 credits shall be selected from either mathematics or science, at a level approved by the Department administering the program.

See program of study listed for additional credits to meet student objectives. Students must meet with an advisor to develop a comprehensive plan for meeting graduation requirements.

Student Options:

Biology: 63 credits

This option prepares students to transfer to bachelor of science degree programs at any SUNY four-year college and many private institutions. This program will satisfy a variety of transfer requirements for Biology as well as Pre-Medical, Pre-Dental, Pre-Veterinary, and Pre-Pharmacy programs.

- First Semester: EN101, BI141, MA150, CH141, ED100, PE Elective
- Second Semester: EN102, BI142, MA151, CH142, PE Elective
- Third Semester: CH247, MA152, HI101, or elective (a), Social Science Elective (b), PE elective
- Fourth Semester: CH248, Natural Science Elective (c), History elective, Social Science Elective (b), PE Elective

(a) History electives: HI102, HI111, or HI112

(b) Social Science electives: PY101, SO101, AN101, PS101, or BM101

(c) Natural Science electives: BI105, WE101, BI151, or BI201

Chemistry: 60 - 62 Credits

Graduates with an area of study in Chemistry have successfully transferred to undergraduate chemistry programs at many colleges. MVCC also has articulation agreements with a range of institutions. Please contact the Mathematics and Natural Sciences Department for more information regarding articulation agreements. Two years of high school mathematics, or the equivalent, and one year of laboratory science are required. A third high school

Total Credit Hours: 63 - 64

First semester

ED100 College Seminar	1
EN101 English 1: Composition (a)	3
Core GE Social Science (b)	3
Mathematics Elective (c)	3
Elective	4
Elective	3
Physical Education Elective (PM Elective for Physical Education & PE172 for Sports Medicine)	.5

Second semester

EN102 English 2: Ideas & Values in Literature (a)	3
Core GE Social Science (b)	3
Mathematics Elective (c)	3
Elective	3
Elective	3
Physical Education Elective (PM Elective for Physical Education & PE172 for Sports Medicine)	.5

Third semester

Elective	3
HI101 History of Civilization 1	3
Science Elective (d)	4
Elective	3
Physical Education Elective (PM Elective for Physical Education & PE172 for Sports Medicine)	.5

Fourth semester

HI102 History of Civilization 2	3
Humanities Elective	3
Science Elective (d)	4
Elective	3
Elective	3
Physical Education Elective (PM Elective for Physical Education & PE172 for Sports Medicine)	.5

math course, or its equivalent, biology, chemistry, and physics are recommended.

- First Semester: ED100, CH141, EN101, MA151 (a) Social Science Elective (b), PE Elective
- Second Semester: CH142, EN102, MA152, PH361, PE Elective
- Third Semester: CH247, PH262, Restricted Electives (c), PE Elective
- Fourth Semester: CH248, HI101, Restrictive Elective (c), 248, Restricted Elective (c), PE Elective

(a) A mathematics course lower than MA151 will not count for graduation within the program; moreover, a student needing to take one or more of those courses may not be able to graduate within two years.

(b) Social Science Restricted electives: AN101, GE101, PS101, PY101, or SO101.

(c) Restricted Electives: BI141, BI142, BI201, CH246, ES151, GL101, MA253, MA260, or PH265.

Liberal Arts & Sciences Mathematics & Science (continued)

Associate in Science Degree

General requirements:

- A. At least six of these 30 credits shall be from Language and Humanities, to include EN101 and EN102.
- B. At least six of these 30 credits shall be from the following social science areas: BM101 Survey of Economics, PY101 Introduction to General Psychology, SO101 Introduction to Sociology, AN101 Biological Anthropology, or PS101 American National Government.
- C. At least six of these 30 credits shall be in mathematics, at a level approved by the Department administering the program.
- D. At least eight of these 30 credits shall be in laboratory science, at a level approved by the Department administering the program.
- E. The remaining four of these 30 credits shall be selected from either mathematics or science, at a level approved by the Department administering the program.

See program of study listed for additional credits to meet student objectives. Students must meet with an advisor to develop a comprehensive plan for meeting graduation requirements.

Student Options:

Biology: 63 credits

This option prepares students to transfer to bachelor of science degree programs at any SUNY four-year college and many private institutions. This program will satisfy a variety of transfer requirements for Biology as well as Pre-Medical, Pre-Dental, Pre-Veterinary, and Pre-Pharmacy programs.

- First Semester: EN101, BI141, MA150, CH141, ED100, PE Elective
 - Second Semester: EN102, BI142, MA151, CH142, PE Elective
 - Third Semester: CH247, MA152, HI101, or elective (a), Social Science Elective (b), PE elective
 - Fourth Semester: CH248, Natural Science Elective (c), History elective, Social Science Elective (b), PE Elective
- (a) History electives: HI102, HI111, or HI112
(b) Social Science electives: PY101, SO101, AN101, PS101, or BM101
(c) Natural Science electives: BI105, WE101, BI151, or BI201

Chemistry: 60 - 62 Credits

Graduates with an area of study in Chemistry have successfully transferred to undergraduate chemistry programs at many colleges. MVCC also has articulation agreements with a range of institutions. Please contact the Physical Sciences, Engineering & Applied Technologies Department for more information regarding articulation agreements. Two years of high school mathematics, or the equivalent, and one year of laboratory science are required. A third high school math course, or its equivalent, biology, chemistry, and physics are recommended.

- First Semester: ED100, CH141, EN101, MA151 (a) Social Science Elective (b), PE Elective
 - Second Semester: CH142, EN102, MA152, PH361, PE Elective
 - Third Semester: CH247, PH262, Restricted Electives (c), PE Elective
 - Fourth Semester: CH248, HI101, Restrictive Elective (c), 248, Restricted Elective (c), PE Elective
- (a) A mathematics course lower than MA151 will not count for graduation within the program; moreover, a student needing to take one or more of those courses may not be able to graduate within two years.
(b) Social Science Restricted electives: AN101, GE101, PS101,

PY101, or SO101.

- (c) Restricted Electives: BI141, BI142, BI201, CH246, ES151, GL101, MA253, MA260, or PH265.

Environmental Studies - Social Science: 62 credits

The Environmental Studies option provides students with a broad background in science, math, social sciences, and the humanities. Students develop the ability to understand concepts related to the environment and the human impact on the environment. Students will learn approaches to solve practical problems and find better ways of meeting complex environmental issues relating to public policy, government, and non-profit work. The Environmental Studies option meets the requirements of the SUNY Environmental Studies (Social Science Track) Transfer Pathway. It is designed to prepare students for transfer to a related bachelor's degree program in the social sciences. Upon successful completion of this coursework, a student should be well-positioned to finish their degree with an additional two years of study at a SUNY transfer college.

- First Semester: BI141, BI105, EN101, MA115, ED100, PE Elective
 - Second Semester: BI142, CH141, MA125, EN102, PE Elective
 - Third Semester: Restricted Elective (a), MA110, HI101, EN150, SO101, PE Elective
 - Fourth Semester: BI202, Business Management Elective (b), PS101, General Education Elective (c), PE Elective
- (a) Restricted elective should be selected from the following: CH142, GL 101, WE 101, or MA 150.
(b) Business Management Elective should be selected from the following: BM 101, BM 110, or BM 115.
(c) General Education elective should be chosen from: AN102, EN197, GE101, HI102, HI103, HI104, HI111, HI112, FL101, HU183, HU187, HU188, HU187, HU188, HU204, HU227, HU228, HU295, SO207, TH193, TH195, or any foreign language.

Environmental Science – Biophysical: 64 Credits

The Environmental Science option is a scientifically and mathematically rigorous program that provides a strong foundation in the sciences and introduces students to the interdisciplinary breadth of environmental science through a selection of core courses dealing with the geographical, physical, social, and living environments. It is designed for students who want to focus on scientific careers in fields such as conservation biology; climate and the atmosphere; pollution prevention and abatement; aquatic environments; or ecosystem protection, restoration, and management. This program requires significant field work, lab work, and other data-oriented work. The Environmental Science option is a transfer program that meets the requirements of the SUNY Environmental Science (Biophysical Track) Transfer Pathway. Upon successful completion of this coursework, a student should be well-positioned to finish their degree with an additional two years of study at another SUNY transfer college.

- First Semester: ED100, BI141, MA125, CH141, EN101, PE Elective
 - Second Semester: EN102, BI142, CH142, MA150, PE Elective
 - Third Semester: MA151, HI101, BI105, Business Management Elective (e), PE Elective
 - Fourth Semester: BI202, MA110, PH261, General Education Elective (f), PE Elective
- (a) It is recommended students coming into this program have had at least two years of high school mathematics, or the

Liberal Arts & Sciences Mathematics & Science (continued)

Associate in Science Degree

equivalent, and two years of laboratory science. High school biology, chemistry, and physics are recommended.

- (b) A mathematics course lower than MA125 will not count for graduation within the program; moreover, a student needing to take one or more of those courses may not be able to graduate within two years.
- (c) Students with math placement scores higher than MA125 may substitute a higher math for MA125.
- (d) Social Science Elective should be selected from the following: PY101, SO101, AN101, or AN102.
- (e) Business Management Elective should be selected from the following: BM101, BM110, or BM115.
- (f) General Education Elective should be chosen from: EN197, GE101, HI102, HI103, HI104, HI111, HI112, FL101, HU183, HU187, HU188, HU187, HU188, HU204, HU227, HU228, HU295, SO207, TH193, TH195, or any foreign language.

General Science: 62 - 64 Credits

This curriculum is designed to serve the interests of those students with goals and strengths in the mathematics and science fields while broadening their knowledge in allied disciplines and clarifying career objectives. In collaboration with a faculty advisor, students can plan a program of study that will prepare them to transfer to a baccalaureate program. Those areas of study available:

- First Semester: ED100, BI141, EN101, MA125, HI101, PE Elective
 - Second Semester: EN102, BI142, CH141, Mathematics Elective (b), PE Elective
 - Third Semester: CH142, Natural Science Elective (a), Natural Science Elective (a), Social Science Elective (d), PE Elective
 - Fourth Semester: IS101, History Elective (c), Natural Science Elective (a), Social Science Elective (d), Restricted Elective (e), PE Elective
- (a) Natural Science Electives: BI105, BI201, BI202, BI216, BI217, CH247, CH248, GL101, GL102, PH141, PH142, PH151, PH152, or WE101.
 - (b) Mathematics Electives: MA110 or MA150.
 - (c) History Electives: HI111 or HI112.
 - (d) Social Science Electives: AN101, BM101, PS101, PY101, SO101, or GE101.
 - (e) Restricted Electives: EN150, EN153 or MA115.

Geology: 61 Credits

This option prepares students for baccalaureate programs in Geology and related Earth Sciences.

- First Semester: ED100, EN101, BI141, MA150, HI101, PE Elective
 - Second Semester: EN102, BI142, MA151, CH141, PE Elective
 - Third Semester: CH142, GL101, PH151, Social Science Elective (a), PE Elective
 - Fourth Semester: GL102, PH152, History Elective (b), Social Science Elective, PE Elective
- (a) Social Science Electives: AN101, BM101, PS101, PY101, or SO101.
 - (b) History Electives: HI102, HI111, or HI112.

Mathematics: 63 Credits

Graduates with a concentration of studies in mathematics have successfully transferred to undergraduate engineering, computer

science, mathematics education, statistics, and mathematics programs at many colleges. MVCC also has articulation agreements with a range of institutions. Please contact the Physical Sciences, Engineering & Applied Technologies Department for more information regarding articulation agreements. Two years of high school mathematics, or the equivalent, and one year of laboratory science are required. Two years of a foreign language recommended.

- First Semester: ED100, EN101, MA150 (a), Social Science Elective (b), Sequence Elective (c), HI101 or HI102, PE Elective
 - Second Semester: EN102, MA151, Social Science Elective (b), Sequence Elective 2 (c), HI101 or HI102, PE Elective
 - Third Semester: MA152, MA275, Natural Science Elective (d), Restricted Elective (e), PE Elective
 - Fourth Semester: MA253, MA280, Natural Science Elective (d), Restricted Elective (e), PE Elective
- (a) The first mathematics course is determined by placement test results. A lower placement test score would place a student at the proper point of the sequence: MA089, MA091 (or equivalent), or MA115 or MA125. A mathematics course lower than MA150 will not count for graduation within the program; moreover, a student needing to take one or more of those courses may not be able to graduate within two years. Students placing into or having credit for MA151 need to take MA260 (three credit hours) in lieu of MA150.
 - (b) Students should select from AN101, BM101, PS101, PY101, or SO101.
 - (c) Students should choose a sequence from CI110 & CI130, or two semesters of a foreign language
 - (d) Students should choose a sequence from BI141 & BI142, CH141 & CH142, GL101 & GL102, PH141 & PH142, PH151 & PH152, or PH261 & PH262. Physics sequence recommended.
 - (e) Six hours of restricted electives, chosen upon advisement, provide the opportunity for the student to pursue courses that are related to career objectives or transfer requirements.

Physical Education: 64 Credits

The Physical Education and Recreation option is designed for students intending to transfer to four-year colleges as physical education majors after graduation from MVCC. Two high school mathematics courses or the equivalent, and one year of a laboratory science are required. A third high school math course or its equivalent, biology, chemistry and physics are recommended. Total credit hours include a minimum of 58 credit hours from academic areas and a minimum of four credit hours of Physical Education activity courses. Academic courses are drawn from the following offerings with appropriate electives chosen on advisement.

- First Semester: ED100, EN101, MA115, SO101, American History Elective, PM Elective, PM Elective
 - Second Semester: BI141, EN 102, MA110, Sociology Elective, PM Elective, PM Elective
 - Third Semester: Humanities Elective (d), BI216, PY101, HI101, Science Elective (a), or Social Science Elective (b), or Coaching Elective (c), PM Elective, PM Elective
 - Fourth Semester: Humanities Elective (d), BI217, Psychology Elective, HI102, PM Elective, PM Elective
- (a) Science Electives: CH141, GL101, PH151, PH141
 - (b) Social Science Electives: BM101, BM110, BM115, PS101
 - (c) Coaching Electives: CO231, CO232
 - (d) Humanities Elective: Fourth semester Humanities Elective must meet SUNY General Education Requirements.

Liberal Arts & Sciences Mathematics & Science (continued)

Associate in Science Degree

Physics: 63 Credits

Graduates with an area of study in Physics have successfully transferred to undergraduate physics programs at many colleges. Two years of mathematics or the equivalent, and one year of laboratory science are required. Courses in chemistry and physics are recommended. For students seeking a career in physics, the following specific courses should be taken to prepare for the upper division courses.

- First Semester: ED100, CH141, CI140, EN101, MA151, PE Elective
 - Second Semester: CH142, EN102, MA152, PH261, PE Elective
 - Third Semester: ES291, MA253, PH262, Social Science Restricted Elective (a), PE Elective
 - Fourth Semester: HI101, MA260, MA280, PH265, PH270, PE Elective
- (a) Social Science Restricted Electives: AN101, PS101, PY101, or SO101

Sports Medicine: 64 Credits

This option is designed for students intending to transfer to a four-year college as Sports Medicine/Athletic Trainer majors after graduation from MVCC.

- First semester: ED100, CO232, EN101, MA115, PY101, Natural Science Elective (a)
- Second semester: AT101, EN102, MA110, Natural Science Elective (a), Psychology Elective (b)
- Third semester: AT201, EN150, HI101, PE172, Natural Science Elective (a), Restricted Elective (d)
- Fourth semester: AT202, BI151, HI102, Humanities Elective (c), Natural Science Elective (a)

Sequences may be selected from the following:

- (a) Natural Science Electives: BI141 General Biology 1, BI142 General Biology 2, BI216 Anatomy & Physiology 1, BI217 Anatomy & Physiology 2, CH141 General Chemistry 1, CH142 General Chemistry 2, PH151 Physics 1, PH152 Physics 2.
- (b) Psychology Electives: PY201 Learning: Behavioral Analysis, PY202 Childhood & Adolescence, PY203 Abnormal Psychology, PY204 Social Psychology, PY205 Adulthood and Aging, PY206 Theories of Personality, PY207 Life-Span Developmental Psychology, PY208 Death, Dying & Bereavement, PY212 Adolescent Psychology.
- (c) Humanities Electives: Fourth semester Humanities Elective must meet SUNY General Education Requirements.
- (d) Restricted Electives: HI111 American History (1492-1850), HI112 American History (1850-present), SO101 Introduction to Sociology.

Liberal Arts & Sciences: Psychology

Associate in Science Degree

This program provides students who plan to transfer to a bachelor-level program with a comprehensive foundation of psychology courses, as well as a liberal arts background. Students interested in advanced degrees in clinical psychology or in academic research in psychology will find this program a good way to begin exploring the field while meeting general education requirements for transfer to four-year colleges.

Following Department guidelines and with guidance from the academic advisor, the student has flexibility the second year to design a program that meets his/her individual needs.

- (a) Foreign Language Elective (3 hours): American Sign Language does not count as a foreign language. Students exempt from this requirement are those with other appropriate foreign language experience, with permission of the Associate Dean of the Social Sciences & Public Services Department. Students exempt from the foreign language courses may select another General Education course.
- (b) Humanities Electives (3 hours): EN148 Modern Short Story, EN198 Contemporary Poetry, EN248 American Literature I, EN249 American Literature II, EN255 World Literature I, EN256 World Literature II, EN265 African-American Literature, EN271 British Literature I, EN272 British Literature II, EN280 Dramatic Literature: Classic Theater, EN281 Dramatic Literature: Modern Drama, HU186 Music Appreciation, HU204 History of Art I, HU205 History of Art II.
- (c) Arts Elective (3 hours): HU183 Fundamentals of Music Theory 1, HU184 Fundamentals of Music Theory 2, HU187 Art Appreciation, HU188 Film Appreciation, HU210 The Arts and the Human Condition, HU292 Topics in Humanities.
- (d) General Education Elective (3 hours): Must be approved by advisor. Strongly recommend a Western Civilization course. (See General Education Table.)
- (e) American History Elective (3 hours): HI111 American History 1492-1850, HI112 American History 1850-Present.
- (f) Psychology Elective (3 hours): PY202 Childhood and Adolescence, PY204 Social Psychology, PY205 Adulthood & Aging, PY206 Theories of Personality, PY208 Death, Dying & Bereavement, PY209 Forensic Psychology, PY212 Adolescent Psychology, or PY213 Human Sexuality.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
EN101 English 1: Composition	3
BI103 Human Life Science	4
PY101 Introduction to Psychology	3
HS101 Introduction to Human Services	3
SO101 Introduction to Sociology	3
Physical Education	.5

Second Semester

EN102 English 2: Ideas & Values in Literature	3
MA110 Elementary Statistics	3
HS241 Chemical Dependencies	3
PY203 Abnormal Psychology	3
PY210 Evaluation, Research & Measurement in Behavioral Science	3
Physical Education	.5

Third Semester

IS101 Computers and Society	3
Foreign Language Elective (a)	3
HI101 History of Civilization 1	3
PY201 Learning: Behavior Analysis	3
PY207 Life-Span Developmental Psychology	3
Physical Education	.5

Fourth Semester

Arts Elective (c)	3
General Education Elective (d)	3
Humanities Elective (b)	3
American History Elective (e)	3
Psychology Elective (f)	3
Physical Education	.5

Liberal Arts & Sciences: Public Policy

Associate in Science Degree

This program prepares students to respond to the changes in government and their communities. It provides the skills to understand public policymaking. Students choose electives from a broad range of disciplines in the field of policymaking. Students completing this program are prepared to transfer to four-year programs in specialized interest areas, or find employment in state, local, and federal government, non-profit agencies, business, law, or management.

(a) Electives: CJ217, HS231, CJ202, AH104.

(b) Any foreign language, including sign language, HU187, HU280, HU290, HU291, HU295, or HU296.

(c) Electives: PH112, PH113, PH114, PH131, PH141, PH142, PH151, PH152 or MA108, MA115, MA121, or MA150.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
EN101 English 1: Composition	3
IS101 Computers and Society	3
PS101 American National Government	3
PS102 Introduction to Public Policy	3
SO101 Introduction to Sociology	3
Physical Education	.5

Second Semester

CJ106 Ethics in Criminal Justice	3
EN102 English 2: Ideas & Values in Literature	3
MA110 Elementary Statistics	3
PS203 State & Local Government	3
Core GE Natural Science	4
Physical Education	.5

Third Semester

AC115 Financial Accounting	3
BM101 Survey of Economics	3
PY101 Introduction to Psychology	3
Restricted Elective (a)	3
Restricted Elective (b)	3
Physical Education	.5

Fourth Semester

HI111 American History 1492-1850	3
OR	
HI112 American History 1850 to Present	3
PS206 Grant Writing	3
SS218 Methods of Research	3
OR	
PY210 Evaluation, Research & Measurements	3
Restricted Elective	3
Restricted Mathematics or Natural Science Elective (c)	3
Physical Education	.5

Liberal Arts & Sciences: Theater

Associate in Arts Degree

This program locates itself between the general Liberal Arts & Sciences program and a specialized theater program. It provides students the first two years of preparation for a transfer to a drama (literature) or theater (acting or technical theater) program while maintaining a liberal arts base. It uses the College's state-of-the-art, 450-seat theater, which serves as a classroom, lecture hall, technical laboratory, and a venue for student, faculty, and community theater work. Students experience the ensemble nature of the theater production process, and are introduced to the components: actor, director, designer, etc. They examine dramatic texts as literature and scripts for performance, develop an understanding of the theory and practice of acting, develop an awareness of the basics of technical theater, and participate in activities as part of student, faculty, and community theater projects.

- a) Mathematics courses must be chosen from MA108, MA110, MA131, or courses higher than MA131. The two-semester requirement may also be fulfilled by any one of the above courses, and any one course beyond the 131 level, or by any two beyond MA131.
- (b) Foreign language consists of a six-hour sequence within the same language. Students who have completed four years of the same language in high school, have completed three years of the same language in high school with a grade of A or over 90%, or those with other appropriate language experience are exempt from this requirement. For those who are not exempt from the requirement, placement in language and level is determined at the beginning of the academic year. For those who are not exempt from the requirement, placement in language and level is determined at the beginning of the academic year. Those who are exempt must replace language credits with six credits in approved electives.
- (c) Social Sciences must be chosen from PY101, SO101, BM101, PS101 or AN101.
- (d) Theater electives may be chosen from: EN152 Oral Interpretation, TH195 Musical Theater, EN282 Contemporary Drama, TH283 Topics in Theater, and TH196 Theater Practicum. Some electives have prerequisites. Theater practicum must be approved by the appropriate theater faculty. Theater Practicum can be taken for a maximum of three credits to complete degree requirements.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
EN101 English 1: Composition	3
MA Mathematics (a)	3
HU191 Acting 1: Principles of Acting	3
TH193 Introduction to the Theater	3
Foreign Language (b)	3
Physical Education	.5

Second Semester

EN102 English 2: Ideas & Values in Literature	3
MA Mathematics (a)	3
TH194 Technical Theater	3
Foreign Language (b)	3
Social Science (c)	3
HU186 Music Appreciation	3
OR	
HU187 Art Appreciation	3
Physical Education	.5

Third Semester

HI101 History of Civilization 1	3
OR	
HU204 History of Art 1	3
Core GE Natural Science	4
EN280 Dramatic Literature: Classic Theater	3
HU192 Acting 2: Character & Scene Study	3
Theater Elective (d)	3
Physical Education	.5

Fourth Semester

HI102 History of Civilization 2	3
OR	
HU205 History of Art 2	3
EN281 Dramatic Literature: Modern Drama	3
Theater Elective (d)	3
Social Science (c)	3
Physical Education	.5

Mechanical Engineering Technology

Associate in Applied Science Degree

This program prepares students to fill mechanical engineering technician (or related) career fields. It also lays a foundation for students who plan on pursuing a four-year mechanical technology curriculum. The program includes topics in technical computing, mechanical analysis, manufacturing systems, and material testing. The curriculum is accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org. Prospective students should take three years of rigorous college preparatory mathematics (four are recommended), including algebra, geometry, and trigonometry. One year of high school, laboratory science is required (chemistry and physics are recommended). The Computer-Aided Drafting certificate or AOS Degree may serve as preparation for this program; check with the Physical Sciences, Engineering & Applied Technologies Department for an advisor.

- (a) CH131 College Chemistry may be substituted for CH141 General Chemistry 1.
- (b) Social Science Restricted electives: AN101 Biological Anthropology, BM101 Survey of Economics, PY101 Introduction to General Psychology, and SO101 Introduction to Sociology.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
EN101 English 1: Composition	3
MA121 Fundamentals of College Mathematics 1	4
MT114 Manufacturing Processes	3
MT140 Drafting and Design Using AutoCAD	3
MT155 Introduction to Solid Modeling	3
Physical Education	.5

Second Semester

EN102 English 2: Ideas & Values in Literature	3
MA122 Fundamentals of College Mathematics 2	4
MT126 Statics: Mechanical	3
MT141 Machining Fundamentals	4
Physical Education	.5

Third Semester

CH141 General Chemistry 1	4
MT207 Computer-Aided Manufacturing (CAM)	3
MT230 Strength of Materials - Mechanical	4
MT231 Lean Six Sigma	4
Physical Education	.5

Fourth Semester

MT203 Design of Machine Elements	3
MT204 Automatic Controls	3
MT209 Materials Science	3
MT252 Fluid Mechanics	4
Social Science Restricted Electives (b)	3
Physical Education	.5

Mechanical Technology: Aircraft Maintenance

Associate in Applied Science Degree

This program serves those individuals who have begun careers in aviation maintenance by completing the 1,905 class hours of instruction in the Airframe and Powerplant Certificate, or an accredited school of aeronautics, and have received their Federal Aviation Administration (FAA) certification. The College equates such instruction and certification to 42 credit hours of transfer credit and provides an additional 28-29 credit hours of coursework leading to an Associate in Applied Science degree.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
EN101 English 1: Composition	3
MA115 Intermediate Mathematics	4
PY101 Introduction to Psychology	3
SO101 Introduction to Sociology	3
Physical Education	1

Second Semester

EN102 English 2: Ideas & Values in Literature	3
MA121 Fundamentals of College Mathematics 1	4
MT225 Applied Mechanics & Strength of Materials	4
PH112 Science of Light	
OR	
PH141 Astronomy: The Solar System	4
Physical Education	1
FAA Certification required for graduation	33

Nursing (Undergraduate)

Associate in Applied Science Degree

This program is registered with the New York State Department of Education, Office of Professions, and accredited by the Accreditation Commission for Education in Nursing (ACEN). It is for people interested in performing the duties associated with being a Registered Nurse. Graduates are prepared as beginning practitioners in nursing and are eligible for the New York State licensing examination. This program is approved by the New York State Board of Nursing and Accreditation Commission for Education in Nursing.

- All courses in the Associate Degree Nursing program have content and clinical laboratory experiences.
- All students are required to meet the prerequisites prior to taking the first nursing courses. Students must have a program GPA of 2.8 or greater to be considered for admission into Nursing 1.
- Students must provide their own transportation to and from the health care agency for clinical experience.
- Professional liability insurance, available through the College, is required and payable at registration.
- Proof of current American Heart Association CPR certification for Healthcare Providers must be on file in the Health Center prior to beginning clinical experiences. This certification must be kept current throughout the program.
- Grades of 75 or higher are required in each nursing course for advancement to the next nursing course.
- Grades of 70 or higher are required in Anatomy and Physiology, and Microbiology. To enhance success in the Nursing curriculum, it is recommended that Human Anatomy & Physiology 1 and 2 be taken at MVCC.
- A grade of "C" or higher is required in all Nursing, liberal arts, and science courses.
- Students must successfully complete BI216 Human Anatomy & Physiology 1 (with a 70 or greater) prior to Nursing 2. Students must successfully complete BI217 Human Anatomy & Physiology 2 (with a 70 or greater) to be eligible to enter Nursing 3.
- Effective Spring 2017: Dismissed students will be ineligible to return to the Nursing program.
- If the student achieves less than a C grade in Anatomy and Physiology, or Microbiology, he/she will be dismissed from the program.
- Credit by exam is not an option for students who have been unsuccessful in any Nursing, Anatomy and Physiology, or Microbiology course.
- Students must have a 2.0 GPA to be eligible to graduate from this program.
- All Nursing students enrolled in Nursing 4 (NU202) are required to take the Diagnostic Readiness Test and the designated NCLEX-RN State Board Review Class in order to be eligible to graduate from the program.
- Graduation from the Nursing program does not guarantee R.N. licensure by the Board of Nurse Registration. If applicant has charges pending or has been convicted of felony and/or misdemeanor, a license may be delayed or denied by the New York State Board of Nursing.

Transfer or Returning Students

Students who have been out of the Nursing sequence for one or more semesters or students returning to the Nursing sequence must:

Total Credit Hours: 62-63

First Semester

ED100 College Seminar	1
NU101 Nursing 1	5
BI216 Human Anatomy & Physiology 1	4
EN101 English 1: Composition	3
PY101 Introduction to Psychology	3
NU111 Pharmacotherapeutics 1	1

Second Semester

NU102 Nursing 2A	4
NU103 Nursing 2B	4
BI217 Human Anatomy & Physiology 2	4
EN102 English 2: Ideas & Values in Literature	3
PY207 Life Span Developmental Psychology	3

Third Semester

NU201 Nursing 3	10
BI201 Microbiology	4

Fourth Semester

NU202 Nursing 4	10
MA108 Concepts in Mathematics	3
OR	
MA110 Elementary Statistics	3
OR	
MA115 Intermediate Mathematics	4

- Make an appointment with the Associate Dean. Call 315-792-5375.
- Meet all prerequisites as listed.
- Pass the applicable Proficiency Skill Examination with 100% accuracy.
- Pass the Dosage Calculation Examination with 80% accuracy.

Prerequisites to Enrolling in Nursing-Specific Courses:

1. Appropriate mathematics placement test result.
2. High school chemistry with lab or its equivalent. (Regents scores of 70 or high school scores of 70 within 10 years of admission to first Nursing course.)
3. High school biology or its equivalent is recommended.
4. Proof of current American Heart Association CPR for Healthcare Providers or PE171 CPR certification must be on file in the Health Center, ACC104.
5. Nursing Health Physical Form completed and on file by July 1, for Fall admission, and Dec. 1 for Spring admission to NU102/103. (Updated yearly at student's expense.) Prerequisite courses can be completed at MVCC.
6. Prerequisites taken at MVCC or other institutions must have a final grade of C or better within five years of starting a Nursing course.
7. A letter of intent is mailed or emailed to students meeting the prerequisite requirements in January each year. The student must return the letter of intent to request a place for NU101 Nursing 1 for the subsequent Fall semester. If a response is not received, the seat will be given to the next qualified candidate. Returning the letter does not guarantee a place in NU101 Nursing 1.

Nutrition and Dietetics

Associate in Science Degree

Nutrition and Dietetics is a transfer program that meets the requirements of the SUNY Dietetics Transfer Pathway. Students who complete this program will be well-positioned to finish the baccalaureate degree with two years of additional study at a SUNY transfer institution and to pursue careers in the fields of dietetics and nutritional care. Additional transfer opportunities are available on the successful completion of this pathway.

- (a) Social Science Elective should be selected from the following:
PY101 Introduction to Psychology or SO101 Introduction to Sociology.
- (b) Natural Science Elective should be selected from the following:
CH142 General Chemistry 2 or BI201 Microbiology.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
BI151 Nutrition & Dietetics 1	3
BI216 Human Anatomy & Physiology 1	4
EN101 English 1: Composition	3
BI141 General Biology	4
Physical Education	.5

Second Semester

BI251 Nutrition Across Lifespan	3
BI217 Human Anatomy & Physiology 2	4
EN102 English 2: Ideas & Values in Literature	3
FS150 Safety & Sanitation	3
MA125 College Algebra and Trig	4
Physical Education	.5

Third Semester

AC110 Principles of Accounting	3
CH141 General Chemistry 1	4
FS111 Food Preparation 1	4
MA110 Elementary Statistics	3
Social Science Elective (a)	3
Physical Education	.5

Fourth Semester

Natural Science Elective (b)	4
HI101 History of Civilization	3
IS101 Computers and Society	3
FS131 Food, Beverage & Labor Cost Control	3
Physical Education	.5

Recreation and Leisure Services

Associate in Applied Science Degree

This program prepares students with the knowledge and skills necessary for success in entry-level positions in the field of recreation and leisure. Graduates may find employment in federal, state, and local agencies such as community centers, a Family Y, recreation and parks, nursing homes, youth agencies, and fitness centers. Working with an advisor, students plan a program of study around their specific career interests. They may select Sports/Coaching, which provides individuals wishing to coach high school/athletic teams with the certification required by the New York State Education Department for Coaching Licensure. Students selecting Fitness/Wellness gain knowledge in the personal fitness components, training methods, diet and exercise, and the opportunity for Personal Trainer Certification. Therapeutic Recreation offers a unique career opportunity for individuals who value leisure experiences and enjoy working with people with disabilities, while the Generalist option allows students to broaden their career choices in the field of recreation and leisure. Students interested in Sports Facility Management are referred to the Business Management program with the option of Recreation Management. The Recreation and Leisure Services Program provides a foundation for students who choose to transfer to a baccalaureate degree program. All students are required to complete an internship experience under professional supervision in a setting specifically related to their career path. Students are encouraged to take those physical education classes directly related to their area of study.

One high school mathematics course or its equivalent is required.

Student Options

** Please consult with your advisor for proper course selection in these areas of study.

Available areas of study include:

Therapeutic Recreation

Restricted electives:

- ED211 Introduction to Exceptionalities
- HS232 Counseling Techniques
- PY203 Abnormal Psychology
- Developmental Psychology Elective: (ED205, PY205, PY207, PY212)

Generalist

Restricted electives chosen in consultation with advisor.

Sports/Coaching

Restricted electives:

- CO231 Philosophy, Principles & Organization of Athletics in Education
- CO232 Health Science Applied to Coaching
- CO233 Theory & Techniques of Coaching
- PY212 Adolescent Psychology
- BM Business Elective (BM120, BM150, BM251)

Fitness/Wellness

Restricted electives:

- BI151 Nutrition & Dietetics 1
- RE204 Fitness Programming & Management
- CO232 Health Science Applied to Coaching

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
EN101 English 1: Composition	3
IS101 Computers and Society	3
RE100 Introduction to Recreation	3
RE105 Recreation Leadership & Activity Development	3
Restricted Elective (b)	3
Physical Education	.5

Second Semester

EN102 English 2: Ideas & Values in Literature	3
Core GE Mathematics	3
BI105 Environmental Science	4
RE102 Recreation Safety & Liability	3
RE106 Outdoor Recreation and Leisure Activities	3
Physical Education	.5

Third Semester

EN150 Effective Speech	3
RE205 Recreation Internship 1	3
RE214 Therapeutic Recreation	3
PY101 Introduction to Psychology	3
Restricted Elective	3
PE170 First Aid	1

Fourth Semester

RE207 Recreation Internship 2	3
RE210 Recreation Program and Facility Management	3
SO101 Introduction to Sociology	3
Restricted Elective	3
Restricted Elective	3

- PE154 Fitness Center*
- PE172 Health and Wellness*

(*Taken in addition to two credits of Physical Education)

Transfer Emphasis

Restricted electives:

- AN102 Cultural Anthropology
- HI101 History of Civilization 1
- HI102 History of Civilization 2
- HI104 History of Western Civilization
- HI111 American History 1492-1850
- HI112 American History 1850-Present
- SO207 Sociology: Comparative Religion

Remotely Piloted Aircraft Systems

Associate in Applied Science Degree

This program is a curriculum of sequential technical courses encompassing the mechanical and electrical systems and operations found in remotely piloted aircraft systems. It offers students the opportunity to work as pilots, operators and/or mission team members of remotely piloted aircraft systems while fully understanding the operational and safety environments of the National Airspace System.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
ET112 Electronics of Remotely Piloted Aircraft System	3
CT265 Intro to Geographic Information Systems	3
MT140 Drafting & Design using AutoCAD	3
UA101 Introduction to Remotely Piloted Aircraft Systems	3
FB101 Introduction to Modeling and Fabrication	3
Physical Education	.5

Second Semester

CT263 Digital Mapping	3
UA120 Remotely Piloted Aircraft Systems Operational and Industrial Operations	3
EN101 English 1: Composition	3
UA 121 Mechanics of Remotely Piloted Aircraft Systems	3
MA110 Statistics	3
Physical Education	.5

Third Semester

GL101 Physical Geology	4
UA215 Remotely Piloted Aircraft Systems Mission Planning and Operations	3
EN102 English 2: Ideas and Values in Literature	3
IS101 Computers and Society	3
UA217 Remotely Piloted Aircraft Systems Operations 1	3
Physical Education	.5

Fourth Semester

UA221 Special Topics in Remotely Piloted Aircraft Systems	3
UA218 Remotely Piloted Aircraft Systems Operations 2	3
BM101 Survey of Economics	3
BM150 Principles of Entrepreneurship	3
GE101 Essentials of World Geography	3
Physical Education	.5

Respiratory Care

Associate in Applied Science Degree

This program provides the knowledge and skills necessary to perform patient assessment and to recommend, deliver, monitor, and evaluate therapeutic/diagnostic respiratory care services. The AAS degree involves four semesters of entry and advanced level coursework, plus a five-week summer session. AAS graduates are eligible to take a series of national examinations that lead to the Certified Respiratory Therapist (CRT) and the Registered Respiratory Therapist (RRT) credentials. This program is accredited by the Commission on Accreditation for Respiratory Care (CoARC). Graduates are eligible to take the Entry-Level, Written Registry and Clinical Simulation Exams sponsored by the National Board of Respiratory Care (NBRC). Graduation from the Respiratory Care program does not guarantee success on national credentialing exams. Students can participate in the AAS degree program on a part-time or full-time basis. Passing national credentialing exams is necessary to receive a license to practice as an entry-level and advance-level respiratory therapist in New York State. If an applicant has charges pending or a felony and/or misdemeanor, a license may be delayed or denied by the applicable state licensing board.

Students must have a minimum GPA of 2.5 to be considered for admission to the Respiratory Care program.

(a) A grade of "C" or higher is required in all RC prefix courses. To enhance success in the Respiratory Care curriculum, it is recommended that Human Anatomy & Physiology 1 and 2 be taken at MVCC.

- Students who have a grade of "D" in BI216 Human Anatomy & Physiology 1 and/or BI217 Human Anatomy & Physiology 2 may advance in the Respiratory Care Program course sequence but must repeat the Human Anatomy & Physiology courses and achieve grades of at least a "C" to be eligible to graduate from the Respiratory Care program.
- Students may repeat each Respiratory Care course once only.
- Respiratory Care students enrolled in a respiratory care (RC) course are permitted one withdrawal. A second withdrawal from any RC course will result in dismissal from the program and ineligibility to return to the Respiratory Care program.
- Students must have at least a 2.0 GPA to be eligible to graduate from this program.
- All students enrolled in the Respiratory Care program are required to take the three Self-Assessment Exams (SAEs) by Applied Measurement Professionals (cost \$30-\$70 each).
- All students enrolled in Clinical Practicum 3 (RC233) are required to take the Kettering National Review Seminar (approximate cost \$300).
- Clinical assignments include rotations that require travel within and outside the Utica/Rome area. Students must provide their own transportation to and from designated clinical sites (Utica/Rome area, Syracuse, and Cooperstown). A dress code exists and identified items (nametag, picture ID, stethoscope, watch, etc.) are required for clinical sessions.
- Professional liability insurance is required when enrolled in clinical courses. This insurance is purchased through the College when registering for clinical courses.
- Accident Insurance is required for all full-time and part-time enrolled in RC courses.
- Grades of "C" or higher are required for the following RC courses to be eligible to advance to the next sequential course: RC111, RC112, RC213, RC215; RC131, RC232, RC233, and

Total Credit Hours: 65

First Semester

ED100 College Seminar	1
EN101 English 1: Composition	3
BI216 Human Anatomy & Physiology 1	4
RC101 Basic Science for Respiratory Care	2
RC103 Cardiopulmonary Pharmacology	3
RC111 Principles of Respiratory Care 1	4

Second Semester

BI217 Human Anatomy & Physiology 2	4
RC112 Principles of Respiratory Care 2	4
RC115 Cardiopulmonary Diseases	3
RC131 Clinical Practicum 1	3

Third Semester

EN102 English 2: Ideas & Values in Literature	3
MA108 Concepts in Mathematics	3
OR	
MA110 Elementary Statistics	3
RC213 Principles of Respiratory Care 3	2
RC232 Clinical Practicum 2	6

Fourth Semester

PY101 Introduction to Psychology	3
OR	
SO101 Introduction to Sociology	3
BI209 Basic Pathophysiology	3
RC214 Acid Base Physiology	2
RC233 Clinical Practicum 3	6

Summer Semester

RC215 Principles of Respiratory Care 4	2
RC234 Clinical Practicum 4	4

RC234 (Principles of Respiratory Care and Clinical Practicum courses). Human Anatomy & Physiology 1 and 2 (BI216 and BI217) require a minimum grade of "C" for successful completion.

- Students who fail BI216 Human Anatomy & Physiology 1 and/or BI217 Human Anatomy & Physiology 2 may not advance in the Principles of Respiratory Care or Clinical Practicum courses until a passing grade is achieved.

Prerequisites for Respiratory Care courses:

- High school chemistry (with lab) or its equivalent with a minimum grade of 70, within 10 years.
- High school biology (with lab) is recommended.
- An appropriate Mathematics placement test result. The MVCC mathematics placement test is based on content presented in two high school mathematics courses or the equivalent.
- For students completing mathematics and chemistry prerequisites by taking equivalent courses, a minimum grade of "C" is required.
- Matriculation into the Respiratory Care Program.
- Personal meeting with program advisor prior to starting classes.
- Proof of current American Heart Association CPR course for Healthcare Providers certification, on file in the Health Center

Respiratory Care (continued)

Associate in Applied Science Degree

prior to starting clinical courses. CPR certification must be kept current throughout the program.

- A Respiratory Care Student Physical Health Form and proof of immunizations must be submitted prior to participation in clinical 104 courses, and updated annually at the student's expense. A PPD skin test is required yearly to screen for tuberculosis (TB) exposure. Exception: If a student has a positive PPD and/or has received a BCG vaccine, a chest X-ray is required every two years. A positive PPD with active TB symptomatology requires an immediate chest X-ray and medical evaluation. Most clinical affiliates require students to receive the Hepatitis B vaccination series or sign a declination statement as a condition for practicing in the facility.
- Shadowing a respiratory therapist at a health care facility is required prior to admission to the Respiratory Care Program.

Transfer or Returning Students

Prior to beginning or resuming Respiratory Care course work, transfer and returning students must:

- Meet with a Respiratory Care advisor. Call for an appointment at 315-792-5664.
- Submit proof of CPR certification to the Health Center.
- Submit a completed Respiratory Care Student Health Form to the Respiratory Care Clinical Coordinator.
- Pass applicable Proficiency Written and/or Skill Exam. A fee is charged for proficiency exams.
- Pass the Respiratory Care Medication Written Exam with 80% accuracy, which includes medication calculations.

School Facilities Management

Associate in Applied Science Degree

This program was developed at the request of, and in cooperation with, the New York State Association for Superintendents of School Buildings and Grounds (SBGA), which represent 600 schools and 30 BOCES Systems of Superintendents of Buildings and Grounds and all related personnel. The program prepares personnel for management positions in school buildings and grounds, and further enhances the skills of those already occupying such positions. Graduates will be effective and efficient in decision-making situations in facilities management, equipped to stay abreast of critical issues in their changing environment. Emphasis is on courses in Facilities Maintenance, Basic Education Law, Public Health and Safety in Schools, and New York State Public School Budgeting and Accounting.

- (a) Recommended Physical Education Course: PE172 Health & Wellness.
- (b) Restricted Electives: AN101 Biological Anthropology, EN150 Effective Speech, PS101 American National Government, PY101 Introduction to General Psychology, or SO101 Introduction to Sociology.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
EN101 English 1: Composition	3
ET115 Basic Electricity 1	3
FM101 NYS Public School Budget & Accounting	3
FM161 Facility Blueprints	3
HI101 History of Civilization 1	3
Physical Education (a)	.5

Second Semester

BM251 Organizational Behavior	3
CT242 Mechanical & Electrical Systems for Buildings	3
EN102 English 2: Ideas & Values in Literature	3
ET116 Basic Electricity 2	3
MA108 Concepts of Mathematics	3
Physical Education (a)	.5

Third Semester

BM101 Survey of Economics	3
BM252 Supervisory Management	3
FM105 Education Law for Facilities Management	3
FM180 Public Health & Safety in Schools	3
FM247 Introduction to Geothermal Heating & Cooling	3
Physical Education (a)	.5

Fourth Semester

FM244 Introduction to Green Building Technology	3
FM246 Introduction to Alternative Energy Systems	3
FM248 Introduction to Solar Voltaic Systems	3
WE101 Introduction to Weather Studies	4
OR	
GL101 Physical Geology	4
Restricted Elective (b)	3
Physical Education (a)	.5

Semiconductor Manufacturing Technology

Associate in Applied Science Degree

This program prepares students for careers in the semiconductor manufacturing industry. Typical technical titles include manufacturing and process technician, maintenance and installation/facility support technician, and quality control and metrology technician. Individuals working in this industry require a solid foundation in mathematics and physical sciences as well as technical knowledge and good problem solving and teamwork skills. Preparation for this program should include:

- Two high school mathematics courses, or the equivalent.
 - One laboratory science (physics and chemistry are recommended).
- (a) Core GE Social Science courses: AN101 Biological Anthropology, BM101 Survey of Economics, GE101 Essentials of World Geography, PS101 American National Government, PY101 Introduction to General Psychology, or SO101 Introduction to Sociology.
- (b) Restricted Electives: ET141 Programmable Logic Controllers, ET291 Fundamentals of Highly Automated Manufacturing Systems.

Total Credit Hours: 63-63.5

First Semester

ED100 College Seminar	1
EN101 English Composition	3
ET151 Circuits 1	4
ET153 Introduction to Electronics	2
ET154 Computer Programming	2
MA121 Fundamentals of College Mathematics 1	4
Physical Education	.5

Second Semester

EN102 English 2: Ideas & Values in Literature	3
ET152 Circuits 2	4
ET161 Linear Electronics	3
ET181 Digital Electronics	3
MA122 Fundamentals of College Mathematics 2	4
Physical Education	.5

Third Semester

CH141 General Chemistry 1	4
ET290 Fundamentals of High Vacuum Technology	3
MT204 Automatic Controls	3
MT231 Lean Six Sigma	4
Physical Education	.5

Fourth Semester

ET285 Motors & Controls	4
ET289 Introduction to Semiconductor Manufacturing	4
Core GE Social Science (a)	3
Restricted Elective (b)	3-3.5
Physical Education	.5

Web Development and Information Design

Associate in Applied Science Degree

This interdisciplinary program combines the strengths of the art, business, and computer science disciplines to provide the design, business, and technical skills needed to create interactive websites and to understand the theory and concepts of e-commerce. Emphasis is placed on the integration of the World Wide Web into the sales, marketing, and recruitment activities of organizations on local and global levels. The program is designed to prepare for employment in this growing field as well as to provide a foundation for further education.

- (a) PH112 Science of Light suggested.
- (b) Students will select from a number of electives offered from the Business, Cybersecurity & Computer Science Department, the Art Department, or the Humanities Department. BM294 Business Internship substitutes for two restricted electives.

Total Credit Hours: 64

First Semester

ED100 College Seminar	1
IS101 Computers and Society	3
EN101 English 1: Composition	3
BM120 Principles of Marketing	3
Core GE Social Science	3
AA107 Keyboarding-Personal	1
Physical Education	.5

Second Semester

IS120 Computer Operating Systems & Environments	3
IS125 Introduction to Multimedia Applications for Business	3
IS130 Desktop Publishing For Business	3
MA115 Intermediate Mathematics	4
EN102 English 2: Ideas & Values in Literature	3
Physical Education	.5

Third Semester

CI110 Principles of Programming	3
IS240 Networking Essentials	3
IS250 Web Development 1	3
EN153 Practical & Professional Written Communication	3
Core GE Natural Science (a)	4
Physical Education	.5

Fourth Semester

IS210 Database Design & Management	3
IS280 Web Development 2	3
PH115 Science of Multimedia	4
Restricted Elective (b)	3
Restricted Elective (b)	3
Physical Education	.5

Welding Technology

Associate in Occupational Studies Degree

This program prepares for actual welding work, or for positions as welding inspectors, welding laboratory technicians, or welding supply and equipment sales representatives. One high school mathematics course or its equivalent is recommended.

(a) Restricted Elective Option: Internship.

Total Credit Hours: 61-62

First Semester

ED100 College Seminar	1
EN110 Oral and Written Communication	3
MA105 Technical Mathematics 1	4
MT170 Oxy-Acetylene Welding Procedures	5
MT174 Electrical Arc Welding Procedures	5
Physical Education	.5

Second Semester

MT107 Basic Machine Shop Practice 1	3
MT270 Welding Procedures for MIG & TIG	5
MT272 Advanced Electric Arc Welding Procedures	5
Physical Education	.5

Third Semester

MA106 Technical Mathematics 2	4
MT140 Drafting and Design Using AutoCAD	3
MT271 Metallurgy for Welders	4
MT278 Welding Inspection & Quality Control Testing	4
Physical Education	.5

Fourth Semester

MT273 Welding Certification	5
MT276 Welders Ornamental Iron & Blacksmithing (a)	3-4
MT277 Welders Blueprint Reading & Metal Fabrication	5
Physical Education	.5

Certificate Programs

MVCC offers a series of certificate programs comprised of a sequence of credit courses leading to technical proficiency in specific fields. Students completing a certificate program may apply those credits toward the degree, providing all entrance requirements are met. Descriptions of courses from the following certificate programs are listed under the appropriate Department or subject area in this Catalog. Questions concerning any certificate should be referred to the Department responsible for administering the certificate.

Administrative Assistant

Certificate

This certificate is for individuals interested in obtaining entry-level office skills. It provides students with the necessary background in office applications to be able to draft, edit, produce, store, and retrieve documents. The certificate will also provide a background in business communications and office administration.

Administrative Assistant — 30 credit hours

First Semester

AA111 Keyboarding-Basic	3
AA208 Office Administration	3
BM129 Business Mathematics	3
EN101 English 1: Composition	3
IS101 Computers and Society	3

Second Semester

AA106 Business Communications	3
AA112 Keyboarding-Intermediate	3
IS102 Computer Applications & Concepts 2	3
IS130 Desktop Publishing for Business	3
EN150 Effective Speech	3

Airframe & Powerplant Technician

Certificate

This certificate, approved by the Federal Aviation Administration (FAA) under the Federal Aviation Regulations, FAR147, prepares students to pass the Federal tests required to receive a Federal Airframe and Powerplant Certificate.

Airframe & Powerplant Technician — 42 credit hours

First Semester

AV170 General Maintenance Practices	5
AV171 Materials and Processes	2
AV172 Basic Electricity	2
AV173 Airframe Systems 1	5

Second Semester

AV174 Aircraft Systems 2	3
AV175 Aircraft Structures 1	3
AV176 Aircraft Structures 2	3.5
AV177 Airframe Inspection & Welding	2
AV178 Introduction to Powerplant	2.5

Third Semester

AV179 Reciprocating Engines	2
AV180 Turbine Engines & Powerplant Systems	4
AV181 Powerplant Systems	6
AV182 Powerplant Inspection & Electrical Systems	2

Allied Health Care

Certificate

This certificate prepares students for positions as medical coders and billers in a variety of healthcare settings or in other environments (e.g., billing services, consulting companies, insurance companies, or in their own homes). Many of the courses can be applied toward an MVCC associate degree. The number of applicable credits will depend on the degree program in which students are interested. Prerequisites to entering the Certificate in Allied Health Care: High school biology or its equivalent is recommended and high school mathematics or its equivalent is recommended. All incoming students must meet with the program coordinator before entering the program. Professional liability and accident insurance, available through the College, is required and payable at registration. Each professional practice experience site dictates the physical examination and/or immunization requirements for their site. Students may have to travel outside the Utica/Rome area to complete the professional practice experience(s). All costs incurred while enrolled in this program are the students responsibility.

Allied Health Care — 32.5 credits

First Semester

AH104 Professional Standards in Health Care	3
BI110 Introduction to Human Anatomy and Physiology	3
HC100 Introduction to Health Care	3
IS101 Computers and Society	3
MR103 Medical Terminology	3

Second Semester

AH207 Medical Claims Management	4
MR104 CPT Procedural Coding	2
MR105 International Classification Systems	4
MR208 Pharmacology for Allied Health	3
PE171 CPR	.5

Summer Semester

AH217 Professional Practice Experience-MCM	4
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- High school chemistry with lab or its equivalent is recommended. An appropriate MVCC Mathematics placement test result.
- Medical Coding and Billing student may repeat one allied health (AH) course only. A second failure of an allied health course will result in dismissal from the Medical Coding and Billing program. Dismissed students will be ineligible to return to the Medical Coding and Billing program.
- Students enrolled in an allied health (AH) course are permitted one withdrawal. A second withdrawal from any allied health (AH) course will result in dismissal from the program and ineligibility to return to the program.
- Students must provide their own transportation to and from the assigned healthcare agency for the professional practice experience.
- Students may have to travel outside the Utica/Rome area to complete the professional practice experience.

- The Health Professions Department's Health/Physical Form must be completed and on file before the start of the professional practice experience.
- Proof of current American Heart Association Healthcare Providers CPR certification must be on file in the Health Center prior to beginning the professional practice experience. This certification must be kept current throughout the professional practice experience.
- Upon graduation students are eligible to take a national examination offered through the American Health Information Management Association (AHIMA). Upon passing, graduates become a Certified Coding Associate (CCA).
- Graduation from the Allied Health Care Certificate program does not guarantee success on national credentialing exams.
- If a student has legal charges pending or has been convicted of a felony and/or misdemeanor, certification may be delayed or denied by the applicable national certification board.

Transfer or Returning Students

(Students who have been out of the Allied Health Care course sequence for more than one semester.)

Prior to beginning or resuming Allied Health Care coursework, transfer and returning students must meet all prerequisites listed and meet with an Allied Health advisor. Make an appointment by calling 315-792-5499.

Carpentry and Masonry

Certificate

This certificate is for the individual wishing to enter the construction field. The combination of laboratory and lecture sessions provides the theory and the practical application of the construction trades. Graduates can find employment as carpenters or masons. Some graduates enter into their own businesses.

Carpentry and Masonry — 39-41 credit hours

First Semester

CB121 Masonry 1	5
CB122 Masonry 2	5
CB123 Masonry 3	5
CB126 Blueprint Reading	3

Second Semester

CB101 Carpentry 1	5
CB102 Carpentry 2	5
CB103 Carpentry 3	5
CB131 Construction Estimating	3
BM150 Principles of Entrepreneurship	3
OR	
CB104 Basic Woodworking	5

Chef Training

Certificate

This certificate develops areas of technical competence and preparation for trainee positions in food preparation in the hospitality industry. It meets the challenges of the food service industry involving food preparation and service through the use of sound business principles. Graduates have established a basis for a career in the food service industry, and are qualified for entry-level positions in the production or service areas of the hospitality industry.

Chef Training — 31 credit hours

First Semester

ED100 College Seminar	1
FS111 Food Preparation 1	4
FS121 Baking 1	4
FS150 Safety & Sanitation	3
IS101 Computers and Society	3

Second Semester

FS112 Food Preparation 2	3
FS131 Food, Beverage & Labor Cost Control	3
FS141 Purchasing for the Hospitality Industry	3
FS230 Food Service Practicum	3
FS233 Food Marketing	3

CNC Machinist Technology

Certificate

This is an assessment-based certificate where students are evaluated on their ability to demonstrate their knowledge and experience in all the topics of study. Topics include safety, blueprint reading, machining a work piece to drawing specification, use of computer aided design software to create drawings, programming, and set-up of CNC lathes and milling machines, proper tooling and work-holding methods, speeds and feeds, and metal cutting theory. After students complete the minimum skills required in their assessment books, they continue their training by developing their own advanced machining projects. These projects include design, manufacturing, and evaluation of their own product ideas. This certificate includes 840 hours of instruction and hands-on practical training. Students take one course at a time, and a new course starts about every 22 days. Students may enter the program at the beginning of every semester.

CNC Machinist Technology — 35 credit hours

First Semester

MT291 CNC/Machinist 1	5
MT292 CNC/Machinist 2	5
MT293 CNC/Machinist 3	5
MT294 CNC/Machinist 4	5

Second Semester

MT295 CNC/Machinist 5	5
MT296 CNC/Machinist 6	5
MT297 CNC/Machinist 7	5

Coaching

Certificate

This certificate provides those wishing to coach high school athletic teams with the background for working in an interscholastic setting. Central to it are the three coaching courses required by the New York State Education Department for Coaching Licensure.

Coaching — 26 credit hours

First Semester

CO231 Philosophy, Principles & Organization of Athletics in Education	3
PY101 Introduction to Psychology	3
EN101 English 1: Composition	3
BI141 General Biology 1	4
OR	
BI103 Human Life Science 1	4

Second Semester

CO232 Health Science Applied to Coaching	3
CO233 Theory & Techniques of Coaching	2
PY212 Adolescent Psychology	3
ED151 Prevention & Safety Issues for the Teacher	1
EN150 Effective Speech	3
PE111 Strength Training	.5
PE112 Speed Training	.5

Computer-Aided Drafting

Certificate

This program prepares students to be drafting technicians capable of working with engineers in the many facets of the technical drawing and solid modeling design fields. Emphasis is placed on architectural and mechanical drafting along with drafting courses for technical comprehension of the subject. Topics include conventional drafting methods and computer-aided drafting (CAD) systems such as AutoCAD, MicroStation, and Solidworks. This program balances computer software skills with design and drafting skills. The Computer-Aided Drafting Certificate constitutes the first year of the degree program without College Seminar and Physical Education. It also may be used as preparation for the Mechanical or Civil Engineering Technology degree programs. At least one high school mathematics course or its equivalent is recommended.

Computer-Aided Drafting — 30-32 credit hours

First Semester

CT265 Introduction to Geographic Information Systems	3
Math Elective (a)	3-4
MT140 Drafting and Design Using AutoCAD	3
MT155 Introduction to Solid Modeling	3
CT102 Engineering Drawing and MicroStation CAD	3
EN101 English 1: Composition	3
OR	
EN110 Oral and Written Communication	3

Second Semester

CT266 Capstone GIS	3
MT112 Architectural Drafting	3
MT251 Advanced AutoCAD	3
MT242 Advanced MicroStation CAD (c)	3
OR	
MT256 Advanced Solid Modeling (c)	3
OR	
Math Elective (b)	3-4

- (a) Math Electives include: MA105, MA106, MA115, MA121, MA122, MA125, MA150, MA151, MA152, MA253, MA260, MA275, or MA280.
- (b) Students interested in pursuing a degree should choose this option. Math Electives include: MA106, MA115, MA121, MA122, MA125, MA150, MA151, MA152, MA253, MA260, MA275, or MA280.
- (c) Students interested in mechanical design should plan on taking MT256 Advanced Solid Modeling. Students interested in civil/architecture/construction should take MT242 Advanced MicroStation.

Criminal Justice: Law Enforcement

Certificate

The Certificate in Criminal Justice: Law Enforcement demonstrates a commitment to excellence by creating an innovative program that meets the needs of the diverse population in the Mohawk Valley. This program is designed to prepare students for careers in law enforcement. The program enables students to complete Phase I of basic police training under the direction of the New York State Division of Criminal Justice Services. Although the program does not guarantee employment into a police department, all academic, practical, and physical fitness requirements will be met. This will provide graduates a competitive edge over other applicants as their qualifications will offer savings to hiring departments and agencies.

Criminal Justice: Law Enforcement — 34.5 credit hours

First Semester

ED100 College Seminar	1
LE118 Police Procedures - Basic	5
LE119 Police Procedures - Intermediate	5
LE120 Police Procedures - Advanced	5
PE155 Police Fitness Training	.5
PE162 Self-Defense	.5

Second Semester

LE121 Principles of Law for Police Officers	7.5
LE122 Techniques of Investigation	6
LE123 Policing in the Community	3
PE154 Fitness Center	1

Cybersecurity

Certificate

The purpose of this certificate is to provide students with an overall view of computer and networked security. The goal of this course is to train students to be able to effectively design, implement, and support security policies for a large scale enterprise network. Students are exposed to a variety of security analysis/defensive tools, implement these tools, then attempt to circumvent them.

Cybersecurity — 24 credit hours

First Semester

CI104 Introduction to Cybersecurity	3
CI110 Principles of Programming	3
CJ101 Introduction to Criminal Justice	3
IS120 Computer Operating Systems & Environments	3

Second Semester

CI112 Networking Fundamentals	3
CI142 Computer Forensics	3
CI212 Internet Security	3
CI232 Security Policies	3

Electronic Technician

Certificate

This program prepares students for careers as electronic technicians in the field of linear electronics and telecommunications. All courses apply toward the AAS degree in Electrical Engineering Technology.

Electronic Technician — 29 credit hours

First Semester

MA121 Fundamentals of College Mathematics 1	4
ET151 Circuits 1	4
ET153 Introduction to Electronics	2
ET154 Computer Programming	2

Second Semester

MA122 Fundamentals of College Mathematics 2	4
ET152 Circuits 2	4
ET161 Linear Electronics	3
ET181 Digital Electronics 1	3
ET Elective (a)	3

- (a) Elective courses may include ET141 Programmable Logic Controllers, ET254 C Programming for Technology, ET265 Fiber Optics 1, ET163 Audio Technology. Prerequisite: Two years of college preparatory mathematics.

English as a Second Language

Certificate

This certificate provides students whose first language is not English with an opportunity to develop proficiency in English at an advanced Standard American English level. The program is designed for students who plan to continue in another college degree or certificate program, supplement an advanced degree from another country, or function in an English-speaking workplace, either in the United States or internationally.

English skills of students entering the program will be evaluated for appropriate placement. Once begun, movement through courses is dependent upon successful completion of courses level by level and the satisfaction of prerequisites, such as completion of EN101 or EN105 before taking EN102. Students who wish additional study or need full-time status may matriculate into a degree or additional certificate program once they have successfully completed required Level 4 Advanced ESL courses. In this way, students may complete the ESL Certificate while beginning coursework in their majors.

English as a Second Language — 25-26 credit hours

For students intending to complete an AA, AS, or AAS degree program:

SL115 ESL 4: Advanced Reading	4
SL116 ESL 4: Advanced Composition	4
SL117 ESL 4: Advanced Grammar	4
SL118 ESL 4: Advanced Listening & Speaking	4
SL120 Pronunciation in Practice	3
EN Elective (a)	3-4
Elective (b)	3

For students intending to complete an AOS degree program:

SL115 ESL 4: Advanced Reading	4
SL116 ESL 4: Advanced Composition	4
SL117 ESL 4: Advanced Grammar	4
SL118 ESL 4: Advanced Listening & Speaking	4
SL120 Pronunciation in Practice	3
EN110 Oral & Written Communication	3
Elective (b)	3

- (a) Students may choose EN105 English Composition for Speakers of Other Languages or EN101 English 1: Composition.

- (b) Upon completion of the level 4 ESL components of the Certificate, students choose an entry level course required in another certificate or program. See advisor.

Entrepreneurship

Certificate

Entrepreneurial leadership is the ability to envision and create new business ventures whether in a startup situation or within a mature organization; the ability to identify new opportunities; and the ability to grow and renew existing businesses (including nonprofit organizations) in a healthy, productive manner. These capabilities are often lacking in traditional organizations. This certificate helps to develop those capabilities, as well as to provide the skills and knowledge necessary to operate a successful business.

Entrepreneurship — 30 credit hours

First Semester

BM150 Principles of Entrepreneurship	3
AA106 Business of Communications	3
AC110 Principles of Accounting	3
AC131 Business Law 1	3
IS101 Computers and Society	3

Second Semester

BM120 Principles of Marketing	3
BM251 Organizational Behavior	3
BM254 Human Resource Management	3
BM264 Professional Selling	3
BM275 Capstone in Entrepreneurship	3

Finance

Certificate

This certificate comprises a concentration of 10 courses dealing with economics, accounting, and banking. It provides a basic knowledge about finance and management operations. All of the courses can be applied to a degree in Financial Services Management or to the Individual Studies degree.

Finance — 31 credit hours

AC115 Financial Accounting	3
AC116 Managerial Accounting	3
AC230 Financial Management	3
OR	
BM108 Personal Finance	3
IS200 Spreadsheet Concepts & Applications	3
BM110 Principles of Microeconomics	3
BM115 Principles of Macroeconomics	3
BM230 Money & Banking	3
BM129 Business Mathematics	3
MA115 Intermediate Mathematics	4
IS101 Computers and Society	3

Heating and Air Conditioning

Certificate

This certificate prepares students to fill careers as service technicians in the field of heating and air conditioning. All courses apply toward the AOS degree in Air Conditioning Technology: Refrigeration Option.

Heating and Air Conditioning — 32 credit hours

First Semester

MA105 Technical Mathematics 1	4
ET108 Refrigeration 1	4
ET111 Electrical Systems	4
ET221 Heating and Air Conditioning Systems	5

Second Semester

ET104 Systems Design	3
ET209 Refrigeration 2	5
ET220 Air Conditioning Principles	4
ET123 Proper Refrigeration Usage	3

Individual Studies: Business & Industry

Certificate (see page 71)

Industrial & Commercial Electricity

Certificate

This certificate prepares students to fill careers as electrical maintenance persons. All courses apply toward the AOS degree in Electrical Service Technician.

Industrial/Commercial Electricity — 28 credit hours

First Semester

MA105 Technical Mathematics 1	4
ET111 Electrical Systems	4
ET105 Computer Control Fundamentals	2
ET234 Electrical Wiring and Codes 1	3

Second Semester

MA106 Technical Mathematics 2	4
ET104 Systems Diagrams	3
ET131 Electrical Machinery & Controls 1	4
ET244 Electrical Wiring & Codes 2	4

Insurance

Certificate

This certificate is for individuals who desire employment with an insurance firm. Successful completion of the two insurance courses meets the New York State educational requirements to take licensing exams in property and casualty insurance. All courses can be applied toward the AAS degree program in Financial Services Management.

Insurance — 31 credit hours

AC131 Business Law 1	3
AC230 Financial Management	3
OR	
BM108 Personal Finance	3
BM120 Principles of Marketing	3
BM129 Business Mathematics	3
BM240 Personal Lines Insurance	3

BM243 Casualty Insurance	3
BM251 Organizational Behavior	3
Business Elective	3
IS101 Computers and Society	3
IS200 Spreadsheet Concepts & Applications	3

Mechatronics

Certificate

This program prepares graduates for entry-level positions that involve the operation and maintenance of electro-mechanical systems commonly found in automated manufacturing environments. Students will be prepared to work in the operations, installation, and maintenance of automated and robotically controlled systems. Systems-level analysis, assembly, and troubleshooting techniques are stressed with hands-on laboratory experiences to complement classroom-based instruction.

Mechatronics — 31 credit hours

First Semester

ET111 Electrical Systems	4
ET127 Modern Industrial Practices	3
MA105 Technical mathematics 1	4
MT149 Pneumatic and Hydraulic Systems	3
Restricted Elective (a)	3

Second Semester

ET104 Systems Diagrams	3
ET131 Electrical Machinery and Controls 1	4
ET251 Mechatronic Systems	3
MT139 Mechanical Systems	4

- (a) For individuals planning on transferring into the Electrical Service Technician Program (AOS): BM150 Principles of Entrepreneurship. Other Elective options: MT107 Basic Machine Shop or MT155 Introduction to Solid Modeling.

Media Marketing and Management

Certificate

This certificate introduces the theory and procedures of the world of media sales. A combination of media and business management courses are taken, with elective choices that allow specific coursework in the area of interest. All courses apply toward the AAS degree in Media Marketing and Management.

Media Marketing and Management — 30 credit hours

MD140 Principles of Advertising	3
Business Management Elective	3
MD151 Fundamentals of Media	3
MD161 Visual Communications	3
Elective (a)	3
MD 141 Digital Video & Copywriting	3
MD152 Print Media & Production	3
BM264 Professional Selling	3
EN150 Effective Speech	3
Elective (a)	3

- (a) Elective Choices (2 courses, 6 credit hours)

MD255 Media Computer Applications	3
MD254 Media Planning	3
BM120 Principles of Marketing	3
MD240 Advertising	3

Photography

Certificate

This certificate program is for individuals who wish to be introduced to the basics of photography and photographic design. Those who wish to pursue photography on a part-time or hobby basis may be interested in the program. All courses apply toward the AAS degree in Photography.

Photography — 28 credit hours

PT101 Photography 1	3
PT102 Photography 2	3
PH112 Science of Light 1	4
PT111 Art Sources	3
PT103 Video and Narrative	3
PT105 Publishing Techniques for Photography	3
EN101 English 1: Composition	3
Photography Elective	3
Photography Elective	3

School Facilities Management

Certificate

This program was developed at the request of, and in cooperation with, the New York State Association for Superintendents of School Buildings and Grounds (SBGA), which represent 600 schools and 30 BOCES Systems of Superintendents of Buildings and Grounds and all related personnel. The program prepares personnel for management positions in school buildings and grounds, and further enhances the skills of those already occupying such positions. Graduates will be effective and efficient in decision-making situations in facilities management, equipped to stay abreast of critical issues in their changing environment. Emphasis is on courses in Facilities Maintenance, Basic Education Law, Public Health and Safety in Schools, and New York State Public School Budgeting and Accounting.

School Facilities Management — 30 credit hours

First Semester

BM251 Organizational Behavior	3
ET115 Basic Electricity 1	3
FM161 Facility Blueprints	3
FM180 Public Health & Safety in Schools	3
FM246 Introduction to Alternative Energy Systems	3

Second Semester

BM254 Human Resource Management	3
CT242 Mechanical & Electrical Systems for Buildings	3
EN101 English 1: Composition	3
FM101 NYS Public School Budgeting & Accounting	3
FM244 Introduction to Green Building Technology	3

Small Business Management

Certificate

This certificate is for individuals who wish to own or operate a small business. Emphasis is on the hands-on skills needed to operate a successful business enterprise. All of the courses can be applied toward an AAS degree in Individual Studies. Many of the courses can be used in other business-related degree programs.

Small Business Management — 30 credit hours

AC115 Financial Accounting	3
AC131 Business Law 1	3
BM120 Principles of Marketing	3
BM129 Business Math	3
BM150 Principles of Entrepreneurship	3
IS101 Computers and Society	3
Business Elective (a)	3
BM251 Organizational Behavior	3
BM254 Human Resources Management	3
OR	
BM264 Professional Selling	3
AA106 Business Communications	3

(a) Any AC, BM (above 101), or IS course other than those already required in the program.

Surgical Technician

Certificate

This program is for people interested in performing the duties of a Surgical Technician. Graduates of this program are prepared as entry-level practitioners in surgical technology. Graduates will work in operating room suites assisting in the preparation of supplies (instrumentation, draping, etc.) and the delivery of care (skin preparation, positioning, counts, dressing materials, specimen care, etc.) to the surgical patient.

Surgical Technician — 38 credit hours

First Semester

BI216 Human Anatomy & Physiology 1	4
MR103 Medical Terminology	3
AH120 Surgical Technician Clinical Seminar	1
AH130 Fundamentals for Surgical Technicians	3
AH140 Surgical Technician Skills/Surgical Procedures	3

Second Semester

AH230 Surgical Technician Clinical Practice 1	7
BI209 Pathophysiology	3
BI217 Human Anatomy & Physiology 2	4
MR208 Pharmacology for Allied Health	3

Summer Session

AH240 Surgical Technician Clinical Practice 2	7
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Prerequisites: The following requirements must be met before acceptance into the program:

- High school diploma or its equivalent.
- High school chemistry with lab component or its equivalent (Regents score of 70 or higher or high school score of 70 or higher within 10 years of admission to the Surgical Technician Program.)
- An appropriate MVCC Mathematics Placement test result.
- High school biology or its equivalent is recommended.
- Proof of current Health Care Provider CPR certification must be on file.
- The Health Physical Assessment form must be completed and on file by July 1 for Fall admission.
- Prerequisites taken at MVCC or at other institutions must have a minimum grade of "C" (75) within the last 10 years.
- Schedule an appointment with the Health Professions Department. Call 315-792-5499 for an appointment.

Other requirements:

- Professional liability and accident insurance, available through the College, is required and payable at registration.
- Students must provide their own transportation to and from the assigned health care agency for externships.
- Health Care Provider CPR must be kept current while attending the program.
- A dress code exists and identified items (protective eyewear, picture ID, laboratory coat, “sturdy” shoes and support hose) are required before entering AH120 Surgical Technician Clinical Seminar. Students are required to purchase “scrubs.”
- Minimum grade of “C” (75) required in all Surgical Technician specific courses and a minimum grade of “C” (70) in Human Anatomy & Physiology 1 and 2.
- Students must have a minimum GPA of 2.0 to be eligible to graduate from this program.
- Graduation from the Surgical Technician program does not guarantee national certification at this time.
- Students with legal charges pending or who have been convicted of a felony or misdemeanor may have their credentialing delayed or denied.
- Credit by examination or credit for lifetime experience is not

an option for any Surgical Technician or Human Anatomy & Physiology 1 and 2 Courses.

- Students may be subject to Criminal Background Checks and/or Blood Screening Tests at their own cost.

Welding

Certificate

This certificate prepares individuals for actual welding work using welding processes and techniques, while preparing for the New York State Certification Examination.

Welding – 34 credit hours

MT170 Oxy-Acetylene Welding Procedures	5
MT174 Electric Arc Welding Procedures	5
MT270 Welding Procedures for MIG & TIG	5
MT273 Welding Certification	5
MT277 Welding Blueprint Reading & Metal Fabrication	5
MT272 Advanced Electric Arc Welding Procedures	5
MT276 Welders Ornamental Iron & Blacksmithing	4
OR	
MT278 Weldng Inspection & Quality Control Testing	4

Course Descriptions

Each course is identified by a combination of two letters and three numbers. The letters indicate the subject area with which the course deals. Found on the next page is a list of the two-letter subject codes used in the College Catalog, along with their meanings. Following the two-letter subject area designation, each course description has three numbers to indicate the level of instruction in the course. The levels are as follows:

Remedial/Developmental	000-099
Introductory Level	100-199
Intermediate Level	200-299
Independent Study	300-399

Abbreviation Code

C = Class Period: a period in which a group teaching method is employed including recitations, lectures, discussions, demonstrations or combinations of these.

P = Practicum Period: a period devoted to direction and guidance of student application and/or development of principles and concepts in a particular physical environment. The practicum period includes laboratory, studio periods, drafting work and field trips.

Cr = Credit

Cr-0 = No Credit for course

Some course numbers are followed by codes such as L1, M2, N2, S1. These codes indicate General Education status. General Education subject areas are indicated with the following codes:

Language:	L
Humanities:	H
Mathematics:	M
Natural Science:	N
Social Science:	S
Computer Science:	C 1

In addition to the letter codes that designate the major subject areas, the course numbers of General Education courses are followed by a numerical code indicating Tier 1 or Tier 2 status. A Tier 1 Natural Science course, for example, would be indicated with the code

“N1.” Similarly, a Tier-Two Mathematics course would be indicated with “M2.” When a course number is not followed by one of these codes, the course does not fulfill General Education requirements. Depending on a student’s situation, some courses may fulfill Tier 1 or Tier 2 requirements. Students should consult their advisors.

Additional information regarding specific General Education requirements appears on pages 16-17 of this Catalog.

Independent Study

The program of Independent Study provides second-year students in certain programs with the opportunity to explore, under the direction of a faculty advisor, a project or area of study not available in the courses offered by the College.

It is the responsibility of students electing Independent Study to secure a project advisor and, with the advisor’s assistance, to develop a project proposal. The student, upon securing approval of the project advisor, academic advisor, and the Vice President for Academic Affairs, then may register for Independent Study. Students may earn from one to four credits for satisfactory completion of their projects. The duration of the project is agreed upon by the student and the project advisor, and may span more than one semester. Proposal forms are available from the Department Associate Dean.

Time Limitation

A time limitation may eliminate courses from consideration for acceptable credit as determined by the student’s Associate Dean.

Prerequisites and Corequisites

In the descriptions of course content, the reader may notice the designation “Prerequisite” or “Corequisite.” A Prerequisite is a course that must be completed successfully (or credit from another institution accepted) BEFORE the student may register for the course being described. A Corequisite may be taken either at the same time as or before the course being described. A Mandatory Corequisite MUST be taken at the same time as its associated course.

Code Subject Areas

AA	Administrative Assistant	SL	English as a Second Language
AC	Accounting	SM	Sports Management
AH	Allied Health	SO	Sociology
AL	American Sign Language	SP	Spanish
AN	Anthropology	SS	Social Sciences
AS	Alcoholism & Substance Abuse	ST	Science and Technology
AT	Athletic Training	TH	Theater
AV	Aviation	TM	Transportation Management
BI	Biology	UA	Remotely Piloted (Unmanned Aerial)
BM	Business Management	VT	Vocational Technology
CB	Construction & Building	WE	Weather Studies
CG	Computer Graphics	WS	Workplace Success
CH	Chemistry		
CI	Computer & Information Science		
CJ	Criminal Justice		
CO	Coaching		
CT	Civil Engineering Technology		
DS	Developmental Studies		
ED	Education		
EI	Educational Interpretation		
EM	Emergency Medical		
EN	English		
ES	Engineering Science		
ET	Electrical Technology		
EV	Environmental Analysis		
FA	Fine Arts		
FB	Fabrication		
FL	Foreign Language		
FM	Facilities Management		
FP	Fire Protection		
FR	French		
FS	Food Service		
GC	Graphic Communication		
GD	Graphic Design		
GT	Graphic Technology		
GE	Geography		
GL	Geology		
GR	German		
HC	Health Care		
HI	History		
HM	Health Information Management		
HP	Honors Program		
HS	Human Services		
HT	Hotel Technology		
HU	Humanities		
IL	Illustration		
IS	Information Systems		
IT	Italian		
LE	Law Enforcement		
LI	Learning Resources		
MA	Mathematics		
MD	Media Marketing & Management		
MR	Medical Records		
MT	Mechanical Engineering Technology		
NU	Nursing		
OP	Photonics		
PE	Physical Education		
PH	Physics		
PM	Physical Education Emphasis		
PS	Political Science		
PT	Photography		
PY	Psychology		
RC	Respiratory Care		
RE	Recreation & Leisure Services		
SA	Study Abroad		

Course Descriptions

The following are the description of each course offered at Mohawk Valley Community College. These descriptions will include the fundamental principles of each course and provide an understanding of how it aligns with the different degree and certificate programs offered at the College.

AA Administrative Assistant Courses

Business, Cybersecurity & Computer Sciences Department

AA106 Business Communications C-3 Cr-3

This course covers the fundamental principles of effective business correspondence, report writing, and oral communications. These principles are applied first to sentences and paragraphs, and then to specific types of business communications. It includes a review of spelling, vocabulary, punctuation, grammar, and composition as necessary.

AA107 Keyboarding - Personal P-2 Cr-1

This course develops touch control of the computer keyboard, proper techniques, and building speed and accuracy. Not for Administrative Assistant majors.

AA111 Keyboarding - Basic C-1 P-4 Cr-3

This course introduces proper computer keyboarding techniques, builds speed and accuracy, and provides practice in formatting personal and business documents.

AA112 Keyboarding - Intermediate C-1 P-4 Cr-3

This course concentrates on increasing keyboarding speed and accuracy, and providing practice on more advanced word processing and desktop publishing projects. Prerequisite: AA111 Keyboarding - Basic.

AA203 Machine Transcription C-1 P-4 Cr-3

This course provides intensive training in the transcription of letters, memoranda, and reports, using various types of equipment and instructional materials. Government, medical, legal, and business documents are keyboarded. Prerequisite: AA112 Keyboarding - Intermediate.

AA208 Office Administration Cr-3

This course introduces the scope and responsibilities of administrative office management. Topics include information management as it relates to planning, organizing, operating, and controlling office operations, management leadership and human relations factors, salary administration, labor management relations, and office personnel problems and practices.

AA214 Keyboarding - Advanced Cr-3

This course covers advanced word processing and desktop publishing skills. Decision-making, editing, abstracting information, setting priorities, and maintaining a smooth workflow are emphasized. Government, medical, legal, and business documents are keyboarded. Prerequisite: AA112 Keyboarding - Intermediate.

AA300 Independent Study in Administrative Assistant Cr 1-4

AC Accounting Courses

Business, Cybersecurity & Computer Sciences Department

AC110 Principles of Accounting C-3 Cr-3

This course, intended for non-accounting majors, is an introduction to the fundamental accounting concepts and principles used to analyze and record business transactions. Topics include the

accounting cycle, accounting for service and merchandising businesses, special journals, payroll, banking and internal controls, and inventory methods.

AC115 Financial Accounting C-3 Cr-3

This course is the first of a sequence that explores fundamental accounting principles, concepts, and practices as a basis for the preparation, understanding, and interpretation of accounting information. It covers the complete accounting cycle for service and merchandising businesses through the adjustment and closing of the books and the preparation of the income statement, the statement of owner equity, and the balance sheet. The details of accounting for cash, receivables, inventory, long-lived assets, and current liabilities are investigated.

AC116 Managerial Accounting C-3 Cr-3

This course is the second of a sequence that explores fundamental accounting principles, concepts, and practices as a basis for the preparation, understanding, and interpretation of accounting information. It covers corporate equity (including the statement of retained earnings), long-term debt, time-value concepts, capital budgeting, cost-volume-profit analysis, and financial statement analysis. Prerequisite: AC115 Financial Accounting.

AC127 Computerized Accounting Systems C-2 P-2 Cr-3

This course uses a variety of standard computerized business systems such as general ledger, purchasing, accounts payable, inventory, payroll, cash receipts, and accounts receivable to enter, process, and store data in operational-level transaction processing. Prerequisites: AC115 Financial Accounting and either IS101 Computers and Society or IS102 Computer Applications & Concepts 2, or IS100 Introduction to Computers and Society.

AC131 Business Law 1 C-3 Cr-3

This basic law course investigates the application of law to societal and business relationships through a study of the concept of commercial law and its sources, the law of contracts, the law of sales, and the law of negotiable instruments. Lecture, class discussion, and case study comprise the primary methods of instruction in the effort to develop awareness of the logic and application of the law.

AC132 Business Law 2 C-3 Cr-3

This course investigates the consequences of the legal forms of business organization and the acquisition, protection, the law of agency, transfer, and loss of rights in personal and real property. Lecture, discussion, and case study help to develop awareness of the scope and requirements of legislation and common law. Prerequisite: AC131 Business Law 1.

AC201 Intermediate Accounting 1 C-3 Cr-3

This course is a continued study of the accounting process and the application of the conceptual framework for generally accepted accounting principles (GAAP). Topics include the accounting cycle; revenue recognition; financial statement preparation; time value of money applications; and cash, receivables, and inventory valuation. Intangibles and plant assets with depreciation, impairments, and depletion are also covered. Prerequisite: AC116 Managerial Accounting.

AC203 Governmental and Not-for-Profit Accounting C-3 Cr-3

This course introduces fund accounting concepts and procedures for reporting for government and non-profit entities. Topics

include the study of fund and budget accounts of governmental units, revenues, appropriations, disbursements, assessments, and reporting. Emphasis is on various budgetary and reporting procedures in the not-for-profit environment. Prerequisite: AC116 Managerial Accounting.

AC230 Financial Management C-3 Cr-3

This course develops the role of the finance function and financial decision-making as it relates to the entire business organization. It stresses the financial planning of the requirements for funds, the effective acquisition of these funds (from internal sources and from capital markets), and the control of the use of these funds within the business. Prerequisite: AC116 Managerial Accounting.

AC243 Cost Accounting C-3 Cr-3

This course covers the effective development, presentation, and analysis of data. Topics include job process costing, cost allocation, joint product costing, and standard cost accounting, variance analysis, relevant costing and responsibility accounting. Prerequisite: AC116 Managerial Accounting.

AC300 Independent Study in Accounting Cr 1-4

AH Allied Health Courses

Health Professions Department

AH104 Professional Standards in Health Care C-3 Cr-3

The course introduces ethical and trans-cultural issues encountered in health care. Examples of topics include value development, ethical theories and controversies, principles of confidentiality, critical thinking, and ethical decision-making.

AH120 Surgical Technician Clinical Seminar P-2 Cr-1

This course introduces the role of the surgical technician and its integration with other hospital departments. Emphasis is placed on observation of Operating Suites, Central Sterile Processing, Endoscopy, Labor and Delivery, and Materials Management departments. Concentration is placed on how these departments prepare and deliver patient care and supplies for operative procedures. Equipment and instrumentation decontamination, tray setups, instrument identification, and packaging and sterilization processes are covered. Corequisites: AH130 Fundamentals for Surgical Technicians, AH140 Surgical Technician Skills/Surgical Procedures, and BI216 Human Anatomy & Physiology 1.

AH130 Fundamentals for Surgical Technicians C-1 P-4 Cr-3

This course provides an in-depth look at the integration of the surgical technician surgeons, anesthesiologists, registered nurses, and other surgical personnel delivering patient care. Concentration is placed on the integration and application of patient care concepts and the responsibilities of sterile and non-sterile personnel addressed in procedural content, clinical practice guidelines, and case-level requirements. Corequisites: AH120 Surgical Technician Clinical Seminar, AH140 Surgical Technician Skills/Surgical Procedures, and BI216 Human Anatomy & Physiology 1.

AH140 Surgical Technician Skills/Surgical Procedures C-2 P-2 Cr-3

This course reviews primary surgical specialties with an emphasis in each surgical specialty focusing on anatomy, physiology, pathophysiology, diagnostic intervention, and surgical interventions. Surgical interventions include special patient care considerations, room setups, anesthesia, positioning, skin prep, incision and approach, supplies, equipment instrumentation, procedural steps, counts, dressing materials, specimen care, and postoperative destination and care. Surgical specialties include General, Obstetric and Gynecology, Ophthalmology, Otorhinolaryngology, Oral and Maxillofacial, Plastic and Reconstructive, Genitourinary, Orthopedics,

Cardiothoracic, Peripheral Vascular, and Neurosurgery. Corequisite: AH120 Surgical Technician Clinical Seminar, AH130 Fundamentals for Surgical Technicians, and BI216 Human Anatomy & Physiology 1.

AH207 Medical Claims Management C-2 P-4 Cr-4

The course introduces medical insurance billing, and credit and collection procedures. It provides an understanding of the insurance options and the laws governing the payers/insurers. Topics include preparing and reviewing claims forms, the significance of coding, electronic and computerized billing, and fraud and abuse. (Spring semester)

AH217 Professional Practice Experience/ Medical Claims Management P-11 Cr-4

This course provides hands-on knowledge of medical claims management and procedures. The professional practice experience integrates the didactic component with the professional practice component. Medical claims are processed, with follow-up on unpaid balances and corporate compliance plan to avoid allegations of health care fraud and abuse. Prerequisites: BI110 Introduction to Human Anatomy & Physiology, MR208 Pharmacology for Allied Health, and AH207 Medical Claims Management. (Summer semester)

AH230 Surgical Technician Clinical Practice 1 P-17 Cr-7

In this course, students are partnered with experienced Surgical Technicians and are expected to transition from an observer to an active role during surgical procedures. Primary surgical specialties are the focus, e.g., General Surgery, OB/GYN, Orthopedic, 120 Otorhinolaryngology, and Genitourinary. Surgical interventions include special patient care considerations, room setups, anesthesia, positioning, skin prep, draping, incision and approach, supplies, equipment instrumentation, procedural steps, counts, dressing materials, specimen care, and postoperative destination and care. Prerequisites: BI216 Human Anatomy & Physiology 1, MR103 Medical Terminology, AH120 Surgical Technician Clinical Seminar, and AH130 Fundamentals for Surgical Technicians. Corequisites: BI217 Human Anatomy & Physiology 2 and AH140 Surgical Technician Skills, Surgical Procedures.

AH240 Surgical Technician Clinical Practice 2 P-17 Cr-7

This course is the continuation of AH230 Surgical Technician Clinical Practice 1. Students are partnered with experienced Surgical Technicians and are expected to take a more active role during surgical procedures. Surgical specialties include General Surgery, OB/GYN, Orthopedic, Otorhinolaryngology, and Genitourinary. Surgical interventions include special patient care considerations, room setups, anesthesia, positioning, skin prep, draping, incision and approach, supplies, equipment instrumentation, procedural steps, counts, dressing materials, specimen care, and postoperative destination and care. Prerequisite: AH230 Surgical Technician Clinical Practice 1.

AH300 Independent Study in Allied Health Cr 1-5

AL American Sign Language Courses

Education & Language Studies Department

AL101 American Sign Language 1 C-3 Cr-3

This course introduces American Sign Language (ASL), a natural and visual-gestural language used by deaf people in the United States and Canada. It covers finger spelling, signs, grammar, syntax, sentence structure, non-manual behaviors, basic communication techniques, conversational skills, and receptive and expressive language skill development. It reviews facets of Deaf culture. A minimum of five hours of participation in the Deaf community is required.

AL102 American Sign Language 2

C-3 Cr-3

This course further develops receptive and expressive finger spelling and signing skills. Functional language strategies are presented to expand conversational skills beyond talking about oneself to talking about other people and activities, giving directions, and making requests. Skills are developed to identify others, exhibit appropriate conversational strategies, and learn to handle interruptions. Study focuses on ASL sentence structures, time, numbers, spatial referencing, temporal aspects, distributional aspects, pluralization, and sign vocabulary. Information about the Deaf community and Deaf culture is covered. A minimum of 15 hours of participation in the Deaf culture is required. Prerequisite: Grade of C or better in AL101 American Sign Language 1, and a specific score on the ASL Proficiency Test, Level 1.

AL201 American Sign Language 3

C-3 Cr-3

This course covers an increased number of specialized vocabulary terms and an expansion of grammatical features. The skills of accurately producing finger spelling, numbers, classifiers, and non-manual markers are included during practice and spontaneous conversations. Conversation structure in ASL is taught as a part of ASL discourse. A minimum of 25 hours of participation in the Deaf community is required. Prerequisite: Grade of "B" or better in AL102 American Sign Language 2, and a specific score on the ASL Proficiency Test, Level 2.

AL202 American Sign Language 4

C-3 Cr-3

This last course in the ASL series for interpreting students builds upon the foundation of the previous courses. Specialized vocabulary and the basic ASL discourse structure for a presentation are covered. Vocabulary, structural principles, and linguistic principles related to narratives of ASL are expanded and applied. Multiple meaning English words and English idioms for expressing concepts in ASL are analyzed. Linguistic principles and discourse features to develop and create ASL narratives are incorporated. Issues related to the Deaf culture are introduced based on topics in each unit. A minimum of 40 hours of participation in the Deaf community is required. Prerequisite: Grade of "B" or better in AL201 American Sign Language 3, and a specific score on the ASL Proficiency Test, Level 3.

AL300 Independent Study in American Sign Language

Cr 1-4

AN Anthropology Courses

Social Sciences & Public Services Department

AN101 Biological Anthropology

C-3 Cr-3

This course presents the biological and evolutionary history of humans. Basic concepts of evolutionary theory, human genetics, human biological adaptation and diversity, and the hominid fossil record are explored. It includes the behavior and ecology of living non-human primates.

AN102 Cultural Anthropology

C-3 Cr-3

This course examines the cultural evolution of humans in a cross-cultural perspective. It includes the study of kinship, marriage, family, political and economic organization, the arts, and the individual in society. It covers the historical background of development of the discipline, research methods, and concepts proposed by various schools of anthropological thought.

AN104 Archaeology

C-3 Cr-3

This course examines the reconstruction of past human cultures based on the material remains left behind. Archaeological concepts, methods, and theories about the past are explored as they apply to human cultural development.

AN205 Forensic Anthropology

C-3 Cr-3

This introductory course provides a general understanding of

the methods that forensic anthropologists use to identify human skeletal remains. It introduces the human skeleton, anthropological techniques used in forensic investigations, and how to discriminate between human and non-human remains. This course involves actual human skeletal material.

AN300 Independent Study in Anthropology

Cr 1-4

AS Alcoholism & Substance Abuse Courses

Social Sciences & Public Services Department

AS201 Introduction to Alcoholism/ Substance Abuse Counseling

C-3 Cr-3

This course provides a foundation in alcoholism/substance abuse counseling knowledge and skills, including practice in basic counseling skills. Prerequisite: A grade of "C" or better in HS241 Chemical Dependencies.

AS202 Alcoholism/Addictions and Family Systems

C-3 Cr-3

This course provides an in-depth look at the effects of alcoholism and substance abuse on the family system. Topics include a variety of approaches to viewing the family, a general overview of codependency, and aspects of family and codependency treatment, including how counselors can be affected. Prerequisite: A grade of "C" or better in HS241 Chemical Dependencies.

AS204 Special Topics in Alcoholism & Substance Abuse Treatment Programs

C-3 Cr-3

A survey of issues is covered related to legal aspects of alcohol, drug, and treatment programs, treatment of special populations, child abuse reporting, and treatment in correctional institutions, specialized addictive treatment modalities, and employee assistance programs. Poly-addiction and new drugs are included. In addition, issues related to the professional in alcoholism and substance abuse treatment are discussed. Other topical issues are introduced, based on class needs and new trends. Prerequisite: A grade of "C" or better in HS241 Chemical Dependencies.

AS206 Prevention Principles for Alcohol, Tobacco & Other Drug Problems

C-3 Cr-3

This course covers principles underlying effective alcohol, tobacco, and other drug (ATOD) prevention strategies. A systems approach is used to give an overview of methods, goals, objectives, models, and history of prevention. The risk and protective framework provides the basis for prevention program examples. These programs are evaluated using science-based methods. Prevention ethics are discussed, with the opportunity to observe and demonstrate presentation skills. This course fulfills requirements of the New York State Office of Alcoholism and Substance Abuse Services for credentialing of alcohol and substance abuse prevention professionals and prevention specialists. Prerequisite: A grade of "C" or better in HS241 Chemical Dependencies.

AS207 Prevention Practice for Alcohol, Tobacco & Other Drug Problems

C-3 Cr-3

This course covers the practice of developing and designing effective Alcohol, Tobacco, and Other Drug (ATOD) prevention education programs. Topics include the performance domains of planning and evaluation, education and skill development, community organization, public organization and policy, and professional growth and development. This course fulfills requirements of the NYS Office of Alcoholism and Substance Abuse Services for credentialing of alcohol and substance abuse prevention professionals and prevention specialists. Prerequisite: A grade of "C" or better in AS206 Prevention Principles for Alcohol, Tobacco & Other Drugs Problems.

AS208 Treatment of Pathological Gambling**C-4 Cr-4**

This course presents a basic understanding of pathological gambling and the treatment of those adversely affected by problem gambling. This impulse control disorder is compared and contrasted with Substance Abuse and Alcoholism. This course fulfills requirements of the NYS Office of Alcoholism and Substance Abuse Services for CASAC credentialing. Prerequisite: A grade of "C" or better in AS201 Introduction to Alcoholism/Substance Abuse Counseling.

AS300 Independent Study in Alcohol & Substance Abuse **Cr 1-4**

AT Athletic Training Courses

Athletics, Physical Education & Recreation Department**AT101 Introduction to Sports Medicine****C-2 P-2 Cr-3**

This course introduces the basic skills involved in the care and prevention of athletic injuries. It covers the recognition of sports-related injuries from head to toe, emergency procedures, training room responsibilities, liability concerns, environmental concerns, nutrition, eating disorders, and rehabilitation and training techniques. Laboratory time consists of BLS-CPR certification, stretching and taping techniques, and practicing emergency procedures. Prerequisites: CO232 Health Science Applied to Coaching.

AT201 Sports Medicine Practicum 1**P-3 Cr-1**

This 15-week practicum provides experience in an athletic training room setting. It includes attending home contests, preparing teams for practices and games, taping student-athletes, assisting with rehabilitation programs, and other duties as determined appropriate by the supervising Athletic Trainer. Prerequisites: AT101 Introduction to Sports Medicine.

AT202 Sports Medicine Practicum 2**P-3 Cr-1**

This second 15-week practicum provides further hands-on experience in the athletic training room setting. It includes attending home games and taping student-athletes as well as designing and overseeing rehabilitation programs under the supervision of the Athletic Trainer. The primary responsibility is for one contact sports team. Prerequisite: AT201 Sports Medicine Practicum 1.

AT300 Independent Study in Sports Medicine**Cr 1-4**

AV Aviation Courses

Physical Sciences, Engineering & Applied Technologies Department**AV170 General Maintenance Practices****P-15 Cr-5**

This course introduces general aviation maintenance practices, including topics in mathematics, blueprints/charts, physics, maintenance forms and publications, human factors, ethics, and aircraft weight and balance. This course also introduces students to airframe material testing procedures. Additional topics include precision measurements, identification and selection of aircraft materials, basic heat-treating processes, penetrant, chemical etching and magnetic particle inspections, welding inspection, and the identification and selection of non-destructive testing methods.

AV171 Materials and Processes**P-6 Cr-2**

This course introduces methods and procedures needed to maintain cleaning and corrosion controls, fluid lines, and fittings. Aircraft general servicing and ground operations are also included.

AV172 Basic Electricity**P-6 Cr-2**

This course introduces the basic electricity terms and calculations, including voltage, resistance, capacitance, inductance, and power. Reading and interpreting electrical circuit diagrams and the inspection and servicing of batteries are also introduced.

AV173 Airframe Systems 1**P-15 Cr-5**

This course introduces methods and procedures needed to maintain, service, and repair airframe electrical and electronic systems.

AV174 Airframe Systems 2**P-9 Cr-3**

This course introduces methods and procedures needed to maintain Ice and Rain control, Fire Protection, and aircraft associated utility systems, including hydraulic and pneumatic power systems. Other topics covered are methods and procedures needed to maintain aircraft landing gear systems, cabin atmosphere control systems, and oxygen systems.

AV175 Aircraft Structures 1**P-9 Cr-3**

This course introduces methods and procedures needed to inspect and repair wood structures, aircraft coverings, and exterior finishes as defined by the Federal Aviation Administration (FAA) publication AC43.13-1B (Acceptable Methods, Techniques and Practices). Topics include identifying, inspection, and repair of wood structures; selection, inspection, testing, and repair of fabric and fiberglass coverings; application of trim and letters; and the identification, selection, application, and inspection of aircraft finishing materials. Proper rigging of a fixed and rotary wing aircraft, checking alignment, of structures, assembling aircraft, balancing and rigging movable surfaces, and properly raising and lowering an airplane are also introduced.

AV176 Aircraft Structures 2**P-10.5 Cr-3.5**

This course introduces the materials, equipment, tools, and procedures needed for the inspection and repairs to aircraft sheet metal structures as defined by the Federal Aviation Administration (FAA) publication AC43.13-1B (Acceptable Methods, Techniques and Practices). Topics also include the inspection and repair of bonded, plastic, honeycomb, and laminated structures, and the inspection and repair of windows doors, and interior furnishings.

AV177 Airframe Inspection & Welding**P-6 Cr-2**

This course introduces methods and procedures needed to understand basic principles of various types of aircraft welding. Students learn inspection, troubleshooting and repair, operation of aircraft fuel systems, and perform airframe conformity and airworthiness inspections.

AV178 Introduction to Powerplant**P-7.5 Cr-2.5**

This course introduces methods and procedures needed to maintain Engine Fire Protection and Engine Systems. This course also introduces auxiliary power units (APU), unducted fan engines, and reciprocating engines.

AV179 Reciprocating Engines**P-6 Cr-2**

The course introduces the basic skills necessary to overhaul a reciprocating engine.

AV180 Turbine Engines & Powerplant Systems**P-12 Cr-4**

This course introduces methods and procedures necessary to inspect, service, repair, install, and troubleshoot gas turbine engines and associated engine systems.

AV181 Powerplant Systems**P-18 Cr-6**

This course introduces methods and procedures necessary to inspect, service, repair, install, and troubleshoot engine systems and associated components, and to control for engine fuel, induction, ignition and starting systems, and associated instruments. Other topics include methods and procedures

necessary to inspect, service, troubleshoot, and repair exhaust systems, engine reverser systems, and propeller systems.

AV182 Powerplant Inspection & Electrical Systems **P-6 Cr-2**

This course introduces installation and repair of engine electrical systems. Methods and procedures required for airframe and engine airworthiness inspections are introduced.

BI Biology Courses

Mathematics & Natural Sciences Department

BI103 Human Life Science 1 **C-3 P-2 Cr-4**

This course explores the form and function of human body systems for non-science students. It stresses normal and abnormal life processes as well as the philosophy and history of science including the scientific method. Laboratory exercises complement lecture topics, which include the study of cells and tissues, and the nervous, cardiovascular, respiratory, and reproductive systems. Dissections are required in the laboratory.

BI105 Environmental Science **C-3 P-2 Cr-4**

This course increases appreciation and interest in human interaction with other organisms and with the physical environment. Topics include basic ecological concepts as well as human impact on the earth with an emphasis on selected environmental problems (i.e. natural resource use, pollution, wildlife conservation, agriculture, hazardous waste, etc.). The laboratory component supplements lecture topics by providing practical experiences. Field experiences are required.

BI110 Introduction to Human Anatomy & Physiology **C-3 Cr-3**

This course introduces the structure, organization, and functioning of the human organism. It provides an overview of most of the systems of the body. Common diseases and injuries are described. This course does not meet graduation requirements for science, health science, or health-related majors.

BI141 General Biology 1 **C-3 P-2 Cr-4**

This is the first of a two-semester course dealing with the central concepts of biology. Topics include the chemical and cellular basis of life, energy transformations, plant structure related to function, and plant reproduction. Laboratory exercises mirror lecture topics. Prerequisite: One year of laboratory science in high school or permission from the Associate Dean of the Mathematics & Natural Sciences Department.

BI142 General Biology 2 **C-3 P-2 Cr-4**

This course is a continuation of BI141 General Biology 1. Topics include classical and molecular genetics, evolutionary processes, and speciation illustrated with trends observed in the simpler animal phyla. Laboratory exercises mirror lecture topics. Prerequisite: BI141 General Biology 1 or permission from the Associate Dean of the Mathematics & Natural Sciences Department.

BI151 Nutrition & Dietetics 1 **C-3 Cr-3**

This course provides a general understanding of the science of nutrition. Topics include nutrients, nutrient requirements, food sources, food safety, dietary assessment, the role that nutrients play in maintaining health and physical well-being, and physiological functions such as digestion, absorption, and metabolism of nutrients. This course is for Nutrition and Dietetics majors. Prerequisite: High school chemistry or equivalent.

BI201 Microbiology **C-3 P-3 Cr-4**

This course introduces the morphology, physiology, and genetics of microorganisms and their impact on health and environment.

Organisms studied include bacteria, fungi, virus, and protozoa. Laboratories emphasize safe handling and culturing of live bacteria, as well as identification procedures. Prerequisite: BI142 General Biology 2 or BI217 Human Anatomy & Physiology 2.

BI202 Ecology **C-3 P-3 Cr-4.5**

This course covers classical ecology, with a study of the interrelationships of organisms and their environment. Topics include basic ecological principles, natural selection and speciation, energy flow and productivity, and biogeochemical cycling of nutrients. Laboratories emphasize quantitative analysis of various environmental parameters. Prerequisite: BI141 General Biology 1 or CH141 General Chemistry 1.

BI209 Basic Pathophysiology **C-3 Cr-3**

This course examines the physiological consequences of various disease states. Diseases are treated as threats to homeostasis. The effects of pathology on normal bodily processes are discussed at various organizational levels, including biochemical, cellular, histological, and organ systems. This course is designed for Allied Health students. Prerequisite: BI216 Human Anatomy & Physiology 1 or permission from the Associate Dean of the Mathematics & Natural Sciences Department. Corequisite: BI217 Human Anatomy & Physiology 2.

BI216 Human Anatomy & Physiology 1 **C-3 P-3 Cr-4**

This course covers the structure and function of the human organism and the regulatory processes that operate within a living system. It introduces general anatomical, physiological, and chemical organization, and includes the integumentary (skin), skeletal, muscular, and nervous systems. Laboratories involve vertebrate dissection, the use of prosected human cadavers and human skeletal materials, microscope work, non-invasive human experimentation, and possibly animal experimentation. Prerequisite: One year of high school chemistry or equivalent preparation, or permission from the Associate Dean of the Mathematics & Natural Sciences Department. High school biology or its equivalent recommended. Students enrolled in Life and Health Sciences Center programs are recommended to complete this course before beginning their specialized program coursework.

BI217 Human Anatomy & Physiology 2 **C-3 P-3 Cr-4**

This course, which is a continuation of BI216 Human Anatomy & Physiology 1, involves the study of structure, function, and regulation in the human organism. Topics include blood, peripheral nerves, the cardiovascular system, lymphatics, the respiratory system, the excretory system, the endocrine system, the reproductive systems, the digestive system, and metabolism. Laboratories involve vertebrate dissection, the use of prosected human cadavers and human skeletal materials, microscope work, non-invasive human experimentation, and possibly animal experimentation. Prerequisite: BI216 Human Anatomy & Physiology 1, permission from the the Associate Dean of the Mathematics & Natural Sciences Department. Students enrolled in Life and Health Sciences Department programs are recommended to complete this course before beginning their specialized program coursework. Students with transfer credit for BI216 Anatomy & Physiology 1 must complete a three-hour orientation to the use of prosected human cadavers before participating in the BI217 Human Anatomy & Physiology 2 laboratory. Transfer students must meet with the Associate Dean of Mathematics & Natural Sciences 30 days before beginning this course.

BI251 Nutrition Across the Lifespan **C-3 Cr-3**

This course explores the changing nutritional needs as an individual progresses through the normal life cycle. Topics include physiology and nutritional demands of growth periods, the physiology and nutritional demands of the aging process, and optimal dietary behaviors during pregnancy, lactation, infancy, childhood, adolescence, and late adulthood. Prerequisites: BI141 General Biology 1 and BI216 Human Anatomy & Physiology 1.

BI270 Practicum in Human Dissection**P-2 Cr-1**

This course provides selected students with hands on experience in directed, supervised human cadaver dissection. Working in small groups, students collaborate to explore, locate, expose, identify, and demonstrate selected organs, structures, anomalies, and pathologies on embalmed specimens. Since different groups may have different dissection tasks, students in each group share their work with those in other groups. Specific dissections and exposures are selected by the instructor to coincide with the prosection requirements of Human Anatomy & Physiology 1 and 2 (BI216 and BI217) and, whenever feasible, with the interests and backgrounds of the enrolled students. Because every cadaver provides a unique dissection and educational experience, students may enroll in this course more than once for credit. Prerequisites: BI216 Human Anatomy & Physiology 1 or BI217 Human Anatomy & Physiology 2, and written permission of the instructor. All prospective students will be required to submit an essay, not to exceed 500 words, explaining their interest in taking this course and indicating the use to which they intend to put this information and the benefit they expect to derive from it. The instructor will consider this essay carefully before any course enrollment decision is made.

BI300 Independent Study in Biology**Cr 1-4**

BM Business Management Courses

Business, Cybersecurity & Computer Sciences Department

BM100 Introduction to Business**C-3 Cr-3**

This course presents the relationships among social, political, economic, legal, and environmental forces, and the development and operation of business in a global economy. It includes an overview of the concepts and principles of the various subfields of business accounting, management, finance, marketing, law, ethics, human resources, and general business as well as current topics of interest, and internet research and simulation exercises.

BM101 Survey of Economics**C-3 Cr-3**

This course introduces economic theory and its relevance to daily life in a market economy. Topics include scarcity, supply and demand, choice, economic growth, taxation, and the role of government in the economy. Attention is given to current economic issues and their impact upon everyday life.

BM108 Personal Finance**C-3 Cr-3**

This course teaches the fundamentals of personal finance through the creation of a financial plan, management of personal finances, and reaching personal financial goals. Topics include the establishment of financial objectives (home ownership, education, and retirement), budgeting and savings, personal income tax, investments (stocks, bonds, and mutual funds), retirement, and estate planning. The effective use and management of credit is covered.

BM110 Principles of Microeconomics**C-3 Cr-3**

This course studies the behavior of the individual and firm in allocating resources in a market system under various the degrees of competition. Topics include the nature of economics, scarcity choice, market pricing and applications, theory of consumer choice, business cost measurement, forms of competition, antitrust and regulations of business, factor pricing, externalities, and pollution. Poverty-income distribution, labor economics, or agricultural economics may also be discussed.

BM115 Principles of Macroeconomics**C-3 Cr-3**

This course studies the theory and operation of the economy and how government attempts to achieve domestic and international economic goals using monetary and fiscal policies. Topics include:

the nature of economics, the economizing problem, capitalism and the circular-flow, overview of the public sector, measuring output and income, macroeconomic instability, aggregate demand and supply, Keynesian employment theory, fiscal policy and its applications, money, banking, monetary policy applications, and international trade and finance.

BM120 Principles of Marketing**C-3 Cr-3**

This course emphasizes the basic practices, concepts, and activities involved in developing a successful marketing program. Topics include buyer behavior, market identification, product development, distribution, promotion, pricing, and the uncontrollable factors (economic, social, political, legal, and technological) involved in the changing marketing environment of today.

BM129 Business Mathematics**C-3 Cr-3**

This course reviews basic arithmetic processes to develop speed and accuracy in working with decimals, fractions, and percentages. Calculators are used to solve business problems, including simple and compound interest, discounting promissory notes, present value, installment purchases, and mortgages. Retail mathematics covers the areas of purchase and cash discounts, trade discounts, and markup of merchandise. Topics may also include the mathematics of sales and property taxes and payroll. Problem-solving exercises are completed through applications and exercises. Prerequisite: An appropriate Mathematics Placement test result.

BM150 Principles of Entrepreneurship**C-3 Cr-3**

This course is designed to provide a basic understanding of entrepreneurship and the challenges of starting and operating a small business. Emphasis is placed on creating and successfully leading a business entity by developing a sustainable competitive advantage. Topics include self-assessment, planning, decision-making, legal forms of business, identifying and leveraging business opportunities, capital formation, start-up issues, the need for social responsibility and ethics, and how to develop long-term relationships with customers, suppliers, and employers. A major course requirement is the presentation of a realistic business plan.

BM206 Business Ethics**C-3 Cr-3**

This course provides an overview of business ethics and ethical management practices, with emphasis on the process of decision making and working through contemporary dilemmas faced by business organizations, managers, and employees. It demonstrates how ethics can be integrated into business decisions and applied to careers. Topics include an overview of business ethics; corporations and social responsibility; business and society; consumers and the environment; ethical issues in the workplace; business ethics in a global and multicultural environment; values, rights, and responsibilities; and frameworks for ethical decision-making in business.

BM212 International Marketing**C-3 Cr-3**

This course emphasizes the basic principles and practices of international marketing. Techniques and strategies of operating in a global environment are a primary focus. Areas of concentration include the international legal environment, foreign business customs, political systems, and U.S. roles in global relations. Prerequisite: BM120 Principles of Marketing.

BM213 Business Logistics**C-3 Cr-3**

This course investigates the seven Rs of business logistics: the right product, in the right quantity, in the right condition, at the right place, at the right time, for the right customer, and at the right cost. Topics include the theories, concepts, analytical techniques, managerial information practices, economic characteristics, and business environment of logistics in relation to the need to manage physical resources and services to accomplish a strategic goal. Private and public sectors are explored and their differences investigated. Prerequisite: An appropriate Mathematics Placement test result.

BM230 Money and Banking**C-3 Cr-3**

This course examines the functions of money and credit and their roles in the economy through the variety of financial intermediaries or financial institutions. Topics include the determination of interest rates; the role, functions, and forces that shape and change financial institutions; the operation of the money, capital, and debt markets; and the role and functions of the Federal Reserve in the financial system. Prerequisites: AC115 Financial Accounting and BM115 Principles of Macroeconomics.

BM240 Personal Lines Insurance**C-3 Cr-3**

This course explores the major forms of Personal Lines insurance through policy and statute analysis. It covers basic insurance concepts along with dwelling, homeowner, flood, personal automobile, and personal umbrella policies. This course also details New York State's agent/broker licensing laws and business practices. Subject to attendance requirements, this course meets the 40-hour educational requirement for the New York Personal Lines Agent/Broker examinations (Series 10-54).

BM243 Commercial Insurance**C-3 Cr-3**

This course explores the major forms of Commercial insurance through policy and statute analysis. It covers basic insurance concepts along with commercial property, commercial general liability, commercial automobile, commercial crime, inland marine, and workers compensation insurance. This course also details New York State's agent/broker licensing laws and business practices. Subject to attendance requirements, this course completed in addition to BM240 Personal Lines Insurance, meets the 90-hour educational requirement for the New York Property and Casualty Insurance Agent (Series 10-55) and Broker (Series 10-56) examinations. Prerequisite: BM240 Personal Lines Insurance.

BM244 Life, Accident & Health Insurance**C-3 Cr-3**

This course provides in-depth information about life, accident, and health insurance, especially for those people who plan to enter the insurance. Successful completion of this course is recommended to sit for the New York State Agents Exam in Life, Accident, and Health Insurance.

BM251 Organizational Behavior**C-3 Cr-3**

This course is the study of how individuals and groups act in organizations. It explores a systems approach in developing organizational and human resource objectives, as well as a holistic approach in examining relations among groups, individuals, and systems as they relate to the organization.

BM252 Supervisory Management**C-3 Cr-3**

This course provides a working knowledge of supervisory skills necessary for dealing with human problems within the organization. It covers elements such as communications, motivation, discipline, negotiations, and conflict management. Prerequisite: BM251 Organizational Behavior.

BM253 Global Perspectives in International Business**C-3 Cr-3**

This course shows students strategies and corporate policies of international firms, and how they operate globally in both internal and external environments. It covers economic, political, and cultural topics as they relate to international business, which include goods, services, technology, and capital, in addition to managerial knowledge and how it must transcend borders.

BM254 Human Resources Management**C-3 Cr-3**

This course introduces the functions involved with managing the human resources within an organization. Topics include job design and analysis, recruitment and selection, performance appraisals, training, compensation administration, benefits, and employee rights.

BM255 Select Topics in Entrepreneurship & Business Operations**C-3 Cr-3**

This course provides critical elements of various disciplines and

topics of interest in entrepreneurship and business operations. Possible topics include innovation/product development, value chain management, entrepreneurial legal issues, human resources, negotiation strategies, quality, sustainability, compliance, and areas of controversy in the current external business environment.

BM262 Marketing Management**C-3 Cr-3**

This course presents the marketing management process and the marketing manager's role. Topics include the marketing decision-making process, marketing concepts, the process of strategic planning, and marketing planning. Prerequisite: BM120 Principles of Marketing.

BM264 Professional Selling**C-3 Cr-3**

This course covers the essential skills to sell a product, service, or idea. Activities include the writing and preparing of a detailed presentation plan as well as the expository delivery of the plan.

BM275 Capstone in Entrepreneurship**C-3 Cr-3**

In this capstone course, students build upon the fundamentals learned in related coursework to research, develop, and write a detailed business plan. Prerequisite: BM150 Principles of Entrepreneurship.

BM290 Business Internship**C-1 P-6 Cr-3**

This internship provides realistic training in a student-chosen field of study. It requires 12 hours of work per week in a supervised environment and helps to prepare for entrance into a competitive work environment. It creates a bond among students, the College, and the business community, and may lead to employment opportunities. A work experience journal is required along with a supervisor evaluation.

BM294 Business Internship**C-2 P-12 Cr-6**

This internship provides realistic training in a student-chosen field of study. It requires 13 hours of work per week for 12 weeks in a supervised environment. A work experience journal is required along with a supervisor evaluation, attendance in the class, and a student presentation. Students must be matriculated in a Business-related major with a 2.0 major GPA, and with a minimum of 36 semester hours earned OR permission of the faculty member(s) teaching the course.

BM300 Independent Study in Business**Cr 1-4**

CB Construction and Building Courses

Physical Sciences, Engineering & Applied Technologies Department

CB101 Carpentry 1**C-2 P-6 Cr-5**

This course introduces description and use of construction materials, tools, safety procedures, and framing techniques for foundations, floors, and walls. Hands-on experience and safety are emphasized.

CB102 Carpentry 2**C-2 P-6 Cr-5**

This course covers the design and construction of residential roofs, including rafters and trusses. Hands-on experience and safety procedures are emphasized. Prerequisite: CB101 Carpentry 1.

CB103 Carpentry 3**C-2 P-6 Cr-5**

This course covers the finishing of the interior and exterior of a residential structure. Topics include windows and skylights, interior and exterior doors, frames and walls, thermal barriers, and sound

insulation, stairs, and plaster, and drywall. Hands-on experience and safety procedures are emphasized. Prerequisite: CB101 Carpentry 1.

CB104 Basic Woodworking **C-2 P-6 Cr-5**

This course covers the practical aspects of basic woodworking in a shop. Topics include the use of table saws, planers, jointers, band saws, and lathes; design, layout, and construction of cabinets and countertops. Hands-on experience and safety procedures are emphasized.

CB121 Masonry 1 **C-2 P-6 Cr-5**

This course introduces the fundamental concepts of concrete construction. Topics include theory of concrete design, construction methods and materials, tools, foundations, walls, and flat work. Hands-on experience and safety procedures are emphasized.

CB122 Masonry 2 **C-2 P-6 Cr-5**

This course introduces the fundamental concepts of block masonry construction. Topics include the history, development, and manufacturing of mortar and block, mixing mortar, laying block, and the use and care of tools and scaffolding. Hands-on experience and safety procedures are emphasized.

CB123 Masonry 3 **C-2 P-6 Cr-5**

This course introduces the fundamental concepts of brick masonry construction. Topics include the history, development, and manufacturing of brick, mixing mortar, bonding, corners, laying brick masonry for fireplaces, chimneys and arches, and the use and care of tools and scaffolding. Hands-on experience and safety procedures are emphasized.

CB126 Blueprint Reading (Construction Trades) **C-2 P-2 Cr-3**

This course provides an introduction to architectural working drawings. Topics include background principles, residential working drawings, specifications, and reading the working drawing of a small structure.

CB131 Construction Estimating **C-2 P-2 Cr-3**

This course covers the organization of a formal estimate for a residential building and the types of estimates used in construction, along with qualifications of an estimator. Each division is broken down for a thorough understanding of the materials and methods used to calculate proper quantities. Actual working drawings and specifications for a small residence are used to compile a systematic estimate of materials and labor. Excavation, concrete work, masonry, and wood and structural steel construction are covered. Topics include builders' estimates, quantity take-off process, quantity determination, cost estimating from quantities, cost control system, contracts, bonds and insurance, overhead and contingency issues, and computer-assisted estimating.

CB301 Industrial Practicum **P-9-36 Cr-3-12**

This course allows for the enhancement of academic skills by gaining work-related experience. Students arrange for the practicum, which must conform to Department guidelines.

CG Computer Graphics Courses

Art Department

CG133 Introduction to Animation **C-1 P-4 Cr-3**

This course provides the foundation of traditional animation techniques. These techniques are mastered before moving on to digital animation. Techniques in portfolio projects are used in the second year.

CG134 Digital Applications for the Animator **C-2 P-2 Cr-3**

This course introduces digital imaging and digital illustration techniques, and software used by the animator. It explores the

aesthetic and technological potential of digital imaging and digital illustration software. The use of digital media and the creation of computer-based imagery are emphasized. It includes advanced technical instruction in the use of software and peripheral devices (scanners, printers, file storage, and other technologies).

CG144 Digital Animation 1 **C-2 P-2 Cr-3**

This course covers the developmental elements of computer animation. Topics include user interface, various 3D modeling techniques, texture mapping, and timing. The course builds on the basic principles of traditional animation with the techniques of computer animation and production processes. Prerequisite: CG133 Introduction to Animation.

CG145 Digital Animation 2 **C-1 P-4 Cr-3**

This course further develops digital animation skills and techniques. Topics include character modeling, mapping, materials, animation, and production techniques. Prerequisite: CG144 Digital Animation 1.

CG146 Storyboarding **C-1 P-4 Cr-3**

This course introduces the principles and techniques used in the creation, practice, and production of storyboards for animation, multimedia, and filmmaking. It covers scriptwriting, along with the fundamental principles of storyboarding through traditional techniques and practice. Drawing skills and composition are applied to set location, cinematography, sound, special effects, and character actions along with fluid storylines in a variety of genres. The results are more proficient visual communicators in industry applications, including animated films, cartoons, commercials, documentaries, live-action feature films, industrial and institutional films, and video gaming. Prerequisite: FA101 General Drawing.

CG147 Sculptural Procedures for the Animator **C-2 P-2 Cr-3**

This course introduces current sculpting techniques used by the animation industry for character creation and design. Work is done with traditional 3D media, digitized models, and 3D animation software. Earth clays, polymer clays, and foam sculpture are used. Armatures are used to study stop-motion, maquettes, and the digitizing process. Character types range from realistic to imaginary. Prerequisite: FA101 General Drawing.

CG213 Graphic Design for the World Wide Web **C-2 P-2 Cr-3**

This course explores design concepts for the World Wide Web (WWW) while developing expertise in web-based typography, image file formats and sizes, hexadecimal color, frames, cascading style sheets, tables, and site interactivity. Emphasis is placed on the understanding of browser constraints, hypertext markup language (HTML), site planning, and site structure. Prerequisite: GD110 Digital Design.

CG214 Motion Graphics **P-6, Cr-3**

This course introduces students to methods of producing motion graphics. Students use problem solving to explore and produce design. Production timeline and graphical requirements of a multimedia project are demonstrated through the manipulation of digital images in a studio environment. Topics include planning, storyboarding, sequencing, compositioning, and designing still images integrated with the aesthetic issues of 2D, 3D, and 4D design.

CG231 Advanced Animation Techniques **C-1 P-4 Cr-3**

This course incorporates full production animation techniques. It expects advanced exploration of storyboarding, set design, cinematography, sound, and finished character development. Contemporary digital recording and editing systems are synthesized with traditional animation techniques. Prerequisites: CG133 Introduction to Animation.

CG233 Animation Production Workshop **C-1 P-4 Cr-3**

This course uses a production animation environment in which students are expected to work in groups to produce animations

specific to an assigned topic. Projects may include animation for advertising, entertainment, educational, and scientific applications. Corequisite: CG234 Professional Practices for the Animator.

CG234 Professional Practices for the Animator C-1 P-4 Cr-3

This course emphasizes the completion of a professional demo reel, which demonstrates a student's strength within 3D animation. Students complete a three-minute animation. Prerequisite: CG145 Digital Animation 2. Corequisite: CG233 Animation Production Workshop.

CG300 Independent Study in Computer Graphics Cr-1-4

CH Chemistry Courses

Mathematics & Natural Sciences Department

CH101 Physical Science C-3 P-2 Cr-4

This course introduces the principles and methods of physical science. It stresses the structure and properties of materials and their interactions. Careful measurement, observation, and the scientific method are covered in lecture and laboratory to develop quantitative reasoning ability. Prerequisite: An appropriate Mathematics Placement test result.

CH111 Introduction to Chemistry 1 C-3 P-2 Cr-4

This course introduces chemistry for those who have had no prior chemistry study or who need chemistry review. Topics include matter, measurement, atomic structure and the periodic table, chemical bonding and reactions, and the three phases of matter. This course does not meet graduation requirements for Chemistry, Biology, or Engineering majors. Prerequisite: An appropriate Mathematics Placement test result or MA090/MA091.

CH112 Introduction to Chemistry 2 C-3 P-2 Cr-4

This is the second introductory level chemistry course. Topics include solutions, colligative properties, concentrations, acids and bases, salts, solution equilibrium, pH buffers, electrolytes, and an introduction to organic molecules of biological importance. This course does not meet graduation requirements for Chemistry, Biology, or Engineering majors. Prerequisite: CH111 Introduction to Chemistry 1.

CH115 Introduction to Metallurgical Chemistry C-3 P-2 Cr-4

This course introduces basic theory and practice as applied to the industrial setting. It emphasizes the practical aspects of working with chemicals and materials and covers the common forms of analytical chemistry, including instrumentation. Topics include problem-solving, the nature of matter, atomic structure and bonding, nomenclature, stoichiometry, gases, solution chemistry, electrochemistry, and organic chemistry. Prerequisite: MA121 Fundamentals of College Mathematics 1 or equivalent.

CH120 Demystifying Science: Scientific Literacy in the Physical Sciences C-3 P-2 Cr-4

This course introduces students to physical science and emphasizes the attainment of scientific literacy. Students develop scientific literacy skills through the exploration of various physical science current event issues including atmospheric ozone, ozone as a pollutant, transportation fuels, medicinal chemistry, nuclear energy, climate change, and water resources and pollutants.

CH131 College Chemistry C-3 P-3 Cr-4

This course is a one-semester introductory chemistry course for students other than those in Chemistry, Biology, and Engineering Science majors. Topics include an overview of modern inorganic, organic, and biochemistry along with an historical perspective. It emphasizes learning the language and methodology of chemistry

as it relates to society. Careful observation and measurement is stressed in lecture and laboratory to develop quantitative reasoning ability. Prerequisites: An appropriate Mathematics Placement test result, MA115 Intermediate Mathematics, MA110 Elementary Statistics, or MA108 Concepts in Mathematics.

CH135 Introduction to Organic Chemistry C-3 P-3 Cr-4.5

This course is for students in the allied science and allied health professions. Topics include bonding, physical properties, chemical properties, nomenclature, and analysis of the common organic compounds. The laboratory segment introduces basic organic laboratory techniques such as recrystallization, distillation, extraction, chromatography, and instrumentation. Prerequisite: CH131 College Chemistry or equivalent.

CH141 General Chemistry 1 C-3 P-3 Cr-4

This course introduces to the field of chemistry for science and engineering students. Topics include dimensional analysis, stoichiometry, periodicity, atomic structure and bonding, the states of matter, solutions, and acid and base concepts. The laboratory exercises exemplify chemical principles and develop individual problem-solving abilities. The laboratory experience includes preparation of the laboratory report and notebook. Prerequisites: high school chemistry, an appropriate Mathematics Placement test result, MA121 Fundamentals of College Mathematics 1, or MA139 College Algebra; or a corequisite of MA125 College Algebra & Trigonometry.

CH142 General Chemistry 2 C-3 P-3 Cr-4

This course is a continuation of CH141 General Chemistry 1. Topics include chemical thermodynamics, electrochemistry, chemical kinetics, chemical and solution equilibrium, descriptive organic chemistry, nuclear chemistry, and descriptive chemistry of elements. Prerequisite: CH141 General Chemistry 1.

CH200 Industrial Practicum P-9 Cr-3

This course provides hands-on experience in chemical or environmental technology in an industrial or regulatory environment. It is offered on demand and may be taken at any time after completion of college chemistry, with appropriate placement arranged. A minimum of four weeks (135 hours) on site is required. Students may be paid by the industry involved. Prerequisite: One year of college chemistry and instructor permission.

CH229 Chemical Instrumentation C-3 P-4 Cr-5

This course in applied instrumentation stresses the analytical solution of environmental/chemical problems by application of instrumental methods. Emphasis is placed on sampling, solution preparation, hands-on instrument operation, records keeping, data processing, and interpretation. Samples are taken to illustrate problems of air and water pollution, and solid and hazardous waste. Analysis methods include spectroscopy, electrochemistry, chromatography, thermal, and industrial hygiene. As time allows, field trips supplement the campus experience. Prerequisites: CH141 General Chemistry 1 and CH142 General Chemistry 2.

CH246 Quantitative Analysis C-3 P-4 Cr-5

This course introduces analytical chemistry and develops the skills and perspectives necessary to solve problems. Topics include sampling, gravimetry, titrimetry, stoichiometry, equilibria, redox, potentiometry, and spectrophotometry. Samples are chosen to illustrate typical industrial and environmental problems. As time allows, field trips supplement the campus experience. Prerequisites: CH141 General Chemistry 1 and CH142 General Chemistry 2.

CH247 Organic Chemistry 1 C-3 P-4 Cr-5

This course introduces organic chemistry for science and engineering students. It includes a systematic study of classes of

carbon compounds. It stresses reaction mechanisms, methods of synthesis, structured optical activity, chemical physical properties, and nomenclature. Topics included alkanes, alkenes, alkynes, aromatic compounds, stereochemistry, and spectroscopy.

Prerequisites: CH141 General Chemistry 1 and CH142 General Chemistry 2.

CH248 Organic Chemistry 2 **C-3 P-4 Cr-5**

This course is a continuation of CH247 Organic Chemistry 1 in developing the topics of spectroscopy, alkyl halides, alcohols, ethers, carboxylic acids and their functional derivatives, aldehydes and ketones, carbanions, amines, and phenols. The laboratory exercises introduce multi-step synthesis and the analysis of organic compounds. Prerequisite: CH247 Organic Chemistry 1.

CH300 Independent Study in Chemistry **Cr 1-4**

CI Computer & Information Sciences Courses

Business, Cybersecurity & Computer Sciences Department

CI104 Introduction to Cybersecurity **C-2, P-2, Cr-3**

This course provides students with a broad understanding of the concepts and interdisciplinary applications of cybersecurity and its impact on society. It examines the historical development of security in technology as it relates to governance, personal information and assets, and major commerce sectors such as finance, healthcare, retail, and manufacturing. It also introduces basic networking, assessing and handling of security risks, hardware components, and basic computer troubleshooting.

CI110 Principles of Programming **C-2 P-2 Cr-3**

This course introduces computer programming methods and techniques of problem-solving using structured programming. Students analyze problems and organize effective solutions. Techniques of problem-solving include defining the problem, specifying required input and output, developing the algorithm, and testing the solution. Students also translate the algorithms to a high-level programming language. Prerequisite: An appropriate Mathematics Placement test result or MA115 Intermediate Mathematics.

CI112 Networking Fundamentals **C-2 P-2 Cr-3**

This course introduces the basics of computer networking from concepts and terminology to materials and equipment. Topics form the foundation for further networking courses, with a solid grasp of fundamentals that lead to experience with equipment. The majority of this course deals with theory, with equipment used for demonstration. Prerequisite: IS101 Computers and Society, IS100 Introduction to Computers and Society, CI104 Introduction to Cybersecurity, or CI121 Microcomputer Techniques for Science.

CI121 Microcomputer Techniques for Science **C-1 P-4 Cr-3**

This course provides hands-on training and experience involving scientific word processing, computer-based data analysis, graphical analysis techniques, interfacing hardware and software, data management concepts, scientific simulation methods, imaging technology, and presentation software. It uses a variety of hardware and software currently in the scientific community. Prerequisite: One year of college preparatory mathematics.

CI124 Windows Systems Security I **C-2 P-2 Cr-3**

This course provides an understanding of Microsoft Windows 2000/XP Professional, or its current version. It focuses on configuring, optimizing, and securing this software. It introduces principles of server and client hardware selection, server installation

and configuration, server monitoring and tuning, and problem troubleshooting. Prerequisite: IS101 Computers and Society, IS100 Introduction to Computers and Society, or CI121 Microcomputer Techniques for Science.

CI130 Programming in C++ **C-2 P-2 Cr-3**

This course provides a comprehensive study of C++ with an emphasis on sound structured programming principles, good style, and top-down method of program design. It covers the designing, coding, executing, and debugging of C++ programs to solve problems in a variety of fields. Corequisite: CI110 Principles of Programming.

CI132 Unix Operating System & Security **C-2 P-2 Cr-3**

This course provides an understanding of the UNIX operating system, covering commands, utilities, and scripts. It focuses on the skill development needed to administer a UNIX system, emphasizing file management, security issues, upgrades, and backups. The installation and maintenance of UNIX systems are addressed. Prerequisite: IS101 Computers and Society, or IS100 Introduction to Computers and Society, or CI121 Microcomputer Techniques for Science.

CI140 Computer Programming for Engineers & Scientists **C-2 P-2 Cr-3**

This is an introductory course designed to meet the needs of Engineering and Physical science students. The course provides an introduction to a variety of computational and data analysis skills necessary for a scientific and/or engineering career. Topics include computer organization, structured engineering and scientific programming, scientific word processing, spreadsheet and graphical analysis, and presentation techniques. Prerequisite: Three years of college preparatory mathematics including trigonometry.

CI142 Computer Forensics **C-2 P-2 Cr-3**

This course covers the acquisition and analysis of data recovery from computer networks to identify potential security or legal evidence. Topics include data recovery after deletion, and the roles and methods of discovering inappropriate data use. It covers operating systems and their vulnerabilities, and techniques about data recovery for use in litigation and future protection. It examines forensic cases. Prerequisite: IS101 Computers and Society, IS100 Introduction to Computers and Society, CI104 Introduction to Cybersecurity, or CI121 Microcomputer Techniques for Science.

CI204 Software Support Strategies **C-1 P-6 Cr-3**

This course provides a comprehensive understanding of technical support and software troubleshooting methods. Best practices and techniques for effective industry communication skills are also explored. Students learn to analyze problems, and develop and implement practical solutions. Students study under the guidance of industry professionals. Prerequisite: CI112 Networking Fundamentals.

CI212 Internet Security **C-2 P-2 Cr-3**

The course provides an overview of computers and network security, addressing the balance of access and security in standard practices and performance issues. It covers the effective design, implementation, and support of security policies for large-scale enterprise networks. It deals with preventive and post-event recovery tools. Prerequisite: CI104 Introduction to Cybersecurity, CI112 Networking Fundamentals, or CI121 Microcomputer Techniques for Science.

CI224 Windows Systems Security II **C-2 P-2 Cr-3**

This course helps to develop a comprehensive understanding of Microsoft Windows 2000 Server, or its current version. Topics include server and client hardware selection, server installation and configuration, network printing services, remote access services, network inter-operation, internet set up, server monitoring

and tuning, and problem troubleshooting. Prerequisites: CI124 Windows Systems Security I, and IS101 Computers & Society, or IS100 Introduction to Computers & Society or CI121 Microcomputer Techniques for Science.

CI230 Data Structures **C-2 P-2 Cr-3**

This course introduces advanced programming concepts. It emphasizes data encapsulation and abstraction through development of static and dynamic data structures. It covers stacks, queues, linked lists, trees, and graphs along with recursion as a programming tool as well as searching and sorting techniques. Prerequisite: CI130 Programming in C++.

CI232 Security Policies **C-2 P-2 Cr-3**

This course covers the design, implementation, and support of security policies for large-scale enterprise networks. It addresses security analysis/defensive tools, including implementation and circumvention. Prerequisite: IS101 Computers and Society, or IS100 Introduction to Computers & Society, or CI104 Introduction to Cybersecurity, or CI121 Microcomputer Techniques for Science.

CI242 CISCO Networking **C-2 P-2 Cr-3**

This course addresses LAN and WAN setup and configuration. It covers specific routing protocols and their application to physical networks. It builds upon the vocabulary and theory of networking fundamentals through hands-on experience.

CI245 JAVA Programming **C-2 P-2 Cr-3**

This course introduces the concepts of object-oriented programming (OOP) and the general purpose Java programming language. Topics include data abstraction, data encapsulation, inheritance, polymorphism, class structures, software design with design patterns, application programming, data types, selection and loop structures, graphical user interface programming, exception handling, data streams, and cryptographic techniques. Prerequisite: Programming in C++ (CI130), or permission of the Instructor.

CI256 Introduction to Programming for the Internet **C-2 P-2 Cr-3**

This course introduces the tools needed to create and manage a web site. Topics include history of the Internet and the World Wide Web (WWW), how to access the WWW, goals needed to create a successful web site, page layout programs, and an introduction to Hypertext Markup Language (HTML). It discusses Common Gateway Interface (CGI) scripts and legal issues of copyright on the web. Prerequisite: CI130 Programming in C++ or IS180 Internet for Business, OR permission from the Associate Dean, Business & Cybersecurity Department.

CI260 Microcomputer Programming **C-2 P-2 Cr-3**

This course focuses on assembler language programming of the 8086 microprocessors. It reviews of the binary number system and arithmetic operations and signed binary numbers, and studies the architecture of the 8086 and its associated family of chips. It covers addressing modes and their applications with respect to the instruction set. It introduces interfacing techniques in preparation or advanced courses. Prerequisite: CI130 Programming in C++.

CI271 Database Design & Implementation **C-2 P-2 Cr-3**

This course covers database management systems and query languages, including relational database and procedural query languages. It includes projects using database file organization, data structures, and development techniques to design application databases. It emphasizes the role of database in system development and information system design. Prerequisite: Any three-credit programming language.

CI272 Visual Basic **C-2 P-2 Cr-3**

This course introduces object-oriented programming (OOP)

techniques in a Windows environment. It covers the fundamentals of event driven programming by use of the Rapid Application Development tool Visual Basic. It emphasizes planning, programming, and debugging VB applications using modern programming techniques and practicing good graphical user interface design. Prerequisite: CI130 Programming in C++.

CI280 Computer Graphics 1 **C-2 P-2 Cr-3**

This course introduces the field of 3D computer graphics. Topics include 2D vector algebra, 3D model creation, 3D transformation theory, texture and shader techniques, lighting effects, camera basics, mesh creation of model resources, user interactivity, animation techniques, and methods for achieving physically realistic behaviors. It uses a professional graphics package and 3D design package to complete programming and laboratory assignments. Prerequisites: CI245 JAVA Programming and MA121 Fundamentals of College Mathematics 1.

CI285 Systems Operations & Management **C-3 Cr-3**

This course introduces operating system concepts, including history, multi-tasking, management of processes, devices, memory and files, scheduling, security, virtual, real-time, and distributed systems. Prerequisite: Any three-credit programming language.

CI300 Independent Study in Computer Science **Cr 1-4**

CJ Criminal Justice Courses

Social Sciences & Public Services Department

CJ101 Introduction to Criminal Justice **C-3 Cr-3**

This course introduces the basic elements of the American criminal justice system, from its legal roots and history to its most current concerns. It analyzes the criminal justice process — from arrest to trial and disposition — emphasizing the function and structure of each component. It provides an understanding of how each component responds to crime and how the key question of individual rights and public safety is addressed. Attention is given to the elements of crime, the role of the police, courts, and corrections, and to the challenges facing this system in an increasingly diverse democratic society.

CJ102 Introduction to Forensic Science **C-3 Cr-3**

This course introduces students to forensic science topics, including crime-scene processing, evidence collection, analysis and admissibility, fingerprints, firearms and tool marks, questioned documents, fire and explosives, blood splatter, forensic photography, trace evidence, entomology, anthropology, the law, pathology, and instrument analysis.

CJ106 Ethics in Criminal Justice **C-3 Cr-3**

The goal of this course is two-fold: first, to recognize the ethical implications of the daily decisions made by justice system personnel; and, second, to evaluate individual ethical frameworks. It addresses key analytical concepts including utilitarianism, deontology, peacemaking, codes of ethics, and tests of moral reasoning to resolve ethical dilemmas commonly found in the administration of justice, including policing, courts, and corrections. It addresses the relationship of criminal justice to social justice, along with issues of cultural competence and diversity, especially as they illustrate the existence of dilemmas in applied ethics. Scenarios are used to raise moral dilemmas in the administration of justice, with resolution of these dilemmas and analysis of the issues.

CJ107 Juvenile Delinquency **C-3 Cr-3**

This course provides comprehensive explanations of delinquent behavior, an overview of the juvenile justice system, and a discussion of programs designed to prevent and address delinquency. It explores issues related to delinquency in an

increasingly diverse environment. It addresses social class, racial, and gender differences in delinquency, the significance of the invention of childhood, and the transformation of juvenile court from a social to a legalistic entity.

CJ108 Criminal Law **C-3 Cr-3**

This course examines the nature and functions of the criminal law. It uses controversial and landmark cases as a framework for an intensive examination of the classification of crimes and the assignment of penalties. It addresses recent court decisions involving the administration of the penal law, jurisdictional questions, and Constitutional protections. It uses the New York Penal Code as an exemplar.

CJ111 Policing in American Society **C-3 Cr-3**

This course explores the role of police in American society, both from an historical framework, as well as a contemporary point of view. Topics include the background of policing, the major types of police work, the role of police discretion, and legal and ethical questions of policing in society. Relationships among federal, state, and local agencies will be discussed as well as their relationship and interaction with the community.

CJ201 Laws of Evidence **C-3 Cr-3**

This course addresses the presentation of evidence at the time of trial, which is of paramount importance in the criminal justice system. It covers the history and philosophy of the rules and laws of evidence, including current rulings, the mechanics of admissibility, and definitions of crimes, as well as the attitudes of the court toward witnesses and the admissibility of evidence. Prerequisite: CJ101 Introduction to Criminal Justice.

CJ202 American Constitutional Law **C-3 Cr-3**

This course addresses the impact of the United States Constitution on the criminal justice system. It emphasizes the fundamental concepts on which the Constitution is based and stresses the Supreme Court decision-making process and schools of interpretation. It analyzes the relationship of the Bill of Rights, especially the Fourth and Fourteenth Amendments, to the criminal justice system. Prerequisites: PS101 American National Government, and either CJ101 Introduction to Criminal Justice or PS102 Introduction to Public Policy.

CJ204 Criminology **C-3 Cr-3**

This course focuses on the social construction of deviance and crime. It addresses major theoretical perspectives that explain crime in America. It investigates societal responses to crime and current issues facing the criminal justice system. It emphasizes public policy implications of the theoretical perspectives. Prerequisite: SO101 Introduction to Sociology.

CJ205 Principles of Investigation **C-3 Cr-3**

This course details the basic procedures followed by law enforcement officers as they investigate crimes. Topics include questioning complainants and eyewitnesses, interrogating suspects, preparing statements, investigating crime scenes, and applicable search and seizure laws. Techniques of crime scene investigation are studied, including photography, charting, note-taking, and the handling of evidence. These techniques are applied to specific property and personal crimes. Prerequisite: CJ101 Introduction to Criminal Justice.

CJ206 Introduction to Economic Crime Investigation **C-3 Cr-3**

This course defines and analyzes illegal acts which provide an economic return to the offender or for which victims bear an economic cost. It details the basic procedures followed by law enforcement officers as they investigate crimes. Topics include the physical and social costs of economic crime, as well as the investigation of securities and corporate fraud, fiduciary fraud,

corruption of public officials, medical crimes, and cybercrimes. Prerequisite: CJ101 Introduction to Criminal Justice.

CJ207 Penology **C-3 Cr-3**

This course addresses the history and philosophy of punishment systems and the background of corrections in America. It covers the impact of changing public opinion and criminal justice policies on corrections. The correctional system is examined from the perspectives of the inmate, the correctional officer, and the correctional administration. Prerequisites: CJ101 Introduction to Criminal Justice and CJ106 Ethics in Criminal Justice.

CJ208 Community-Based Corrections **C-2 P-3 Cr-3**

This course examines the history and philosophy of alternatives to incarceration. It analyzes the range of current alternatives, including probation, parole, and restorative and community justice programs designed to maintain offenders ties to their communities. It covers the philosophy and practice of probation, parole, mediation, circle conferencing, victim-offender reconciliation programs, victim impact panels, and other programs. In each community-based system, the roles of victim, offender, criminal justice system workers, and community members are discussed. At least three hours per week in related community agencies and two hours per week in seminar are required.

CJ209 Homeland Security **C-3 Cr-3**

This course provides an overview of the key challenges associated with defending American society from potential threats. It reviews attacks on American security from internal and external sources, the transformation of security issues in light of the 9/11 attacks, and the creation of a federal Department of Homeland Security. Topics include critical infrastructure protection, legal issues in homeland security, constitutional rights and legal protections, civil liberties, community and private industry involvement, as well as homeland security strategies and initiatives. Prerequisites: CJ101 Introduction to Criminal Justice.

CJ210 Juvenile Delinquency: Field Experience in Diversion & Corrections **C-2 P-3 Cr-3**

This course addresses the ways in which American communities respond to juvenile delinquency. Theories upon which juvenile diversion and corrections are based and the history of juvenile detention, diversion, and incarceration since the founding of the first juvenile court are studied. Community-based diversion programs, waiver and related "get-tough" approaches, as well as broad-based prevention programs, are discussed. At least three hours per week in supervised experiences in delinquency-related community agencies and two hours per week in seminar are required. Prerequisite: CJ107 Juvenile Delinquency.

CJ212 Street Gangs and Youth Violence **C-3 Cr-3**

This course provides both a comprehensive historical analysis of street gangs and an analysis of their modern development. Students examine major theories and socio-economic explanations for the existence of gangs; descriptions of the type of gangs, including small, regional, national, and female gangs; law enforcement techniques to deter gang development; and diversion efforts to keep youths out of gangs. Prerequisite: CJ101 Introduction to Criminal Justice or CJ107 Juvenile Delinquency.

CJ213 Animal Law **C-3 Cr-3**

This course acquaints students with the fundamental principles of animal law and their relationship to the criminal justice system. Topics include the history of animal law, the protection of animals by anti-cruelty laws, animal fighting, and agricultural animals, the social movement of animals in the legal system, and constitutional issues raised in cases involving animals.

CJ214 Criminal Justice Communications **C-3 Cr-3**

This course examines the nature and importance of communication

within the criminal justice system. Students develop report writing skills and an understanding of the impact report writing has on the investigation and prosecution of crime, as well as on the administration of justice. Students refine communication skills within criminal justice contexts. Observational skills, interview techniques, and field note-taking skills are developed. Applications to the Civil Service exam are used where appropriate. Prerequisites: CJ101 Introduction to Criminal Justice, and either EN101 English 1: Composition or EN106 English 1: Composition and Reading.

CJ216 Selected Topics in Criminal Justice **C-3 Cr-3**

This course provides the opportunity to investigate different aspects of the criminal justice system in greater depth. Topics considered vary each semester; see the Associate Dean of the Social Sciences & Public Services Department for specific offerings. Prerequisites: CJ101 Introduction to Criminal Justice and CJ204 Criminology.

CJ217 Restorative Justice **C-3 Cr-3**

This course introduces the theory and practice of resolving interpersonal and group conflict through nonviolent means. Religious, humanist, and feminist peacemaking traditions are among the theoretical perspectives addressed. Critical criminology, as it identifies problems in conventional criminal justice problem solving, is stressed. Arbitration, mediation, conflict intervention, and community-based initiatives for resolving disputes are studied. It considers ways in which employees of the criminal justice system can use the principles of restorative justice in their work.

CJ219 Restorative Practices: Mediation **C-3 Cr-3**

This course presents the history and philosophy of mediation, an informal dispute resolution practice. It analyzes key concepts, including conflict, language, power, diversity, equity, justice, communication styles, and creative problem-solving techniques. It addresses the role of mediation in civil and criminal justice disputes, and discusses current controversies. Through role-plays and mediations supervised by certified mediators, it applies principles to the solution of hypothetical and real civil, juvenile, family, and other disputes. Supervised and independent mediation experiences are made available as students qualify for them. Successful completion may result in eligibility to apprentice in certified mediation programs.

CJ290 Internship **C-1 P-6 Cr-3**

This course promotes an interest in criminal justice for students pursuing a related course of study. It reinforces academic concepts through practical work experience, assists in making career choices, and provides familiarity with the work of criminal justice agencies. Students participate on the staffs of local public or private criminal justice agencies. A minimum of 90 hours of field experience is required. Attendance and participation in seminar discussions are mandatory. Permissions of Internship Director and Associate Dean are required. Prerequisites: CJ101 Introduction to Criminal Justice and CJ106 Ethics in Criminal Justice.

CJ300 Independent Study in Criminal Justice **Cr 1-4**

CO Coaching Courses

Athletics, Physical Education & Recreation Department

CO231 Philosophy, Principles & Organization of Athletics in Education **C-3 Cr-3**

This course introduces the basic philosophy and principles of coaching as integral parts of physical education and general education. Topics include the function and organization of leagues and athletic associations in New York State; state, local, and national policies as related to athletics; standards for the responsibilities and duties of the coach as an educational leader;

legal considerations; team management; athletic facilities; budget and record keeping; and interacting with supervisors and officials. This is one of three mandatory courses required by the New York State Education Department to become permanently certified to coach high school athletics.

CO232 Health Science Applied to Coaching **C-2 P-2 Cr-3**

Topics in this course include first aid, CPR, and athletic training/conditioning principles. Upon completion, students are eligible for National Safety Council First Aid and American Heart Association CPR certification. This is one of three mandatory courses required by the New York State Education Department to become permanently certified to coach high school athletics.

CO233 Theory & Techniques of Coaching **C-1 P-3 Cr-2**

This course provides basic knowledge and skills in the use and development of sport-specific coaching methods and skills. New York State high school rules and regulations, teaching methods, performance skills, organization and management of practice sessions, and conditioning are explored. An internship in a specific sport under the supervision of a master coach or athletic trainer and seminar sessions in interschool athletic history are required. This is one of three mandatory courses required by the New York State Education Department to become permanently certified to coach high school athletics. Prerequisite: CO231 Philosophy, Principles & Organization of Athletics in Education.

CT Civil Engineering Technology Courses

Physical Sciences, Engineering & Applied Technologies Department

CT102 Engineering Drawing and MicroStation CAD **C-1 P-4 Cr-3**

This course includes both basic technical drawing techniques and MicroStation CAD to support engineering design. Topics include line types, dimensioning, scaling, auxiliary views, sectioning, and notations. This course also introduces the use of MicroStation software. Topics include operational concepts; main palette use; projecting elements; entity construction and editing; entity manipulations; and text and dimensioning parameters.

CT121 Statics **C-2 P-2 Cr-3**

This course is a study of force systems and their actions on bodies at rest. Topics include force systems, equilibrium, distributed forces, centroid, moment of inertia, and friction. Prerequisite: MA121 Fundamentals of College Mathematics 1. (Spring, Summer semesters.)

CT141 Introduction to Civil Engineering Technology **P-4 Cr-2**

This course introduces the many aspects of Civil Engineering to students who are interested in pursuing a career in either the civil engineering and/or surveying technology field. It also introduces students to the various tools required for use in these fields as well as the fields of engineering or engineering technology. The use of personal computers is introduced as an engineering tool for work enhancement. Experience is provided with a variety of microcomputer software applications, including word processing, electronic spreadsheets, presentations, file management, and database software. Engineering and surveying ethics are also introduced.

CT151 Surveying 1 **C-2 P-4 Cr-4**

This course introduces surveying, and includes the topics in the care and use of surveying instruments, field note procedures, land surveying, topographic surveying, construction surveying,

and mapping from field notes. Fieldwork includes the use of measurement equipment, levels, transits, the odolites, total stations, and Global Positioning System (GPS). Corequisite: MA121 Fundamentals of College Mathematics 1.

CT221 Strength of Materials: Civil C-2 P-4 Cr-4

This course introduces the fundamental concepts used to design structural members. Topics include the relationship between stress and strain, design of beams, shear and moment diagrams, deflection of beams, and columns. Practicums include computational work, related to problem analysis, and the performance of tests on various construction materials such as steel, concrete, and asphalt. Prerequisite: CT121 Statics. (Fall semester.)

CT222 Soil Mechanics & Foundations C-3 P-2 Cr-4

This course introduces soil mechanics and its application to problems encountered in civil engineering. Topics include the flow of water through soils, soil strength and compressibility, the effect of water on these properties, and geo-synthetics. The theories of soil mechanics are applied to the design of foundations and retaining walls. This course explores the methods of performing field explorations. Laboratory tests commonly used to evaluate the engineering properties of soils are studied and performed. Corequisite: CT221 Strength of Materials: Civil. (Fall semester.)

CT225 Structural Steel Design C-2 P-2 Cr-3

This course explores the design of structural members and connections using structural steel. Prerequisite: CT221 Strength of Materials: Civil. (Spring semester.)

CT226 Reinforced Concrete Design C-2 P-2 Cr-3

This course explores reinforced concrete beams, slabs, columns, footings, and walls. Prerequisite: CT221 Strength of Materials: Civil. (Spring semester.)

CT231 Transportation Engineering C-2 P-2 Cr-3

This course covers transportation modes, including the interlocking relationships among transportation, economics, community, and the environment. Emphasis is placed on the process behind a transportation project including planning, design, construction, and maintenance especially on highway design. Prerequisite: MA121 Fundamentals of College Mathematics 1.

CT232 Environmental Engineering C-2 P-2 Cr-3

This course covers basic practices in hydraulics and hydrology, as well as environmental topics encountered in the civil engineering field. Prerequisites: MA121 Fundamentals of College Mathematics 1 and CT151 Surveying 1.

CT242 Mechanical & Electrical Systems for Buildings C-3 Cr-3

This course explores the features of mechanical and electrical systems typically included as part of the utility of service grouping in modern buildings, including design principles, materials and equipment, installation, operation, and maintenance. All mechanical aspects of supporting a building are covered, including air handling, HVAC, heat loads and losses, electricity, plumbing, and water delivery.

CT243 Construction Management P-4 Cr-2

This course covers the legal problems, building codes, specifications, and efficient construction methods relating to construction projects. Topics include estimating costs of construction projects and construction scheduling.

CT253 Global Positioning and High Order Controls P-8 Cr-4

This course introduces engineering field surveys, equipment, and methods. Topics include azimuth determination, control and level nets, surveying with data recording total stations, and position

determination with Global Positioning Systems (GPS), including computer exposure for data reductions. Prerequisite: CT151 Surveying 1.

CT263 Digital Mapping C-1 P-4 Cr-3

This course covers remote sensing along with metric analysis and interpretation of digital images. Photo interpretations and digital image analysis include satellite and aerial platforms. Topics include concepts and theories of geographic information systems and traditional photogrammetry. Prerequisite: CT151 Surveying 1 or CT265 Introduction to Geographic Information Systems.

CT265 Introduction to Geographic Information Systems C-2 P-2 Cr-3

This course introduces the techniques and concepts of GIS. The mapping software package ArcGIS is used to display, analyze, and query spatial data sets. Topics include coordinate systems/datums, symbology, classifications, digital imagery, and global positioning systems.

CT266 Capstone GIS C-1 P-4 Cr-3

This independent study capstone course involves the creation of a project using GIS. Proposals must have instructor approval. Projects incorporate collecting GPS data, building an attribute geo-database, and are completed using ArcGIS software. Final presentations are required, which explain data collection techniques, analysis, and project success. Prerequisite: CT265 Introduction to Geographic Information Systems. (Spring semester.)

CT267 Advanced GIS C-2, P-2, CR-3

This course focuses on advanced topics and applications in analyzing and visualizing geospatial data. Topics include spatial modeling, advanced editing, geodatabase creation, and three-dimensional modeling. Prerequisite: CT265 Introduction to Geographic Information Systems.

CT299 Capstone Design Project - Civil C-1 P-4 Cr-3

In this course students collaboratively design and present a project that integrates program course knowledge with long-range planning and economic, budgetary, environmental, scheduling, and public concerns. Students present the final design to a group of professionals formally. Prerequisites: CT102 Engineering Drawing and MicroStation CAD, CT151 Surveying 1, CT222 Soil Mechanics and Foundations, and CT231 Transportation Engineering. Corequisite: CT232 Environmental Engineering.

CT300 Independent study in Civil Engineering Cr 1-4

DS Developmental Studies Courses

Education & Language Studies Department

DS051 Essential Reading & Study Skills C-5 Cr-0

This course improves reading and study skills. It stresses improvement of reading comprehension, vocabulary, and study skills in preparation for college-level coursework. Prerequisite: Appropriate placement test result. Mandatory Corequisite: ED112 Critical Thinking and Reasoning.

DS060 Personal and Academic Survival Skills C-3 Cr-0

This course develops the academic skills that are essential for college success. Topics include goal-setting, time management, memory improvement, note-taking, SQ3R, vocabulary development, and test-taking. Prerequisite: Appropriate placement test result.

DS090 Academic Reading C-3 Cr-0

This course develops reading and study skills necessary for success in college courses. Topics include time management, note

taking, review techniques, and test-taking skills. Reading instruction includes a systematic reading plan for textbooks, strategies for vocabulary acquisition, skimming and scanning techniques, and textbook notations. Prerequisite: An appropriate placement test result. Mandatory Corequisite: SO101 Introduction to Sociology or PY101 Introduction to Psychology.

ED Education Courses

Education & Language Studies Department

ED100 College Seminar

C-1 Cr-1

This course is an opportunity for students to develop the skills necessary to be successful in college. Students learn the importance of the faculty-student and advisor-advisee relationship, develop time management techniques, apply effective study skill techniques, recognize the implications of living in a diverse society, utilize college resources, and explore career and transfer requirements. Collaborative projects are included. Students matriculated in a degree program must take this course in their first term of study.

ED110 Speed Reading for College

C-3 Cr-3

This course emphasizes techniques for reading college-level material more effectively and efficiently. It includes rate improvement, flexibility, skimming, and scanning. Techniques for acquiring academic vocabulary are presented, and varied textbook materials are analyzed to maximize student use. Prerequisite: An appropriate placement test result.

ED112 Critical Thinking and Reasoning

C-3 Cr-3

This course assists in the development of critical thinking and reasoning skills. Topics include the characteristics of critical thinking, the effect of language on critical thinking and reasoning, drawing deductively valid conclusions, hypothesis testing, analysis of arguments, decision-making, and problem-solving methods. Prerequisite: An appropriate placement test result. Mandatory corequisite: DS051 Essential Reading & Study Skills.

ED150 Social & Philosophical Foundations of Education C-3 Cr-3

This course provides a study of the philosophical, historical, sociological, ethical, and political bases of the N-12 American educational system. It includes a comprehensive introduction to the issues, laws, policies, and practices affecting the education system, teaching, learning, and assessment. It explains ways that teachers and schools can work with students and families to provide a meaningful and equitable education. Topics include diversity in student populations, school funding, high-stakes testing, school desegregation and re-segregation, technology, standardized tests, and learning standards. The history of the American educational system is discussed in relation to current issues and topics in education, teaching, and learning. A 15-hour observation in a general education classroom must be completed.

ED151 Prevention & Safety Issues for the Classroom Teacher

C-1 Cr-1

This course focuses on prevention and safety issues facing professionals working with children. Topics include the identification and prevention of child abuse and neglect, violence in schools, and substance abuse. Traffic, fire, and safety issues are covered. Successful completion results in NYS certification in Identification & Reporting of Child Abuse and Neglect and in School Violence Prevention & Intervention.

ED201 Introduction to Early Childhood Education

C-3 Cr-3

This course aids in understanding and providing for the needs and education of young children in care/educational settings. Methods and materials used to plan, implement, and assess integrated learning experiences that consider the inter-relatedness of physical, social/emotional, and cognitive development are

explored. The importance of planning experiences for young children to develop intellectual curiosity and demonstrate a respect for diversity of backgrounds is emphasized. This course includes a minimum of eight hours of observation in a preschool classroom. Prerequisites: ED150 Social & Philosophical Foundations of Education and ED205 Child Development. Prerequisites must be met with a minimum grade of "C".

ED203 Early Childhood Methods & Materials

C-3 Cr-3

This course introduces early childhood curriculum development including planning, implementing, and assessment based on the New York State Learning Standards. It covers developmentally appropriate practice, methods, and materials for preschool through primary grade children. Emphasis is placed on curriculum that meets the needs of the whole child: cognitive, social, emotional, language, and physical. Knowledge is gained of early childhood curriculum that is respectful to the backgrounds of all children and families. Early childhood best practices are learned, grounded in early childhood educational theories, including Vygotsky and Piaget, and using play as the vehicle for planning, implementation, learning, assessment, and emphasizing Constructivist practice. Best practice techniques, including lesson plan and thematic unit planning, are demonstrated. This course includes a minimum of eight hours of observation in a preschool classroom. Prerequisites: ED150 Social & Philosophical Foundations of Education and ED205 Child Development. Prerequisites must be met with a minimum grade of "C".

ED204 Infant and Toddler Development

C-3 Cr-3

This course helps to synergize knowledge of total development from the neonatal stage to age three. These concepts are applied to develop appropriate strategies and care programs that are responsive and supportive of the young child and family. Information gained through observation of infants and toddlers, and through interviews with parents is collected and evaluated in terms of the impact of adult-child interactions and on activity planning. Programming problems and services to families are included. This course includes a minimum of 15 hours of observation in an 8-week-old to 3-year-old classroom/daycare setting. Prerequisites: ED150 Social & Philosophical Foundations of Education and ED205 Child Development. Prerequisites must be met with a minimum grade of "C".

ED205 Child Development

C-3 Cr-3

This course examines children's physical, social, emotional, language, and cognitive development from pre-natal to age 12. Topics include childhood development theories and research, the recognition and understanding of significant child behaviors, the role of parenting and culture, the role of the teacher, influence of peers, and play. Students must complete a 15-hour child observation in a daycare setting, observing both infants/toddlers and preschool children. Prerequisite: PY101 Introduction to General Psychology.

ED206 Language and Literacy in Childhood

C-3 Cr-3

This course studies acquisition of language and literacy from birth through age 8, including theories of acquisition, the components of language, development milestones, atypical development, and ESL. Methods are covered for teaching literacy to children from infants through intermediate grades, including learning to read and write, phonics, whole language other techniques, and integrating literacy into the whole curriculum. Topics include children's literature and how it can be used in the classroom and curriculum. A minimum of 10 hours of observation is required, five in a Universal Pre-Kindergarten (UPK) classroom and five hours in a primary grade classroom. Prerequisites: ED150 Social & Philosophical Foundations of Education and ED205 Child Development. Prerequisites must be met with a minimum grade of "C".

ED207 Observation and Assessment in Early Childhood Environments

C-3, Cr-3

This course explores the guidelines for appropriate observation and

assessment of young children, as well as how to apply numerous developmentally appropriate observation and assessment techniques commonly used in group care and educational settings. It examines the early childhood professional's role in sharing information gathered and in implementing practices that promote physically healthy/safe and emotionally secure environments. This course requires the student to complete a minimum of 30 hours of observation in early child care settings. Students concurrently enrolled in ED251 Educational Internship will have the ED207 observation hours waived. Prerequisites: ED150 Social & Philosophical Foundations of Education, ED205 Child Development, ED201 Introduction to Early Childhood Education, and ED203 Early Childhood Methods & Materials. Prerequisites must be met with a minimum grade of "C".

ED211 Introduction to Exceptionalities C-3 Cr-3

This course provides an overview of the education of children and adolescents with exceptionalities, focusing on those with disabilities and those with giftedness. Topics include the historical, philosophical and legal foundations of special education and other exceptionalities and their prevalence, causes, and characteristics. Educational modifications, accommodations, and teaching strategies for general and specific classrooms are addressed. Current issues and trends educating children with exceptionalities are explored. A minimum of fifteen hours of observations in a special education setting must be completed. Prerequisites: ED150 Social & Philosophical Foundations of Education and ED205 Child Development or PY212 Adolescent Psychology. Prerequisites must be met with a minimum grade of "C".

ED251 Education Internship C-1, P-4, Cr-3

This course provides the student with a field experience in an early childhood or primary grade classroom. Emphasis is placed on the special needs of young children in all-day care, including planning the daily program; promoting nutrition, health, and safety; involving parents; child guidance; observing and recording children's behavior; and meeting licensing regulations. The weekly seminar is used to discuss fieldwork experiences and teaching concepts and skills. A medical exam, fingerprinting, and Child Abuse Central Register clearance are usually required. Students must complete a minimum of 90 clock hours in a classroom setting in addition to a weekly seminar class. Prerequisites: A grade of C or better in the following courses: ED150 Social & Philosophical Foundations of Education, ED205 Child Development, ED201 Introduction to Early Childhood, and ED203 Early Childhood Methods & Materials. Corequisite: ED207 Observation & Assessment in Early Childhood Environments.

EI Educational Interpretation Courses

Education & Language Studies Department

EI101 Introduction to Education & Educational Interpreting C-5 Cr-5

This course provides an overview of the history and current status of education and educational interpreting throughout the United States. Content includes the role, practices, and skills of educators and educational interpreters in K-12 settings; philosophies of teaching, learning and assessment; communication systems; pertinent laws and regulations; resources, information, and strategies for consumer awareness and education; administrative practices and personnel structure of school systems; assessment and management of educators and educational interpreters; and topics that concern educators and educational interpreters.

EI120 Processing Skills and Discourse Analysis C-4 Cr-4

This course introduces the mental processing skills (pre-interpreting skills) of consecutive and simultaneous interpretation and an in-

depth look at the interpreter as a bicultural/bilingual mediator. It includes an overview of the theoretical models of interpretation, skill development activities, and practice activities. Interpreting theory, visualization, listening and comprehension, shadowing, paraphrasing, abstracting, dual task training, text analysis, cloze skills, and translation are included. A focus is presented on the interpreters communicative competence. It includes a study of conversational exchanges in English and ASL. Prerequisite: EI101 Introduction to Education & Educational Interpreting with a grade of "C" or better. Corequisite: AL202 American Sign Language 4.

EI201 Introduction to Consecutive Interpreting C-4 Cr-4

This course develops the ability to produce equivalent messages from English into ASL and ASL into spoken English. It focuses on text and communication analysis, as well as an introduction to process models in both consecutive and simultaneous interpretation. Content includes development of the skill sets needed while interpreting, along with management strategies. Prerequisites: EI120 Processing Skills and Discourse Analysis with a grade of "C" or higher and AL202 American Sign Language 4.

EI205 Transliteration C-3 Cr-3

This course introduces the task of sign language transliteration. It covers the ability to translate simultaneous from a spoken English message into an equivalent signed message while retaining English features. The focus is on transliterating in Pre-K-12th grade educational settings. Topics include analysis and interpretation of the macrostructure and microstructure of academic texts, transliteration of frozen texts, an introduction to team interpreting, and production of transliterations appropriate for contact language situations. Corequisite: EI250 Practical & Ethical Applications of Interpretation.

EI250 Practical & Ethical Applications of Interpretation C-3 Cr-3

This course covers the underlying principles of the Registry of Interpreters for the Deaf (RID) Code of Ethics and application of the Code of Ethics to the various situations and settings in which sign language interpreters' work. It explores how professional interpreters apply these principles in their daily work and how deaf consumers perceive the ethical role and function of interpreters. In addition to ethical considerations, etiquette and protocol for each setting are discussed. Settings include K-12, post-secondary, religious, medical, mental health, deaf-blind, performing arts, business and industry, and vocational rehabilitation.

EI251 Interpreting Practicum C-1 P-6 Cr-3

This course comprises a practicum placement under the immediate supervision of a professional interpreter who functions as the mentor, and the general supervision of the instructor. It involves activities such as observing the mentor and a variety of interpreters at work; preparing videotapes for mentor critique; interpreting under mentor supervision; interpreting independently; and meeting weekly with the mentor to discuss the practicum experience. Weekly meetings share observations and experiences gained from the practicum placement. Class discussions focus on linguistic issues in interpretation, ethical dilemmas, situational concerns, and problem-solving. This field experience requires a minimum of 90 hours. Prerequisite: The following courses with a grade of C or better and with a GPA of 2.5: EI201 Introduction to Consecutive Interpreting, EI250 Practical & Ethical Applications of Interpretation; and SO210 Deaf Culture & Community. Corequisite: EI205 Transliteration.

EI300 Independent Study in Educational Interpretation Cr 1-4

EM Emergency Medical Courses

Social Sciences & Public Services Department

EM200 Emergency Medical Services/Paramedic 1 C-6 P-12 Cr-12

Paramedic students will participate in classroom lectures, skill labs,

and clinical training and education that prepares them to provide medically competent and correct advanced life support treatment of the critically ill and injured, using good medical judgement.

Prerequisite: Current NYS Emergency Medicine Technician - Basic Certification.

EM201 Emergency Medical Services/Paramedic Clinical & Field Internship 1 **P-18 Cr-6**

The paramedic student will participate in supervised field internship where continued instruction and on-the-job practical application of knowledge and skills attained in Emergency Medical Services/Paramedic 1 are practiced and evaluated under the guidance of Faxton-St. Luke's EMS Education Program field preceptors. Candidates will also participate in various clinical rotations such as the emergency department, IV team, morgue, and pre-hospital experience. Corequisite: EM200 Emergency Medical Services/Paramedic 1.

EM202 Emergency Medical Services/Paramedic 2 **C-6 P-12 Cr-12**

Paramedic students will participate in classroom lectures, skills labs, and clinical training and education that prepares them to provide medically competent and correct advanced life support treatment of the critically ill and injured, using good medical judgment. This course includes ACLS, PALS, and PHTLS certifications. Prerequisites: EM200 Emergency Medical Services/Paramedic 1 and EM201 Emergency Medical Services/Paramedic Clinical & Field Internship 1. Corequisite: EM203 Emergency Medical Services/Paramedic Clinical & Field Internship 2.

EM203 Emergency Medical Services/Paramedic Clinical & Field Internship 2 **P-18 Cr-6**

The paramedic student will participate in supervised field internship where continued instruction and on-the-job practical application of knowledge and skills attained in Emergency Medical Services/Paramedic 1 and 2 and Emergency Medical Services/Paramedic Clinical & Field Internship 1 are practiced and evaluated under the guidance of Faxton-St. Luke's Healthcare EMS Education Program field preceptors. Candidates will also participate in various clinical rotations such as the emergency department, medical surgical intensive care, pediatrics, labor and delivery, psychiatric, and pre-hospital experience. Prerequisites: EM200 Emergency Medical Services/Paramedic 1 and EM201 Emergency Medical Services/Paramedic Clinical & Field Internship 1. Corequisite: EM202 Emergency Medical Services/Paramedic 2.

EN English Courses

Education & Language Studies Department

EN105 English Composition for Speakers of Other Languages **C-4 Cr-4**

This course satisfies the EN101 English 1: Composition requirement for non-native English speakers. It focuses on self-expressive, informative, and argumentative/persuasive writing. Emphasis is placed on the composition of clear, correct, and effective prose required both in academic settings and in a variety of professions and occupations in American culture. Patterns of organization and development, communicative grammar and syntax, and the significant acquisition of vocabulary and idiom are stressed. Prerequisite: An appropriate placement test result, or successful completion of SL116 ESL4: Advanced Composition.

EN English Courses

Humanities Department

EN090 Basic Writing Skills **C-3 P-2 Cr-0**

This composition course focuses on the organization and development of ideas, the subordination and coordination of sentences, and the practice of standard usage. Students develop skills in writing, revising, and editing paragraphs and short essays.

EN099 Introduction to College English **C-3 Cr-0**

This composition course focuses on the organization and development of ideas, the subordination and coordination of sentences, and the practice of standard usage. Students develop skills in writing, revising, and editing paragraphs and short essays. Prerequisite: Appropriate score on placement test writing sample.

EN101 English 1: Composition **C-3 Cr-3**

This course focuses on several kinds of writing: self-expressive, informative, and argumentative/persuasive, and others. A minimum of five essay compositions are required. The course emphasizes the composition of clear, correct, and effective prose required in a variety of professions and occupations. Prerequisites: The required developmental reading (DS051 Essential Reading & Study Skills, or SL115 ESL 4: Advanced Reading), and/or writing courses (EN099 Introduction to College English or SL116 ESL 4: Advanced Composition) or permission of the instructor or designee.

EN102 English 2: Ideas & Values in Literature **C-3 Cr-3**

This course encourages a deeper understanding of human nature and the human condition through the study of ideas and values expressed in imaginative literature. Emphasis is placed on the use and development of critical thinking and language skills. Library-oriented research is required. Prerequisite: EN101 English 1: Composition or EN106 English 1: Composition and Reading.

EN106 English 1: Composition and Reading **C-4 Cr-4**

This course focuses on several kinds of reading and writing: self-expressive, informative, argumentative/persuasive, and others. It emphasizes the comprehension and composition of clear, correct, and effective prose required in a wide variety of professions and occupations. Prerequisites: An appropriate placement test result, successful completion of EN099 Introduction to College English, or successful completion of SL116 ESL 4: Advanced Composition.

EN110 Oral & Written Communication **C-3 Cr-3**

This course covers the effective oral and written contexts of occupational communications. It includes practice in oral presentations, business letters, resumes, memos, instructional materials and reports, and visual aids. It is designed specifically for AOS degree programs. Prerequisite: An appropriate placement test result; or successful completion of DS051 Essential Reading & Study Skills or SL115 ESL 4: Advanced Reading, and successful completion of either EN099 Introduction to College English or SL116 ESL 4: Advanced Composition.

EN111 Public Speaking: A Mini-Course **C-1 Cr-1**

This mini-course emphasizes the basics of preparing, organizing, and delivering informative and persuasive speeches based on personal experience and a cursory look at current and local issues. It includes topic selection, gathering materials, and use of visual aids. This course does not substitute for EN150 Effective Speech.

EN147 Report Writing **C-3 Cr-3**

This course emphasizes the preparation of written reports, focusing on organization, format, language, and purpose. Reports based on the types written in the fields of business, industry, and sciences are prepared. Prerequisite: EN110 Oral & Written Communication.

EN148 Modern Short Story C-3 Cr-3

This course traces the development of the modern short story from its origins in other story forms to the present. Emphasis is placed on recent and contemporary writers, with attention given to content, form, and style.

EN149 Introduction to Poetry C-3 Cr-3

This course investigates the basic elements of poetry. It features poets from diverse backgrounds and focuses on form, imagery, figurative language, symbolism, allusion, and myths. Emphasis is on historical, philosophical, social, and psychological themes. Prerequisite: EN102 English 2: Ideas & Values in Literature.

EN150 Effective Speech C-3 Cr-3

This course is an introduction to public speaking. It emphasizes the fundamentals of preparing, organizing, supporting, and delivering the speech based on factual material. It includes topic selection, audience analysis, fact vs. opinion, outlining, supporting material, and visual support. Informative, demonstrative, and persuasive speeches are presented. Elements of interpersonal communication, logic, and persuasion are discussed. Prerequisite: EN101 English 1: Composition or EN106 English 1: Composition and Reading.

EN151 Practical and Professional Oral Communication C-3 Cr-3

This course provides guidance and practice in types of oral presentations commonly used in business, industrial, and academic settings. It involves making and presenting of oral and visual material for participation in small conference and large audience situations. It emphasizes group dynamics and the importance of interpersonal communication techniques in the conference or meeting situation. Prerequisite: EN150 Effective Speech.

EN152 Oral Interpretation C-3 Cr-3

This course involves the use of public speaking skills and techniques as an art form. It emphasizes the use of voice and body to interpret poems, passages from fiction, etc. in a public reading situation. Group readings of short plays or scenes from plays are included. This is highly recommended for students considering teaching, broadcasting, acting and/or interpretive arts. Prerequisite: EN150 Effective Speech or permission of the instructor.

EN153 Practical and Professional Written Communications C-3 Cr-3

This course covers the skills required to communicate in the industrial, business, and technical settings. Emphasis is placed on the objective presentation of ideas and information. It includes the preparation of formal and informal reports, abstracts, summaries, and proposals. It covers practice in the coherent organization of ideas, stylistic conventions, standard language usage, and the design and decisions necessary for successful written communication. Prerequisites: EN101 English 1: Composition or EN106 English 1: Composition and Reading, and EN102 English 2: Ideas & Values in Literature.

EN154 Persuasive Writing C-3 Cr-3

This course deals with the techniques of changing attitudes and opinions. It analyzes and provides practice in presentation of issues and evidence, methods of argumentation, and uses of emotion and other mechanisms. It examines research in influence factors, persuasibility, credibility, and the components of attitudes and opinions. Prerequisites: EN101 English 1: Composition or EN106 English 1: Composition and Reading, and EN102 English 2: Ideas & Values in Literature.

EN160 English Grammar and Usage C-3 Cr-3

This course improves the knowledge of basic English grammar, punctuation, vocabulary usage, and spelling. It is intended

for those who wish to apply this knowledge to their studies or work, to review material learned in earlier years, to prepare for a professional exam, or to understand the English language better.

EN188 Twentieth Century Poetry C-3 Cr-3

This course explores poetry written between World War I and the 1990s. Topics include the basic elements of prosody, prominent poetic forms, and key movements such as Modernism, the Harlem Renaissance, the Black Mountain and New York Schools, confessional poetry, and the beat movement, among others. Prerequisites: EN102 English 2: Ideas and Values in Literature

EN195 Mass Communications C-3 Cr-3

This course introduces the history, theory, processes, effects, and issues of mass media in American society. Areas of study include electronic, print, and digital media. Prerequisite: EN102 English 2: Ideas & Values in Literature.

EN196 Journalism C-3 Cr-3

This course introduces American journalism, including electronic media. Lectures cover historical and operational aspects, while readings and discussions explore controversial issues surrounding the news media. Written assignments provide practice in news gathering and journalistic writing: news reporting, live coverage, headline and caption writing, sports writing, feature writing, and reviewing. Prerequisite: EN102 English 2: Ideas & Values in Literature.

EN197 Creative Writing C-3 Cr-3

This course introduces the techniques of fiction and poetry writing through a series of discussions, readings, and writing activities. Prerequisite: EN102 English 2: Ideas & Values in Literature.

EN198 Contemporary Poetry C-3 Cr-3

This course focuses on the poetry written in recent years, with emphasis on living poets. Topics include the basic elements of prosody, prominent poetic forms, and current trends such as language poetry and rap, slam, and other performance-based modes. Prerequisites: EN102 English 2: Ideas and Values in Literature.

EN240 Children's Literature C-3 Cr-3

This course is a survey of traditional and contemporary literature for children from birth through Grade 6. Literary models include picture books, traditional literature, poetry, fantasy, juvenile fiction and nonfiction, biography, and informational books. Prerequisite: EN101 English 1: Composition and EN102 Ideas & Values in Literature.

EN241 19th-Century American Women's Fiction C-3 Cr-3

This course examines works of fiction by Nineteenth-Century American women, which have been traditionally excluded from the canon. It exercises a range of critical approaches to analyze novels and short stories. Topics include domesticity and the sphere of women, the voice of the mother and wife, political action and suffrage, the economics of writing and publishing, sentimentalism, and the link to contemporary society. Prerequisite: EN102 English 2: Ideas & Values in Literature.

EN248 American Literature 1 C-3 Cr-3

This course is a survey of representative American writers from the Columbian Exchange to 1914, including the Colonial, Revolutionary, and Federal periods, as well as Romanticism and Realism. Prerequisite: EN102 English 2: Ideas & Values in Literature.

EN249 American Literature 2 C-3 Cr-3

This course is a survey of representative American writers from 1914 to the present. The focus is on Modern, Post-Modern, and Contemporary movements in American Literature. Prerequisite: EN102 English 2: Ideas & Values in Literature.

EN255 World Literature 1 **C-3 Cr-3**

This course is a survey of the world literature masterpieces in English translation from the ancient times through the Renaissance. Among the major writers and texts studied are Homer, Sophocles, Socrates, Plato, Aristotle, Dante, the Bhagwad Gita, the Jataka, Machiavelli, Rabelais, Cervantes, and Shakespeare. Prerequisite: EN102 English 2: Ideas & Values in Literature.

EN256 World Literature 2 **C-3 Cr-3**

This course is a survey of world literature masterpieces in English translation from the Enlightenment through the Twentieth Century. Among the major writers studied are Swift, Pope, Voltaire, Roussnau, Dostoevsky, Tolstoy, Kafka, Ibsen, Camus, Garcia Marquez, Achebe, Mishima, and Mann. Prerequisite: EN102 English 2: Ideas & Values in Literature.

EN265 African-American Literature: A Survey **C-3 Cr-3**

This course provides an historical survey of the literature written by Americans of African descent from colonial times to the present. Emphasis is given to slave narratives, autobiographical writings, the Harlem Renaissance, and the development of the African-American novel. Prerequisites: EN101 English 1: Composition or EN106 English 1: Composition and Reading, and EN 102 English 2: Ideas & Values in Literature.

EN271 British Literature 1 **C-3 Cr-3**

This course is a survey of the British literary tradition through a study of selected masterworks in poetry and prose through the Eighteenth Century. Among the major writers studied are Chaucer, Spenser, Shakespeare, Donne, Milton, Dryden, Pope, Swift, and Johnson. Prerequisite: EN102 English 2: Ideas & Values in Literature.

EN272 British Literature 2 **C-3 Cr-3**

This course is a survey of the British literary tradition through a study of selected masterworks in poetry and prose from the Romantic period through the Twentieth Century. Among the major writers studied are Wordsworth, Coleridge, Byron, Shelley, Keats, Tennyson, Browning, Arnold, Hardy, Shaw, Joyce, Yeats, and Eliot. Prerequisite: EN102 English 2: Ideas & Values in Literature.

EN275 Shakespeare **C-3 Cr-3**

This course examines the life and work of William Shakespeare, the context in which Shakespeare was writing, and the importance of the theater during the English Renaissance. Prerequisites: EN102 English 2: Ideas and Values in Literature.

EN280 Dramatic Literature: The Classic Theatre **C-3 Cr-3**

This course covers the classic period of drama from the ancient Greek theater of 400 BCE to the neo-classic French theater of the Eighteenth Century. Major plays and playwrights from world theaters are discussed. Prerequisite: EN102 English 2: Ideas & Values in Literature.

EN281 Dramatic Literature: Modern Drama **C-3 Cr-3**

This course explores the period of drama beginning in the Nineteenth Century and running to the mid-Twentieth Century. Major plays and playwrights from world theaters are discussed. Prerequisite: EN102 English 2: Ideas & Values in Literature.

EN282 Contemporary Drama **C-3 Cr-3**

This course explores the period of drama beginning in the middle of the 20th century and introduces major plays and playwrights from world theaters since World War II. Prerequisite: EN102 English 2: Ideas & Values in Literature.

EN297 Creative Writing 2 **C-3 Cr-3**

This course helps to develop skills in writing short fiction, poetry, and creative non-fiction. A series of well-crafted exercises are

completed with situations that focus on the same characters. Models for writing are the works of published authors and fellow course participants. Other activities may include conferences and collaborative evaluations. Prerequisites: EN101 English 1: Composition or EN106 English 1: Composition and Reading, EN102 English 2: Ideas & Values in Literature, and EN197 Creative Writing.

EN300 Independent Study in English**Cr 1-4**

ES Engineering Sciences Courses

Physical Sciences, Engineering & Applied Technologies Department**ES151 Introduction to Engineering****C-1 P-2 Cr-2**

This is an introductory course designed to meet the needs of Engineering Science students. The course provides a look at the various fields of engineering. Topics include engineering majors and professions, computer literacy for engineers, working in a team setting, use of practical engineering tools, and engineering ethics.

ES171 Engineering Graphics**C-2 P-3 Cr-3.5**

The course introduces the basics of engineering drawing, descriptive geometry and graphical mathematics. Topics include freehand and instrumental techniques; orthographic projection of points, lines, planes and solids; auxiliary views and sectional views, working drawings; graphs and graphical calculus; functional and alignment charts; and vector geometry.

ES175 Engineering Science Design**C-2 P-3 Cr-3**

This course covers project proposal writing, project costing, drawing preparation and project specification, group dynamics, and making a product. The course practicum may include assignment to a practicing engineer. It is required for Engineering Science students after completing the equivalent of one full-time semester. Prerequisite: ES151 Introduction to Engineering.

ES261 Mechanics of Materials**C-2 P-2 Cr-3**

This calculus-based course covers normal and shear stress, materials properties and testing, torsional stress, normal and shear strains, stress concentration, blending stress, point stress, columns, failure theories, combined stresses, beam deflection, and strain gauge application and techniques. Prerequisites: PH261 Engineering Physics 1 and ES271 Engineering Statics.

ES271 Engineering Statics**C-3 Cr-3**

This calculus-based course uses the vector approach to deal with the three-dimensional resolution of forces and moments on rigid bodies in equilibrium, centroids, moments of inertia, and virtual work. Prerequisites: MA152 Calculus 2 and PH261 Engineering Physics 1.

ES272 Engineering Dynamics**C-3 Cr-3**

This calculus-based course uses the vector approach to deal with kinematics and kinetics of particles and rigid bodies. Prerequisites: MA253 Calculus 3 and ES271 Engineering Statics.

ES281 Thermodynamics**C-3 Cr-3**

This course addresses these topics: the zeroth, first and second laws of thermodynamics, thermodynamic equilibrium, thermodynamic properties, cycles, and applications to physical and chemical systems. Prerequisites: MA253 Calculus 3 and PH262 Engineering Physics 2.

ES291 Electrical Circuits 1**C-3 P-2 Cr-4**

This course presents a calculus-based introduction to linear circuit analysis. Topics include electrical laws, quantities, and DC and AC circuits. Analysis techniques include mesh and nodal approaches,

Thevenin, Norton, superposition, and source transformation, as well as phasor analysis. Balanced three-phase and transformer circuits are presented, analysis techniques are discussed, and computer-based circuit simulation tools are introduced. Corequisites: MA253 Calculus 3 and PH262 Engineering Physics 2.

ES292 Electrical Circuits 2 **C-2 P-2 Cr-3**

This course covers the complete response of first and second order electrical circuits using the classical solution of differential equations and the Laplace Transform methods. It analyzes circuits containing operational amplifiers. Diodes and their applications in rectifiers and wave shaping circuits are studied. Simple transistor biasing is learned. Prerequisites: ES291 Electrical Circuits 1. Corequisite: MA260 Differential Equations.

ES300 Independent Study in Engineering Science **Cr 1-4**

ET Electrical Technology Courses

Physical Sciences, Engineering & Applied Technologies Department

ET101 Technical Electricity 1 **C-2 P-2 Cr-3**

This introductory course provides the basic knowledge and skills necessary within any electrical service technician program. It includes an in-depth study of electron theory, Ohm's Law, series and parallel circuits, as well as electrical energy and power relationships. Also included are methods of generation of electromotive force, electromagnetism, and motor principles and capacitance as these apply to DC circuits. Uses, construction, and calibration of voltmeters and ammeters are investigated. Corequisite: MA105 Technical Mathematics 1.

ET102 Technical Electricity 2 **C-2 P-2 Cr-3**

This course is a continuation of ET101 Technical Electricity 1. It reinforces previously acquired information and applies it to alternating current (AC) circuits. It investigates AC sine wave generation, mutual inductance inductive and capacitive reactance, and instantaneous values of voltage and current as well as real and apparent power. Uses, construction, and calibration of AC metering equipment are an integral part of this course. Practical application of each topic in both introductory courses are included in all laboratory experiments. Prerequisite: ET101 Technical Electricity 1. Corequisite: MA106 Technical Mathematics 2.

ET103 Technical Electronics **C-2 P-3 Cr-3.5**

This course investigates the fundamental properties of semiconductor materials and the utilization of these materials in devices such as diodes, bi-polar transistors, field effect transistors, thyristors, and common substrated integrated circuits. Experiments pertain to various rectifiers, voltage regulators and elementary amplifier circuits. Emphasis is placed on constructing, troubleshooting, modifying, and repairing those circuits considered fundamental to the operation of electronic equipment. Prerequisites: ET101 Technical Electricity 1 OR ET111 Electrical Systems and MA105 Technical Mathematics 1.

ET104 Systems Diagrams **C-2 P-2 Cr-3**

This course covers the types, application, and use of electrical/electronic drawings. It includes schematic diagrams and symbols as well as the operation of electro-mechanical devices. The course differentiates between schematics and wiring diagrams. It develops the use of block diagrams, schematics, ladder-logic diagrams, wiring diagrams, assembly drawings, and bills of material. Topics include Programmable Logic Controllers (PLCs), Basic Relay PLC Instructions, PLC Timers and Counters, and PLC programs in the form of PLC ladder diagrams. Prerequisite: ET111 Electrical Systems.

ET105 Computer Control Fundamentals **C-1 P-2 Cr-2**

This introductory course covers the personal computer and its software for electrical service technicians. It includes a survey of fundamental personal computer hardware: the keyboard, microprocessor, mouse, disk drives, and printers. It introduces DOS and Windows operating systems and hands-on experience with software packages such as word processing and spreadsheets. It concludes with an introduction to BASIC, which is used to solve practical problems in the electrical/electronic field. (Fall semester.)

ET108 Refrigeration 1 **C-3 P-2 Cr-4**

This course covers basic physics as applied to refrigeration and air conditioning. Topics include flaring and soldering techniques, compressor construction, domestic refrigeration, and characteristics of automatic controls.

ET111 Electrical Systems **C-3 P-2 Cr-4**

This course provides the basic knowledge and skills necessary within any electrical service technician program. Topics include electrical units and metric prefixes; Ohm's Law; series and parallel DC resistive circuits; electrical energy and power relationships in DC circuits; AC sine wave generation; mutual inductance; inductive and capacitive reactance; instantaneous values of voltage and current; and real and apparent power. Troubleshooting techniques and strategies to identify, localize, and correct malfunctions are examined. Corequisite: MA105 Technical Mathematics 1.

ET112 Electronics of Remotely Piloted Aircraft Systems **C-2 P-3 Cr-3**

This course provides the student with basic knowledge of electrical theory. Topics include electron theory, Ohm's Law, series and parallel circuits, electrical energy and power relationships, electromagnetism, and DC & AC circuit theory as applied to remotely piloted aircraft systems.

ET115 Basic Electricity 1 **C-3 Cr-3**

This web-based course introduces basic electrical theory. The course is a study of electron theory, Ohm's Law, series and parallel circuits, electrical energy, power relationships, and electromagnetism. DC circuit theory is emphasized. This course does not satisfy the requirements for any courses in the Electrical Service Technician programs.

ET116 Basic Electricity 2 **C-3 Cr-3**

This web-based course is a continuation of ET115 Basic Electricity 1. It covers topics in AC electrical theory and investigates sine wave generation, mutual inductance, inductive and capacitive resistance, and instantaneous values of voltage and current as well as real and apparent power. This course does not satisfy the requirements for any courses in the Electrical Service Technician programs. Prerequisite: ET115 Basic Electricity 1.

ET123 Proper Refrigerant Usage **C-3 Cr-3**

This course covers the impact of refrigerant on the global environment. Topics include ozone destruction, climate change, and EPA standards for the safe usage and handling of refrigerants. Additional topics include the Montreal Protocol and Clean Air Act of 1990.

ET127 Modern Industrial Practice **C-3 P-2 Cr-3**

This course presents a broad introduction of topics related to industrial and manufacturing environments. Topics include safety and workplace hazard awareness, quality practices and measurement methods, modern manufacturing processes and production methods, and an awareness of maintenance procedures in manufacturing environments.

ET131 Electrical Machinery and Controls 1 **C-2 P-4 Cr-4**

This introductory course investigates the construction, operation,

and control of electrical equipment installed and maintained by the various electrical trades. Topics pertain to direct current equipment and include shunt, series, and compound motors and generators, manual and automatic DC controllers, stepping motors, and DC meters. It emphasizes the practical aspects of magnetic flux, counter-electromotive force, armature and field currents, motor and generator loading conditions, and the relationship of these electrical characteristics to specific types of mechanical, electrical, and electronic controllers. Prerequisite: ET111 Electrical Systems and MA105 Technical Mathematics 1.

ET137 Sustainable Energy in the Developing World C-2 P-2 Cr-3

This course provides a study abroad experience for students interested in sustainable energy system use in the developing world. Travel sites vary depending on site availability and projects. Renewable energy systems in the local region are studied in relation environmental, social, economic, and technological factors. Instructional lecture and practicum sessions, site visits, and service learning activities during the study abroad period by local experts and other faculty are included. Periodic classroom and online seminar sessions during the semester are required for student presentations and further project development activities. Additional Study Abroad fees apply. Prerequisites: Mathematics Placement test score beyond MA089/MA090 or prior successful completion of MA090.

ET141 Programmable Logic Controllers C-2 P-2 Cr-3

This course is a study of the types, applications, and use of Programmable Logic Controllers (PLCs). It includes methods for developing PLC ladder programs, PLC installation, wiring, operation, maintenance, and troubleshooting. Experience is provided using Allen Bradley MicroLogix, SLC500, and Compactlogix PLCs, as well as the Logixpro PLC Simulator. Prerequisites: ET151 Circuits 1 and ET153 Introduction to Electronics or ET111 and ET104 Systems Diagrams.

ET151 Circuits 1 C-3 P-2 Cr-4

This course introduces the fundamentals of DC circuit analysis including the definition of various electrical quantities and their relationships. Topics include series and parallel circuits, Kirchhoff's Laws, Thevenin's Theorem, Norton, super positioning, maximum power transfer, and nodal and mesh analysis. Proper usage of laboratory equipment is stressed. Corequisites: ET153 Introduction to Electronics and MA121 Fundamentals of College Mathematics 1.

ET152 Circuits 2 C-3 P-2 Cr-4

This course covers AC circuit analysis. Topics include Phasor representation of sinusoidal voltage, currents, impedance, power solution of RLC circuits, frequency response, and series and parallel resonance. Three phase power transformers and Fourier analysis of complex waveforms are introduced. The use of computer solutions in problem solving is included. Prerequisites: ET151 Circuits 1, ET153 Introduction to Electronics, and either ET154 Computer Programming, IS100 Introduction to Computers & Society or IS101 Computers & Society. Corequisite: MA122 Fundamentals of College Mathematics 2.

ET153 Introduction to Electronics C-1 P-2 Cr-2

This course provides the basic theory of electrical and electronic devices with elementary applications, familiarization with laboratory test equipment, and construction of an electronic power supply project. It covers the practical aspects of resistors, capacitors, inductors, transformers and voltage regulators. Both AC and DC theory is discussed as well as the use of power supplies, function generators, digital multi-meters, and the oscilloscope. The course concludes with the assembly and testing of a DC power supply. Corequisites: ET151 Circuits 1 or ET111 Electrical Systems.

ET154 Computer Programming C-1 P-2 Cr-2

This course uses a high-level programming language and

examines the available structure on a typical personal computer platform. Programming techniques and algorithm development are presented with real-world examples from the electrical field. The programming techniques may be used to solve practical problems in other ET courses. The course introduces the use of schematic capture and electrical circuit simulation software. This is a foundation course in computer programming for students in the Electrical Engineering Technology program. No previous programming knowledge is assumed. Corequisites: ET151 Circuits 1 or ET111 Electrical Systems.

ET161 Linear Electronics C-2 P-2 Cr-3

The theory and applications of modern transistors are introduced; both the bipolar junction transistor and the field effect transistor are examined. Applications include usage in small and large signal class A amplifiers, as well as in class B power amplifiers. Voltage control FET applications are studied. Problem-solving techniques involving digital computers are discussed. Prerequisites: ET153 Introduction to Electronics, and either ET154 Computer Programming, IS101 Computers and Society, or IS100 Introduction to Computers and Society. Corequisites: ET152 Circuits 2.

ET163 Audio Technology C-2 P-2 Cr-3

Modern audio technology is introduced. Topics include basic acoustics, transducers such as microphones and loudspeakers, signal processing, and amplification systems. An introduction to digital audio is included as well as software/Internet applications. Corequisites: ET152 Circuits 2 or ET102 Technical Electricity 2 or ET111 Electrical Systems.

ET167 Introduction to Photovoltaics C-2 P-2 Cr-3

This course introduces fundamental concepts in photovoltaics in applications related to electrical power generation. Topics include types of photovoltaic systems and applications, solar radiation and resource determination, site assessment, and units of measurement common to solar systems. Measurement and instrumentation equipment as well as related tools, including safety and personal protective equipment (PPE), are discussed. Solar electrical systems including solar panels, inverters, charge controllers, batteries, and balance of system components are presented, with relevant aspects of electrical and mechanical discussed. Fundamental concepts of system sizing, cost, and economic analysis are presented. Prerequisite: ET101 Technical Electricity 1 or ET151 Circuits 1 or ET111 Electrical Systems.

ET181 Digital Electronics 1 C-2 P-2 Cr-3

This introductory course presents fundamental topics in digital systems. Topics include numbering systems and coding schemes used in digital logic; combinational logic devices at a functional level; concepts of Boolean algebra and logic analysis and methods for logic circuit simplification; and arithmetic circuits. Sequential circuits including latches and flip-flops are analyzed and their applications in basic counters and registers are presented. Prerequisites: ET151 Circuits 1, ET153 Introduction to Electronics, and ET154 Computer Programming. Corequisite: ET152 Circuits 2.

ET209 Refrigeration 2 C-3 P-4 Cr-5

This course covers the components of refrigeration for commercial and industrial systems. It includes systems requirements and the application of components to develop built-up systems. Prerequisite: ET108 Refrigeration 1. (Fall semester)

ET220 Air Conditioning Principles C-3 P-2 Cr-4

This course covers calculations of heat loss and gain based on residential and commercial levels. Topics include humidification; dehumidification; air mixture problems; and determination of U factors to enhance calculation accuracy. Additional topics include ventilation, exhaust loads and standards, and a working background in psychometrics. The course starts with simple heat properties of air and will progress to complex air mixture properties.

ET221 Air Conditioning Systems**C-3 P-4 Cr-5**

This course introduces combustion techniques in oil and gas furnaces. It covers coil cells, stack controls, oil primary controls plus safety devices. Basic principles are applied to problem-solving in heat transfer. Types of systems involving residential and small commercial heating and air conditioning are covered. Split systems, hydronic systems, electric heat, heating and air conditioning controls, and package equipment are discussed along with heat pumps. Corequisites: ET108 Refrigeration 1.

ET222 Systems Design**C-2 P-2 Cr-3**

This course covers refrigerant piping techniques and designs for commercial and industrial use. Refrigeration load calculating and equipment selection for commercial and industrial applications and proper air handling techniques are studied. Prerequisites: ET209 Refrigeration 2 and ET220 Air Conditioning Principles. (Spring semester.)

ET223 Transport Refrigeration**C-2 P-4 Cr-4**

This course covers the refrigerant and electrical controls used in transport refrigeration. Topics include problems unique to the industry and fundamental approaches to gasoline and diesel engine principles. Prerequisite: ET209 Refrigeration 2.

ET224 Modern Hydronic Systems**C-2 P-2 Cr-3**

This course covers the design and installation of modern hydronic (water-based) heating and cooling systems in residential and small commercial buildings. Topics include hydronic heat sources, fluid flow-in pipes, circulators, terminal units, system sizing, distribution piping layout, controls, valve selection, expansion tanks, freeze proofing, and balancing. Co-requisite: ET220 Air Conditioning Principles.

ET226 HVAC Diagnostics**C-2 P-2 Cr-3**

This course covers diagnostic techniques for HVAC/R systems. Topics include commercial refrigeration and supermarket equipment. Students utilize computers and simulations to analyze, test, and repair gas, oil, and heat pump systems. Prerequisite: ET209 Refrigeration 2.

ET230 AC Motors & Controls**C-3 P-4 Cr-5**

This course is intended for the heating, refrigeration, and air condition technicians. It provides HVAC students with theory and practicum in motors and controls, networking protocols, and automated building systems. The course has a blend of theory and practice suitable for vocational-technical students or industry practitioners who wish to upgrade their backgrounds. Electrical principles, components, meters, schematics, and systems are discussed and applied to modern small and large scale installations. Prerequisite: ET102 Technical Electricity 2.

ET232 Electrical Machinery and Controls 2**C-3 P-4 Cr-5**

This course is designed to combine related information pertaining to AC machinery, electromechanical controllers, transducers, and electronic controls with the practical skills of equipment selection, installation, wiring, troubleshooting, and maintaining the machinery control systems currently used by industry. Topics include single and multiphase alternators, motors, transformers, and meters. Methods of machinery control include across-the-line starters, control relays, voltage and current transformers, limit switches, electronic switching, and speed or rotation sensors. Prerequisites: ET131 Electrical Machinery and Controls 1 and MA106 Technical Mathematics 2.

ET233 Industrial Electronics**C-3 P-4 Cr-5**

This course is a study of electromechanical and electronic devices in the operation of industrial equipment and manufacturing processes. Emphasis is placed on the operating characteristics and applications of discrete components such as solid-state

devices, thyristors, trigger devices, relays, timers, amplifiers, and transducers. Laboratory experiments use skills and knowledge to diagnose and repair malfunctions in moderately complicated automated equipment. Prerequisite: ET104 System Diagrams. Corequisite: MA106 Technical Mathematics 2.

ET234 Electrical Wiring and Codes 1**C-2 P-2 Cr-3**

This course is an introduction to the art of electrical wiring. Installation of electrical equipment provides the student with the opportunity to combine related information and manipulative skills with the practical aspects of wiring methods for complete electrical installations and systems. All temporary laboratory wiring is installed in compliance with the current National Electrical Code and provides experience in cable, conduit, surface raceway, and service entrance installations. Corequisite: ET111 Electrical Systems.

ET235 Digital Logic**C-3 P-3 Cr-4**

This course provides an overview of the basic logic circuits inherent in all digital electronics applications. Topics include the various numbering systems, encoders and decoders used in digital systems, binary logic gates, flip-flops, counters, and shift registers with arithmetic circuits. Memories and interfacing of digital and analog devices are also investigated. Experiments supporting related information are designed to provide maximum hands-on experience for students with no prior training in electronics. Prerequisites: ET111 Electrical Systems. Corequisite: MA106 Technical Mathematics 2.

ET244 Electrical Wiring and Codes 2**C-2 P-4 Cr-4**

This course includes continuation of electrical techniques with emphasis on design and layout of single and polyphase systems. Skills to be developed include diagnosis and repair of equipment malfunctions, interpretation of the National Electrical Code, and estimates of project costs and progress coupled with installation techniques. Electrical systems studied include lighting, heating, ventilation, interior and exterior power distribution, and emergency energy conservation. Activities are focused on electrical systems. Prerequisites: ET111 Electrical Systems and ET234 Electrical Wiring and Codes 1.

ET245 Microprocessor Technology**C-3 P-2 Cr-4**

This course applies knowledge of binary logic and circuits to elements, diagnostic procedures, and methods of operating and repairing microprocessor-based home and automated industrial equipment. Laboratory components include using personal computers and development systems to create microcontroller applications. An introduction to the architecture of the IBM 80x86 architecture is provided, and methods of assembly upgrading and maintaining PCs are presented. Prerequisites: ET235 Digital Logic.

ET246 Industrial Computer Applications**C-3 P-4 Cr-5**

This course introduces hardware and software applications of the personal computer. It covers applications involving interfacing, digital Input/Output, analog Input/Output, data acquisition, and computer control of external electrical devices. Hardware components are studied for an understanding of computer systems, and BASIC is used to write Input/Output instructions. Experiments include wiring, testing, and debugging of a digital/analog circuit board and trainer. Prerequisite: ET233 Industrial Electronics. (Spring semester.)

ET251 Mechatronic Systems**C-2 P-2 Cr-3**

This course provides hands-on experience in the control, maintenance, and simulation of a mechatronics system in a team environment to promote learning a broad array of job-ready troubleshooting skills in integrated technologies. Topics include system level programming/troubleshooting, application and calibration of hall-effect sensors, vacuum grippers, pneumatic

robots, material feeding system, magnetic sensors, photoelectric sensors, magnetic reed switches, limit switches, inductive sensor, capacitive sensors, ultrasonic sensor, synchronous belt drive, ball screw drives, part rejection/transfer, stepper motors, homing sensors, GMR (Giant Magnetoresistive) sensors, pneumatic screw feeders, pick and place assembly, gravity feeders, servo robotics, and parts transfer.

ET254 C Programming for Technology C-2 P-2 Cr-3

This course details C programming language and how it is applied to problems in the technology field. A complete examination of the language is presented. Laboratory exercises are concerned with typical problems encountered in the electrical field. The focus is on desktop and embedded system development. Prerequisite: ET154 Computer Programming or equivalent. Corequisite: ET181 Digital Electronics 1.

ET257 Photovoltaic Systems C-3 P-2 Cr-4

This course builds on the concepts presented in ET167 and further defines the component and system considerations for solar electric systems. Topics include grid-tie and stand-alone system components, system sizing installation and integration of photovoltaic (PV) systems in existing residential and commercial locations, system component and installation compliance with regulatory requirements of the National Electrical Code (NEC), Underwriters Laboratory, and local codes requirements. System commissioning, operation, and maintenance requirements are discussed. PV mounting systems and installation requirements are presented, with relevant aspects of electrical and mechanical system requirements discussed. Fundamental concepts of system sizing, cost, and economic analysis are presented. ET167 Introduction to Photovoltaics and ET234 Wiring and Codes 1.

ET262 Operational Amplifiers C-3 P-2 Cr-4

This course includes further study of linear transistor circuits. Examination of frequency response and negative feedback are of prime importance. Operational amplifiers are discussed in great depth, including applications in summing, precision rectifying, voltage regulation, filtering, and other popular circuit applications. Usage of digital computers for analysis and design is discussed. Prerequisites: ET161 Linear Electronics.

ET265 Fiber Optics 1 C-2 P-2 Cr-3

This introductory course in fiber optics covers the theory of light transmission and its limiting factors. It includes Modal and Chromatic Dispersion and signal attenuation along with how they impact on signal bandwidth. The various types of fiber optic cable are explored while noting their application characteristics. The course also covers the techniques for applying fiber optic connectors and splices as well as the use of light sources, light meters, fusion splicers and Optical Time Domain Reflectometers (OTDRs). Prerequisite: ET111 Electrical Systems.

ET274 Telecommunications Concepts C-3 P-2 Cr-4

This course presents concepts related to the components, circuitry, and components of telecommunication systems. Topics include radio frequency amplifiers, filters, oscillators, measurement methods, modulation methods, coding and network models, transmission lines, antennas, and wave propagation. Prerequisite: ET161 Linear Electronics.

ET282 Digital Electronics 2 C-2 P-2 Cr-3

This course covers the characteristics and applications of MSI circuits and devices such as decoders, encoders, multiplexers, and demultiplexers. The IC logic families are introduced at a circuit level. It emphasizes TTL devices along with ECL, I²L, MOS, and CMOS device characteristics. It includes semiconductor memory along with bipolar and MOS, static and dynamic, and ROM and RAM devices. Prerequisites: ET181 Digital Electronics 1 and ET161 Linear Electronics. (Fall semester.)

ET283 Microprocessor Fundamentals C-3 P-2 Cr-4

This course presents the microprocessor/microcontroller as the principal component of embedded systems, providing information on the architecture and programming model using the C language. C programming techniques for arithmetic and logic operations along with flow control are introduced. The use of functions, I/O instructions, and timers are presented with laboratory experiments. Prerequisite: ET181 Digital Electronics 1.

ET284 Design & Layout C-1 P-4 Cr-3

This capstone course provides for the application of electronic principles learned throughout the program. The course involves the steps necessary to take an electronic project from the design stage through to a final working project. Topics include typical company structure, specification and schedule development, proper prototyping and troubleshooting procedures, and the method for designing printed circuit boards. These topics are applied to an actual electronic project that results in a functioning circuit board — a working prototype. A final formal report is completed, submitted, and presented to the class. Prerequisites: ET181 Digital Electronics 1 and ET262 Operational Amplifiers.

ET285 Motors and Controls C-3 P-2 Cr-4

This course introduces the theory, operation, applications, adjustment, and control of AC/DC motors using single and three phase electrical power. It covers a variety of discrete devices, transformers, DC and AC motors, AC motor frequency drives, industrial networking, and motion control using PLCs. The components and characteristics of control systems are studied. Prerequisite: ET152 Circuits 2.

ET289 Introduction to Semiconductor Manufacturing C-2 P-4 Cr-4

This course introduces the processes, materials, and equipment used in the manufacture of semiconductor devices. Topics include atomic theory, crystal structure, and properties of semiconductor materials, and manufacturing processes. It covers wafer preparation, thermal oxidation, doping, lithography, thin film deposition, metrology, testing, and packaging. Cleanroom safety and protocol are discussed. Prerequisites: ET161 Linear Electronics and ET181 Digital Electronics 1. Corequisites: CH141 General Chemistry 1 and MT129 Statistical Quality Control. (Fall semester.)

ET290 Fundamentals of High Vacuum Technology C-2 P-2 Cr-3

This course introduces vacuum fundamentals, units, and terminology commonly found in low pressure environments. Topics include pumps, gauges, hardware components, vacuum systems, leak detection methods, thin film deposition, and etch processes, including sputtering and evaporative deposition. Additional topics include aspects of current practice in RF and plasma systems. Prerequisite: ET161 Linear Electronics. Corequisite: CH141 General Chemistry 1.

ET291 Fundamentals of Highly Automated Manufacturing Systems C-2 P-3 Cr-3.5

This course introduces basic principles of systems encountered by technicians employed in highly automated manufacturing environments. Topics include manufacturing sequences, remote access, cycle time, and production flow analysis. Gantt charts and other planning tools, troubleshooting, and routine/preventative maintenance procedures are presented. Manufacturing execution systems and applications of statistical process control are discussed. Prerequisites: MA106 Technical Mathematics 2 or MA121 Fundamentals of College Mathematics 1.

ET300 Independent Study in Electrical Technology Cr 1-4

EV Environmental Analysis/ Chemical Technology Courses

Physical Sciences, Engineering & Applied Technologies Department

EV100 General Industrial Safety C-3 Cr-3

This introductory survey course covers a range of safety topics that address workplace needs. It provides training in safety responsibility and a basic understanding of the safety profession along with refreshers and updates. It presents the required topics of the 30-hours OSHA overview course in addition to topics reflective of industry standards. Areas covered include the OSHA Act and its related standards and clauses.

EV231 Water Analysis C-1 P-4 Cr-3

This course is about water, including the quality of the natural water supply and the presence of pollutants. It stresses water chemistry and methods of analysis. A discussion of resources and needs is followed by data collection and evaluation. Analytical methods covered include acidity/alkalinity, oxygen tests, nutrient analysis, and metal ion analysis. Prerequisite: CH246 Quantitative Analysis.

FA Fine Arts Courses

Art Department

FA100 Creativity in Art C-2 P-2 Cr-3

This course introduces students to the fundamental principles of creativity with an emphasis on understanding historically significant art styles. Students explore various types of visual expression and apply creative problem-solving principles to both two-dimensional and three-dimensional projects in a variety of media. Students are introduced to the masters, practices, and careers of painting, sculpture, graphic arts, graphic design, animation, film, digital media, illustration, and photography.

FA101 General Drawing P-6 Cr-3

This course introduces the tools, media, and theory used in drawing for visual communication. Coursework includes both the study of fundamentals of perspective and the theory of light and shade, as well as a survey of graphic representation. Classroom work consists of drawings that show line, value, tone, form, texture, space, and proportion. Studio laboratory fee: \$20.

FA103 Figure Drawing 1 P-6 Cr-3

This is an introductory course in drawing the human figure, focusing on the body's geometric and anatomical structure. Classroom work consists of drawing from the live model and plaster sculpture casts. A hierarchy of form, working from general to specific, is emphasized. Studio work is supplemented by lectures and critiques on the principles of accurate representation of the human form in pictorial space, including gesture, proportion, anatomy, and light on form. Studio laboratory fee: \$20.

FA104 Figure Drawing 2 P-6 Cr-3

This intermediate course expands upon the technical skills and aesthetic concepts of FA103 Figure Drawing 1. More complex problems are addressed, including the foreshortened figure, the figure in space, multiple figure composition, extended poses, and large format drawing. Projects explore various drawing media, settings, lighting situations, and approaches to the figure. Classroom work consists of drawing from the live model, supplemented by lectures and critiques. Prerequisite: FA103 Figure Drawing 1. Studio laboratory fee: \$20.

FA105 Foundation Design P-6 Cr-3

This course introduces the visual elements and principles of design. Emphasis is placed on compositional concepts and the mastery of a visual language. Course projects explore a variety of media, processes, and techniques to provide a broad view of visual problem solving.

FA106 Color Theory P-6 Cr-3

This course investigates the role of color in the organization of the two-dimensional surface, as well as its practical use in our visual environment. Emphasis is placed on understanding the mastery of value, hue, and temperature in physical and digital media. Students apply design composition principles, processes, and techniques to engage in creative problem solving.

FA108 Three-Dimensional Design P-6 Cr-3

This course incorporates an examination of design principles and organization of willed form in space. Studio work focuses on the study of natural, fabricated, and architectonic forms, emphasizing construction, scale, and proportion. These principles are fundamental to architecture, industrial design, and sculpture. Studio laboratory fee: \$35.

FA113 Figure Sculpture 1 P-6 Cr-3

This course introduces sculpture through the figure, using a variety of traditional and modern techniques. Topics include the elements of structure, mass, volume, anatomy, and proportion, as they combine to give form and meaning. These principles are fundamental to improving form conception in drawing, painting, and sculpture. This course provides an introduction to armature building, water clay techniques, and mold-making. Prerequisite: FA108 Three-Dimensional Design. Studio laboratory fee: \$35.

FA201 Figure Sculpture 2 P-6 Cr-3

This course further advances the study of sculpture through the figure, using a variety of traditional and modern techniques. Topics include the elements of scale, anatomy, proportion, gesture, and content as they combine to give form and meaning. These principles are fundamental to advancement in sculpture, drawing, and painting. This course provides instruction in advanced armature building, reclining and seated figure studies, and multi-piece and multi-material mold-making. Prerequisite: FA113 Figure Sculpture 1. Studio laboratory fee: \$35.

FA202 Intermediate Drawing P-6 Cr-3

This course further develops the visual vocabulary of general drawing. Emphasis is on the use of the basic elements of design such as composition, space, scale, and form resolution in various narrative and serial conceptual modes. Relying less on formal solutions to problems, classroom work focuses on the development of a relationship between form and content. A variety of materials and techniques are explored through projects that reference historical and contemporary approaches. Studio laboratory fee: \$20.

FA209 Painting 1 P-6 Cr-3

This course provides an introduction to the technique of the oil painting medium and approaches to color mixing. Emphasis is given to the painting from the observed subject. A variety of subjects and techniques are explored through projects that reference historical and contemporary approaches. Studio laboratory fee: \$20.

FA210 Digital Painting P-6, Cr-3

This course involves the art of digital painting in a studio environment working from observation, photo reference, and imagination. Topics include live observational digital painting, design and illustration principles of environments, color keys, dramatic lighting, composition, atmospheric perspective, and applying textures. Course projects are designed to build a professional portfolio.

FA211 Printmaking: Relief**P-6 Cr-3**

This course introduces traditional relief printmaking techniques such as wood engraving, wood cut, color reduction, and multiple plate relief printing. Other printmaking processes such as intaglio and monotype are also investigated. Emphasis is placed on techniques, and then expanded to subject matter and content. Studio laboratory fee: \$35.

FA212 Ceramics: Throwing Techniques**P-6 Cr-3**

This course explores the basic principles of Wheel Thrown Pottery: centering clay, fundamentals of clay bodies, hand building skills, kiln firing, and glazing. Studio projects approach these principles through the study and practice of proportion, scale, pattern, texture, and color, as well as exploration of the expressive qualities of clay and throwing technique. Slide lectures relate these concepts to historical and contemporary ceramic form making. Prerequisite: FA108 Three-Dimensional Design. Studio laboratory fee: \$50.

FA216 Sculpture: Metal Welding**P-6 Cr-3**

This course is welded steel sculpture covers volumetric linear, spatial, kinetic, biomorphic, and geometric issues. Basic cutting and joining of oxyacetylene and electric arc techniques are used. Classroom work focuses initially on techniques, and then derived meaning of subject matter as it relates to materials and content. Studio laboratory fee: \$50.

FA218 Painting 2**2 P-6 Cr-3**

This course expands on the concepts introduced in FA209 Painting 1. Oil painting techniques are further explored through course projects. Emphasis is given to the painting from the observed subject and then expanded to content and technique. Prerequisite: FA209 Painting 1. Studio laboratory fee: \$20.

FA220 Ceramics: Ceramic Sculpture & Design**P-6 Cr-3**

This course is an exploration of space, mass, volume, and surface, using clay as a medium and employing various firing techniques. It pursues development of expressive ideas through the use of formal elements. Slide lectures connect these concepts to historical and contemporary ceramic form making. Prerequisite: FA108 Three-Dimensional Design. Studio laboratory fee: \$50.

FA226 Printmaking: Intaglio**P-6 Cr-3**

This course introduces a selection of intaglio processes such as etching, dry point, mezzotint, and aquatint. In addition, the principles of some other printmaking techniques and practices are covered. The traditional approach of making multiple originals is investigated. Studio laboratory fee: \$35.

FA230 Jewelry Making**P-6 Cr-3**

This course introduces the techniques and materials used in jewelry making. Five specific projects involving forging, filing, sawing, lost wax casting, and basic stone setting develop appreciation of the three-dimensional aspects of jewelry design and fabrication. Prerequisite: FA108 Three-Dimensional Design. Studio laboratory fee: \$30.

FA240 Expressive Arts in America 1940s-1960s**C-3 Cr-3**

This course is an exploration of the Expressive Art movement as a reaction to global issues from 1940s through the 1960s. Topics include the integration of traditional fine arts, literature, music, and philosophy. Art is examined as a reaction to society and as societal voice through cross-discipline discovery. Students analyze artists and their craft through the examination of historical, biographical, psychological, social, and contemporary art. In addition, the influence of music, photography, and literature is examined. Prerequisite: EN101 English 1: Composition or EN106 English 1: Composition and Reading.

FA300 Independent Study in Fine Arts**Cr 1-4**

FB Fabrication Courses

Physical Sciences, Engineering & Applied Technologies Department

FB101 Introduction to Modeling and Fabrication**C-2 P-3 Cr-3**

This course introduces basic knowledge design and fabrication techniques used in industry. Techniques include solid modeling, CNC machining, laser engraving, routing and 3D printing. Students design and manufacture parts to be used in subsequent courses.

FL Foreign Language Courses

Education & Language Studies Department

FL101, 102 Elementary Arabic 1, 2**C-3 Cr-3**

These courses teach the fundamentals of the language, including the essentials of reading, writing, speaking, and listening within a cultural context. Prerequisites: No previous instruction, or fewer than three years of instruction more than two years ago.

FL111, 112 Elementary Chinese 1, 2**C-3 Cr-3**

These courses teach the fundamentals of the language, including the essentials of reading, writing, speaking, and listening within a cultural context. Prerequisites: No previous instruction, or fewer than three years of instruction more than two years ago.

FL141, 142 Elementary Japanese 1, 2**C-3 Cr-3**

These courses teach the fundamentals of the language, including the essentials of reading, writing, speaking, and listening within a cultural context. Prerequisites: No previous instruction, or fewer than three years of instruction more than two years ago.

FL151, 152 Elementary Latin 1, 2**C-3 Cr-3**

These courses teach the fundamentals of the language, including the essentials of reading, writing, speaking, and listening within a cultural context. Prerequisites: No previous instruction, or fewer than three years of instruction more than two years ago.

FL173, 174 Elementary Russian 1, 2**C-3 Cr-3**

These courses teach the fundamentals of the language, including the essentials of reading, writing, speaking, and listening within a cultural context. Prerequisites: No previous instruction, or fewer than three years of instruction more than two years ago.

FL211, 212 Intermediate Chinese 1, 2**C-3 Cr-3**

These courses review selected grammatical features, with emphasis on oral and written competency at the intermediate level, supported by a study of cultural materials and further use of Chinese characters. Successful completion of the review sequence, or three years of Chinese instruction fewer than two years ago with a grade of B or better.

FL300 Advanced Study in Language**Cr 1-4**

These courses expand the development of grammar, cultural understanding, conversation skills, writing, and reading through the study of literature. Prerequisite: Successful completion of the intermediate sequence, or four years of instruction in which one year was Advanced Placement level.

FM Facilities Management

Physical Sciences, Engineering & Applied Technologies Department

FM101 New York State Public School

Budgeting & Accounting **C-3 Cr-3**

This web-based course provides a basic understanding of NYS public school budgeting and accounting fundamentals, including financial statements and cost and managerial relationships. An introduction to the regulatory authorities of public school accounting is included.

FM105 Education Law for Facilities Management **C-3 Cr-3**

This web-based course emphasizes the understanding, analysis, and application of law to school districts and the management of their facilities. A broad conceptual basis is supplemented by an examination of case law, current articles, federal and state statutes, and regulations and school district policy.

FM161 Facility Blueprints **C-3 Cr-3**

This web-based course introduces construction and facility plans and blueprints necessary for a construction or maintenance project, including how to interpret information from plans and blueprints.

FM180 Public Health & Safety in Schools **C-3 Cr-3**

This web-based course provides the rationale for an occupationally safe and healthy work environment in an educational facility. Skills include working effectively with school emergencies, safe internal and external facility environments, and safety inspections.

FM244 Introduction to Green Building Technology **C-3 Cr-3**

This web-based course focuses on the principles of commercial construction using a sustainable methodology. Green building principles such as energy efficiency, environmental impacts, resource conservation, indoor air quality, renewable energy sources, and community issues are studied. National and international programs for design, as well as building rating systems, are investigated. Codes and building standards are reviewed with emphasis on the LEEDS standards. Current building ratings and standards are reviewed.

FM246 Introduction to Alternative Energy Systems **C-3 Cr-3**

This course provides both professional engineers as well as engineering students interested in energy systems with essential knowledge of major energy technologies, including function, quantitative evaluation cost, and impact on the natural environment. Topics covered include fossil fuel combustion, carbon sequestration, nuclear energy, wind energy, and biofuels.

FM247 Introduction to Geothermal Heating & Cooling **C-3 Cr-3**

This course addresses the theory of operation of residential and commercial geothermal systems. Topics include the science and principles of heat transfer, convection and infrared, and identification of the best system for application and budget. Market values, tax incentives, and rebates for these systems are discussed as well as system configurations, system sizing, and design.

FM248 Introduction to Solar Voltaic Systems **C-3 Cr-3**

This course addresses the installation of residential and commercial photovoltaic (PV) systems. It covers the principles of PV electricity and its effective incorporation into stand alone or utility connected electrical systems. Topics include solar radiation; array orientation; components and system configurations; system sizing and design; and mechanical and electrical installation.

FM300 Independent Study in Facilities Management **Cr 1-4**

FP Fire Protection Courses

Social Sciences & Public Services Department

FP101 Firefighter 1 **C-4 P-2 Cr-5**

This course provides initial entry level training for firefighting personnel. It covers instruction and skill activity in these areas: fire department organization, firefighter safety, fire behavior, personal protective equipment, self-contained breathing apparatus, fire extinguishers, ropes and knots, building searches, forcible entry, ground ladders, ventilation, hose practices, fire streams, loss control, tactics, vehicle suppression, water supply, fire cause determination, fire department communications, fire suppression systems, and fire prevention practices.

FP102 Firefighter 2 **C-1 P-1 Cr-1.5**

This course completes the initial training for the entry level firefighter. It covers instruction and skill activity in these areas: incident command implementation, building materials, building collapse, special rescue, hydrant flow, hydrant operability, hose tools, foam operations, flammable liquid and gas emergencies, alarm and detection systems, pre-fire planning, and strategy and tactics.

FP103 Incident Command System **C-1.5 Cr-1.5**

This course provides training in the organization, terminology, and common responsibilities for personnel operating in the Incident Command System. It describes the principal features that constitute the Incident Command System (ICS). It also provides information for personnel who will operate at an emergency incident in a functional capacity.

FP105 Hazardous Materials **C-2.5 P-2 Cr-3.5**

This course prepares emergency responders to respond effectively and safely to stabilize a hazardous materials incident from both a defensive and offensive position. It includes information on recognizing and identifying potential hazardous materials and the classification of such material. It also includes material and skill sessions in these areas: chemistry and toxicology of materials, dangerous properties of materials, detection equipment, protective equipment, confinement and mitigation concepts, and decontamination procedures.

FP107 Rescue Technician - Basic **C-1 P-1 Cr-1.5**

This course provides a basic education and awareness of technical rope rescue operations, specifically low-angle rescue. Material includes instruction and skill sessions in ropes and knots, technical rescue management, understanding the risks associated, establishing rescue systems, and helicopter landing areas.

FP108 Firefighter Assist and Search Operations **C-.5 P-1 Cr-1**

This course provides training in FAST operations. The material covered involves the following knowledge and skills: proper equipment and make-up of a FAST company. Rescue planning for a missing, lost, or trapped firefighter, and removal techniques for rescuing trapped firefighters.

FP109 Firefighter Survival **C-3 P-.4 Cr-.5**

This course enables firefighters to recognize the type of events on the fire ground that contribute to firefighter disorientation and entrapment. The material covers the following knowledge and skills: techniques to stay oriented during the interior operations, and skills that will enable the firefighter to perform self-rescue should they become disoriented.

FP110 Accident Victim Extrication **P-1 Cr-.5**

This course provides instruction and skill sessions in the safe technique of auto extrication. Material includes instruction and skills in these areas: scene safety, vehicle stabilization, rescue theory, rescue life cycle, and automotive design and technology.

FP111 Truck Company Operations**C-1 P-1 Cr-1.5**

This course provides instruction on using ladder company equipment. Material includes knowledge and skills in these areas: duties and responsibility of a ladder company, operating and maintaining tools and equipment, ventilation skills, forcible entry skills, search and rescue skills, and placement and operation of ground ladders.

FP112 Apparatus Operations - Emergency Vehicle C-2.5 P-3 Cr-4

This course provides vehicle operators with the understanding of the seriousness of vehicle operations. It also provides the necessary knowledge of the operation of aerial devices used in the fire service and in the operation of fire department pump apparatus. It includes information on the potential for tragedy, understanding of the responsibilities of emergency response vehicles, and skills in the operation and handling of emergency vehicles, as well as information and skills in classification and typing of aerial devices, plus their proper placement, setup, and stabilization. It also includes knowledge and skills concerning the responsibilities of pump operators, hydraulics and friction loss, pump controls and accessories, fire streams, pump operation from draft, and pump operation from fire hydrant.

FP115 Code Enforcement Practices - Regs, Admin, Enforcement**C-4.5 Cr-4.5**

This course provides training for code enforcement officials and the practices necessary to carry out the jobs for local government. It also provides knowledge of basic principles of buildings that will endure the effect of fire and enable occupants to safely escape. Materials covered include issuing permits, inspection practices, record keeping, enforcement actions, and legal recourses, as well as minimum construction standards, fire resistant construction techniques, notification and suppression systems, and proper planning. Historical aspect is covered to help show how codes are developed.

FP116 Fire & Emergency Service Leadership and Safety C-3 Cr-3

This course introduces the principles of fire safety and emergency service organizational leadership and safety emergency procedures. It also focuses on cultural changes with regard to fire and emergency services.

FP119 Physical Training**P-4 Cr-2**

This course prepares the fire recruit for passing the Candidate Physical Ability Test (CPAT). Recruits are required to attend physical training daily for one and a half hours. Training consists of muscular strength training, muscular endurance training, aerobic capacity training, and functional training specific to firefighting.

FP120 Live Fire Training**P-2 Cr-1**

This course exercises the culmination of knowledge gained during the entire training program. Students are given a firefighting assignment, and expected to accomplish it safely and effectively. This training is conducted at the department's live burn training tower in a safe environment following all guidelines set forth in NFPA 1403 and all applicable NYS standards.

FP125 Basic Exterior Firefighting**C-3 Cr-3**

This course provides initial entry level training for basic exterior firefighting operations. Topics include fire department organization, firefighter safety and health, fire fighting skills and equipment, fire development and behavior, and building construction. In addition, this course prepares students to develop fire and life safety programs and to earn First Aid and CPR certification.

FR French Courses

Education & Language Studies Department**FR101, 102 Elementary French 1, 2****C-3 Cr-3**

This sequence teaches the fundamentals of French, including the essentials of reading, writing, speaking, and listening within a cultural context. Prerequisites: No previous French instruction, or fewer than three years of French instruction more than two years ago.

FR181 French for Business Personnel**C-3 Cr-3**

This course serves a vocational or professional language needs and provides insight into the ways another culture communicates and lives. It includes an introduction to pronunciation, grammatical structures, vocabulary, and culture. These elements are practiced by communicating in the language through listening and speaking. The use of the language lab may be required.

FR191, 192 Review French 1, 2**C-3 Cr-3**

This sequence continues the development of grammar, cultural understanding, reading, writing, and conversation skills, and is presented at an accelerated pace. Prerequisite: Three years of French instruction more than two years ago with a grade of B or better.

FR201, 202 Intermediate French 1, 2**C-3 Cr-3**

This sequence reviews selected grammatical features, with emphasis on oral and written competency at the intermediate level supported by a study of cultural and literary materials. Prerequisite: Successful completion of the elementary or review sequence, or three years of French instruction fewer than two years ago with a grade of B or better.

FR301, 302 Advanced French 1, 2**C-3 Cr-3**

This sequence expands the development of grammar, cultural understanding, conversation skills, writing, and reading through the study of literature. Prerequisite: Successful completion of the intermediate sequence, or four years of French instruction in which one year was Advanced Placement level.

FS Food Services Courses

Hospitality Department**FS105 Computer Applications: Food Service****C-1 P-2 Cr-2**

This course introduces computer applications for managerial decision-making in the hospitality industry. It provides an understanding and practical application of systems related to the executive chef, production manager, and dining room manager. An introduction to computer operations and concepts as well as terminology and methodology related to culinary and hospitality specific software is emphasized.

FS111 Food Preparation 1**C-2 P-4 Cr-4**

This course introduces the fundamentals of commercial food preparation, with an emphasis on the use and care of tools and equipment. Proper cooking methods including sautéing, frying, roasting, grilling, braising, broiling, poaching, stir frying, and simmering are covered. Preparations include stocks, soups, sauces, vegetables, salads, starches, garnishes, sandwiches, and pasta. Applied problems from the areas of food preparation, including weights, measures, portions, and conversions are incorporated. Corequisite: FS150 Safety & Sanitation.

FS112 Food Preparation 2**C-1 P-4 Cr-3**

This course introduces the terminology and techniques of commercial food preparation, including identification, selection,

and preparation of additional foods, such as eggs, poultry, fish, shellfish, beef, pork, lamb, veal, and smoked foods. Laboratories employ a variety of cooking methods using professional kitchen equipment. Emphasis is placed on operating in a safe and sanitary manner. Prerequisite: FS111 Food Preparation 1.

FS121 Baking 1 **C-2 P-4 Cr-4**

This course introduces the bakery shop preparation of cakes, cookies, muffins, sweet rolls, and breads, including the mixing of ingredients and shaping of dough. It covers the ingredients used in the preparation of baked goods, and the tools and equipment used in the bakery shop. Corequisite: FS150 Safety & Sanitation.

FS131 Food, Beverage & Labor Cost Control **C-3 Cr-3**

This course introduces the methods, tools, and procedures used to control food, beverage, and labor costs in a food service organization. Emphasis is placed on each step in the flow of costs: purchasing, receiving, storage, issuing, preparation, portioning, service, and accounting for sales. Labor costs as they relate to the operation are discussed. Active problem solving and practical application are used to relate the principles learned to the food service industry.

FS141 Purchasing for the Hospitality Industry **C-3 Cr-3**

This course introduces the purchasing function in food service organizations. Emphasis is placed on the methods of controlling costs while maintaining strict quality and quantity standards through the effective purchasing of goods and services. Included is the concept of specification development as it applies to the products and services used in the hospitality industry. Purchasing requirements for equipment, furniture, supplies, perishable foods, groceries, and convenience foods are covered.

FS150 Safety & Sanitation **C-3 Cr-3**

This course introduces the correct procedures for food handling and the hygienic basis for these practices. General kitchen and bakery safety, pest management, and crisis management are discussed. Proper clothing, personal hygiene, fire safety regulations, and state and federal laws pertaining to the hospitality industry are stressed. This course includes a certification exam provided by the National Restaurant Association.

FS160 Dining Room Service **C-1 P-4 Cr-3**

This course introduces principles and techniques of table service. Emphasis is placed on table setting, buffet services, the various job categories in the dining room, different styles of service, and dining room arrangement and supplies. Students have an opportunity to work in each dining room position.

FS202 Menu & Facilities Planning **C-3 Cr-3**

This course provides the knowledge to design and organize a food service facility. Typical furniture and equipment organization with respect to space allocation in the facility are addressed. Topics include equipment purchasing, facilities engineering, and energy practices.

FS204 Banquet & Catering Management **C-1 P-6 Cr-4**

This course emphasizes industry standards, practices, and terminology as they apply to off-premises and banquet catering. Menu planning, pricing, selling, food preparation, dining room service, staffing, and personnel management are practiced. Personnel management and collaborative techniques are used to offer multicourse meals to the public. Prerequisites: FS112 Food Preparation 2.

FS205 Baking 2 **C-1 P-6 Cr-4**

This course emphasizes commercial baking skills as they are developed and practiced. Danish pastry, puff pastry, sponge dough, yeast breads, tarts, choux pastry, and holiday specialties are prepared. Proper uniform is required. Prerequisite: FS121 Baking 1.

FS210 Food Preparation 3

C-1 P-6 Cr-4

This course integrates knowledge of food and food preparation, equipment, techniques, methods, and practices learned in prerequisite courses. Acting as chef/managers, students plan menus, edit recipes, order food, assign tasks, analyze food cost, and offer multi-course meals to the public. Emphasis is placed on collaboration, food variety and presentation, and timeliness of presentation with strict adherence to safety and sanitation principles. Proper uniform is required. Prerequisite: FS112 Food Preparation 2.

FS213 Cake Decorating

C-1 P-4 Cr-3

This course presents the use of decorating tools, icing, and spray guns. Emphasis is placed on the preparation of cakes for decorating, types of icings, and the art of flower making. Proper uniform is required.

FS214 Food Presentation

C-1 P-4 Cr-3

This course presents basic techniques in vegetable carving and arranging, aspic work, canaps, salt dough, saltiage, ice carving, pats, galantines, mousses, marinades, cures, brines, and pastry bag work. Proper uniform is required. Prerequisite: FS112 Food Preparation 2.

FS225 Advanced Bread Baking

C-1 P-4 Cr-3

This course provides practical experience in the science of advanced bread baking. Use of different flours, ingredients, and dough processing using technical evaluation of the results is emphasized. Traditional approaches from around the world including artisan, whole grain, rye, sourdough, and laminated breads, as well as American and European baking practices are included. Proper uniform is required. Prerequisite: FS121 Baking 1 and FS150 Safety & Sanitation.

FS230 Food Service Practicum

C-1 P-6 Cr-3

This course provides the student with on-the-job experience in a variety of food service settings. In addition to the minimum of six hours a week of field experience, participation in a weekly seminar is required as a forum to discuss work-related situations and problems.

FS233 Principles of Food Marketing

C-3 Cr-3

This course provides a foundation in marketing, planning, segmentation, and positioning food items within a specific demographic. Food marketing tools such as menu pricing, advertising, sales promotion, merchandising, personal selling, and external advertising media are explored.

FS242 Beverage & Bartending Management

C-3 Cr-3

This course provides an overview of the alcoholic beverage industry, focusing on history and classification according to the characteristics of spirits, wines, and beer. Topics include mixology, lounge service, beverage control, and legal issues.

FS245 Pastry Techniques and Practices

C-1 P-6 Cr-4

This course covers commonly used pastry techniques and practices from the hotel and restaurant industries. Topics include spun sugar, chocolate tempering, mousse and Bavarian cream, petit four sec, pastillage, French pastry makeup, meringues and macaroons, ornamental sugar, and display work. Emphasis is placed on the development of merchandising practices. Proper uniform is required. Prerequisite: FS121 Baking I.

FS250 Food Packaging and Merchandising

C-1 P-4 Cr-3

This course focuses on consumer behavior and legislative requirements in the food packaging sciences. The fundamentals of large scale batch cooking, cook/chill processes, sous vide, vacuum, aseptic, and retail packaging technologies such as new generation refrigerated and home meal replacement foods are presented. Emphasis is placed on quantity production planning, requisition, and execution with attention to quality control and food safety issues.

FS300 Independent Study in Food Service

Cr 1-6

FT Fitness Training Courses

Athletics, Physical Education & Recreation Department

FT101 Personal Training 1 C-2 P-2 Cr-3

This course introduces the basics behind the exercise physiology, kinesiology, biomechanics, psychology, demographics, and training program structure needed to implement a safe and effective personal training program. Group exercise includes yoga, Pilates, and aerobics.

FT102 Personal Training 2 C-2 P-2 Cr-3

Students learn techniques in motivation, communication, and behavioral modification related to the varying demographics in fitness training. Also studies are professional liabilities, responsibilities, and ethics of personal trainers. Successful students will be eligible to sit for the American Council of Exercise Certification of Personal Trainers. Prerequisite: FT101 Personal Training 1.

FT202 Personal Training Practicum P-3 Cr-1

This practicum provides supervised, hands-on experience in MVCC's Fitness Center. Students will assess, design, and implement a personalized fitness plan for each client based on the client's goals.

GC Graphic Communications Courses

Art Department

GC244 Topics in Art History C-3 Cr-3

This course is a discussion and exposition of specific areas and subjects in art history. It presents information on the cultural impact, artistic value, and historic significance of art movements and developments. Prerequisite: EN101 English 1: Composition or EN106 English 1: Composition and Reading.

GC298 Internship C-1 P-6 Cr-3

This course covers work in industrial, educational, and commercial establishments to gain experience in the field. Locations include printers, in-house graphics facilities, magazines and newspapers, colleges, advertising agencies, and design firms. Students work under the supervision of a designated mentor and participate in classroom activities to share experiences. An interview may be required for participation in internships. Prerequisite: Permission from the Associate Dean for the Art Department.

GC300 Independent Study in Graphic Communication Cr 1-4

GD Graphic Design Courses

Art Department

GD110 Digital Design C-1 P-4 Cr-3

This course introduces the principles, techniques, and technologies used to produce graphic design on the computer. The visual elements and language of graphic design are taught through the demonstration and mastery of programs and problem-solving methods. It includes becoming technically proficient in the use of software, learning the methodology of graphic design, and demonstrating problem-solving ability.

GD121 Digital Typography C-1 P-4 Cr-3

This course covers the fundamentals of typesetting and typography. It includes a study of the development of type designs, typesetting methods, type measurement, and page layout.

Computers are used to prepare multi-color mechanicals while becoming familiar with one or more software programs appropriate for typesetting and page construction.

GD145 Digital Applications 1 C-2 P-2 Cr-3

This course introduces contemporary text manipulation, digital imaging, and digital illustration software. Students produce projects demonstrating their knowledge of both the software and the interfaces between page layout, raster graphics, and vector graphics. No previous software knowledge is required.

GD146 Digital Applications 2 C-2 P-2 Cr-3

This advanced course integrates contemporary text manipulation, digital imaging, and digital illustration software. Students complete industry standard projects demonstrating mastery of software. Prerequisite: GD145 Digital Applications 1.

GD218 Graphic Design Seminar C-1 P-4 Cr-3

This course prepares for entry into graphic design as a practicing professional. Emphasis is placed on the preparation of resumes and portfolios for professional presentation. It augments the ability to solve advanced graphic design problems in corporate identity.

GD220 Graphic Design Theory 4 C-2 P-2 Cr-3

This course introduces creative applications of typography, building upon vocabulary by mastering a series of visual problems typographically. Historic and contemporary applications are demonstrated. Traditional and digital media are used in executing graphic solutions. Prerequisite: GD121 Digital Typography.

GD221 Typography 1 C-2 P-2 Cr-3

This course explores visual problem solving as it relates to publication design. Students apply design principles and practice to various formats using the printed page. Students are introduced to the typographic grid and practice its application in the design process. Prerequisite: GD145 Digital Applications 1.

GD222 Typography 2 C-2 P-2 Cr-3

This course explores advanced visual typographic problem solving as it relates to print design. Students apply advanced design principles and practice as they prepare to create a professional portfolio. Advanced understanding and application of the typographic grid is applied to problems in the design process. Prerequisite: GD221 Typography 1.

GD300 Independent Study in Graphic Design Cr-1-4

GE Geography Courses

Humanities Department

GE101 Essentials of World Geography C-3 Cr-3

This course introduces the geographical and demographic attributes of the world, such as environment, cultural differences, ethnic make-up, and diversity. Emphasis is placed on developing a more global outlook on the emerging world community.

GL Geology Courses

Physical Sciences, Engineering & Applied Technologies Department

GL100 Introduction to Earth Science C-3 P-2 Cr-4

This course is intended for non-science major students. It provides an introduction to the primary components of Earth science: oceanography, meteorology, geology, and astronomy.

GL101 Physical Geology**C-3 P-2 Cr-4**

This course explores the composition and formation of minerals and rocks that make up the Earth. Additionally, the primary surface and subsurface properties that continually shape the Earth are discussed. In the laboratory, the common rock-forming minerals as well as igneous, sedimentary, and metamorphic rocks are examined. Additionally, the concepts of surface and groundwater flow are discussed as well as topographic map interpretation and construction. Field trips may be taken during laboratory periods.

GL102 Historical Geology**C-3 P-2 Cr-4**

This course explores the physical and biological aspects of the Earth's dynamic past over the last 4.6 billion years of its existence. Emphasis is placed on the geologic time scale, the concepts of physical and biological evolution, and plate tectonics. Laboratory topics include fossilization and taphonomy as well as the biological evolution and diversity of the Earth's organisms through identification and examination of fossil specimens. Field trips may be taken during laboratory periods. An end-of-semester visit to the American Museum of Natural History in Manhattan is encouraged. Prerequisite: GL101 Physical Geology.

GL202 Earth Science for Childhood Education Majors**C-3 P-2 Cr-4**

This course is an exploration of Earth Science for students enrolled in the SUNY Oneonta Childhood Education transfer program. Instruction emphasizes learning through inquiry. Content is consistent with the core ideas and learning outcomes prescribed by the Earth and Space Sciences (ESS) core standards, grades 1-6, of the Next Generation Science Standards (NGSS), and the National Science Teachers' Association (NSTA). Lecture along with individual and collaborative laboratory activities illustrate various Earth and planetary science phenomena and topics. (Fall only offering).

GL300 Independent Study in Geology**Cr 1-4**

GR German Courses

Education & Language Studies Department**GR101, 102 Elementary German 1, 2****C-3 Cr-3**

This sequence teaches the fundamentals of German, including the essentials of reading, writing, speaking, and listening within a cultural context. Prerequisites: No previous German instruction, or fewer than three years of German instruction more than two years ago.

GR201, 202 Intermediate German 1, 2**C-3 Cr-3**

This sequence reviews selected grammatical features, with emphasis on oral and written competency at the intermediate level supported by a study of cultural and literary materials. Prerequisite: Successful completion of the elementary or review sequence, or three years of German instruction fewer than two years ago with a grade of B or better.

GR301, 302 Advanced German 1, 2**C-3 Cr-3**

This sequence expands the development of grammar, cultural understanding, conversation skills, writing, and reading through the study of literature. Prerequisite: Successful completion of the intermediate sequence, or four years of German instruction in which one year was Advanced Placement level.

GT Graphic Technology Courses

Humanities Department**GT122 Digital Prepress****C-1 P-4 Cr-3**

This course introduces prepress procedures that include document

layout on the desktop computer, digital image assembly, planning and preparation for production, and printing output procedures. It provides practical, hands-on experience with equipment, materials and knowledge used in the industry and in subsequent courses. Prerequisite: GD121 Digital Typography.

GT123 Introduction to Offset Presswork**C-1 P-4 Cr-3**

This course provides the opportunity to learn basic skills of offset presswork sufficient for entry-level jobs. It covers the general capabilities and characteristics of the offset press. Essential press components such as cylinders, inks, dampeners, feeders, and delivery systems are stressed. It includes the fundamentals of negative stripping and platemaking using additive and subtractive plates. Prerequisite: GD121 Digital Typography.

GT124 Commercial Screen Printing**C-1 P-4 Cr-3**

This course covers screen printing production, including the selection and preparation of materials, printer set up, printer operation, and troubleshooting as well as other materials, information, and equipment necessary to produce jobs. A desktop system is used to prepare artwork for production.

GT125 Dye Sublimation and Vinyl Graphics**P-6 Cr-3**

In this course, students utilize computer software to design and produce graphic images, typesetting, and color separation. Finished projects represent the type of work produced in the graphic arts industry, including multi-color projects containing a wide variety of graphic images both photographic and computer-generated.

GT221 Prepress Procedures**C-1 P-4 Cr-3**

This course covers the design and production of projects using computer software for the creation of graphic images, typesetting, and color separation. Corequisite: GT122 Digital Prepress.

GT222 Printing Production**C-1 P-4 Cr-3**

This course concentrates on production procedures pertaining to offset lithography. It provides experience in the operation of printing presses and the creation and reproduction of projects through hands-on experience with available laboratory equipment. Professional practices are discussed and emphasized. The student portfolio is examined, discussed, and strengthened throughout the course. Prerequisite: GT221 Prepress Procedures.

GT300 Independent Study in Graphic Technology**Cr-1-4**

HC Health Care Courses

Health Professions Department**HC100 Introduction to Health Care****C-3 Cr-3**

This course introduces the field of health care for people interested in the field. Topics include an introduction to the health care delivery system, a brief historical overview of U.S. health care, health care settings and programs, members of the health care delivery team, roles of health care professionals, legal and professional ethics, health care organizations and agencies, medical record content, risk management, continuous quality improvement, epidemiology (morbidity and mortality), and interpersonal communication skills.

HC300 Independent Study in Health Care**Cr 1-4**

HI History Courses

Humanities Department**History**

Two two-course sequences are offered: History of Civilization

and American History. History of Civilization is required for all candidates for the Associate in Arts degree. American History is offered as an elective. History of Civilization presents an understanding of history as a record and as a discipline. It covers the major civilizations of the past, how they developed, and how they influenced one another. American History presents a fuller and deeper understanding of American history, its geography, people, institutions, and culture, and how they interact to define the American experience.

HI101 History of Civilization 1 **C-3 Cr-3**

This course introduces the nature and study of history, and covers the emergence and development of Eurasian civilization to about 1500 A.D. in the Near East, India, China, Europe, the Western Hemisphere, and Africa. Attention is given to religion in these civilizations and on the rise of the West to a position of world power during the Middle Ages.

HI102 History of Civilization 2 **C-3 Cr-3**

This course is concerned with civilizations and their influences on each other in the modern world. It traces the rise of the West to a position of world dominance and its impact on non-Western societies. Emphasis is placed on the major forces that have shaped the contemporary world — industrialization, urbanization, nationalism, militarism, imperialism, democracy, and communism.

HI103 History of Western Civilization: Early Civilization to 1453 **C-3 Cr-3**

The course traces development of Western Civilization from its Greek beginnings to the fall of Constantinople in 1453. Beginning with the Greek experience, Western Civilization developed in uniquely different ways from the rest of the civilized world. Patterns of Western thought led to the emergence of ideals such as the dignity and rights of man, free expression, social inclusion, and equal opportunity. The influence of Western forms of political and economic organizations on the modern world is examined.

HI104 History of Western Civilization: 1453 to Present **C-3 Cr-3**

This course is a continuation of the history of Western Civilization, beginning with the Renaissance and continuing to the present. It investigates the philosophical, international, political, economic, and social movements that dominated events leading up to the present time. It examines the reasons and motivations behind the events and perspectives of modern Western Civilization.

HI111 American History 1492-1850 **C-3 Cr-3**

This survey course develops a comprehensive overview of American history as well as a deeper understanding of how its geography, people, institutions, and culture interact to define the American experience. It begins with American colonization and concludes on the eve of the Civil War.

HI112 American History 1850-Present **C-3 Cr-3**

This course continues to survey the development of the American story from an agricultural, frontier society to an urban, industrial nation. Emphasis is placed on the economic revolution of the post-Civil War era, its social, political, and military aspects, and the emergence of America as a world leader. It begins with the Civil War and concludes with the present.

HI113 The United States in Vietnam **C-3 Cr-3**

This survey course traces the American involvement in Vietnam from the end of World War II through the defeat of the Republic of South Vietnam. It develops an understanding of the events, conditions, and policies that moved the United States from a position of little involvement and interest in 1945 to a national commitment to the survival of an independent South Vietnam.

HI115 Humanities & Technology **C-3 Cr-3**

This interdisciplinary, team-taught course explores the

relationship between the humanities and the technologies. It focuses on humanities, technology, and values; technology and the environment; the social impact of technology; and artificial intelligence. Prerequisite: Honors student.

HI214 New York State History **C-3 Cr-3**

This course provides a survey of significant political, social, economic trends, and institutions in New York State from early settlement to the present. It gives a geographical and historical understanding of the state as well as how New York became the Empire State, molding its own unique identity while playing a major role in shaping and influencing the nation and the world. Attention to the changing pattern of land holding, the development of a democratic commonwealth, urbanism, immigration, industrialism, political feuds, and political factions are addressed along with local history. (Spring offering only)

HI300 Independent Study in History **Cr 1-4**

HM Health Information Management Courses

Health Professions Department

HM100 Medical Terminology for Health Professionals **C-3 Cr-3**

This course includes a study of the language of medicine, including roots, prefixes, and suffixes and the proper pronunciation and spelling of medical terms. All body systems and functions, including the structure, meaning, and use of medical terms related to diseases and operations of the human body are covered. An introduction to pharmacology (medications) is included. (Online Only)

HM101 Health Information Management Introductory Concepts **C-2 P-3 Cr-3**

This course includes a study of the health information management profession, functions, technologies, and purposes; health care delivery systems; health record content and documentation; data management, governance, privacy, and security; health law, including release of information processing; health information technologies; and health care information, including the health information exchange. (Online Only)

HM120 Pharmacology and Pathophysiology **C-3 P-0 Cr-3**

This course covers pathophysiological, pharmacological, therapeutic, and diagnostic aspects of medicine. It includes concepts and medical word components for body systems and disorders encountered in health care. Pathophysiology of the normal body systems is covered. Topics include pharmacological agents, diagnostic tests and interventions, pharmacological intervention selection, and value of laboratory tests. (Online Only) Prerequisites: BI216 Human Anatomy and Physiology 1 and HM100 Medical Terminology for Health Professionals. Corequisite: BI217 Human Anatomy & Physiology 2.

HM121 ICD-10-CM and ICD-10-PCS Coding **C-3 P-3 Cr-4**

This course includes a study of the ICD-10-CM and ICD-10-PCS clinical classification systems and the inpatient prospective payment system (IPPS), which utilizes Medicare-severity diagnosis-related groups (MS-DRGs). Topics covered include the assignment of ICD-10-CM and ICD-10-PCS codes according to the Centers for Medicare and Medicaid Services (CMS) official coding guidelines, assignment of DRGs and MS-DRGs, encoder software and references (e.g., AHA Coding Clinic), accuracy of coding and DRG assignment, and physician query process. (Online Only) Prerequisites: BI216 Human Anatomy and Physiology I, HM100 Medical Terminology for Health Professionals, and HM101 Health Information Management Introductory Concepts.

Corequisites: BI217 Human Anatomy and Physiology 2 and HM120 Pathophysiology and Pharmacology.

HM122 Legal and Ethical Aspects of Health Information Management **C-3 P-0 Cr-3**

This course introduces the legal and ethical aspects of health information management with an emphasis on civil law and how health care settings are affected by law and non-governmental rulemaking bodies. Topics include the general study of law and an overview of ethics. (Online Only) Prerequisite: HM101 Health Information Management Introductory Concepts.

HM201 CPT and HCPCS Level II Coding **C-2 P-3 Cr 3**

This course is a study of the CPT and HCPCS level II coding systems and outpatient and physician office payment methodologies. Topics covered include assignment of CPT codes according to coding guidelines, HCPCS level II coding, ambulatory payment classifications, accuracy of coding and APC assignment, use of encoders and references, accuracy of computer-assisted coding assignment, and physician query process. (Online Only) Prerequisites: BI217 Human Anatomy and Physiology II, and HM121 ICD-10-CM and ICD-10-PCS Coding.

HM202 Health Data and Quality Management **C-2 P-3 Cr-3**

This course includes a study of health care information requirements and standards, hospital and vital statistics, data quality and integrity, data analytics, quality management, and performance improvement. (Online Only) Prerequisites: HM121 ICD-10-CM and ICD-10-PCS Coding, HM122 Legal and Ethical Aspects of Health Information Management.

HM203 Electronic Health Record Management **C-2 P-3 Cr-3**

This course includes a study of health information technologies, information management strategic planning, analytics and decision support, consumer informatics, health information exchange, information integrity and data quality, and enterprise information management. (Online Only) Prerequisite: HM101 Health Information Management Introductory Concepts.

HM204 Alternate Care Health Information Management **C-2 P-3 Cr-3**

This course provides a comparative analysis of HIM practices and information management across the spectrum of health care settings. (Online Only) Two class hours and three lab hours weekly. Prerequisite: HM121 ICD-10-CM and ICD-10-PCS Coding. Corequisite: HM201 CPT and HCPCS Level II Coding.

HM220 Health Information Management Leadership **C-2 P-3 Cr-3**

This course includes a study of health information management leadership. Topics include leadership roles, change management, work design and process improvement, human resources management, training and development, strategic and organizational management, financial management, ethics, project management, vendor/contract management, and enterprise information management. (Online Only) Prerequisites: HM202 Health Data and Quality Management and HM203 Electronic Health Record Management.

HM221 Reimbursement Methodologies **C-2 P-3 Cr-3**

This course includes a study of classification and coding systems, health information technologies, the revenue cycle and reimbursement, coding compliance, and clinical documentation improvement. (Online Only) Prerequisite: HM201 CPT and HCPCS Level II Coding.

HM230 HIT Professional Practice Experience **C-0 P-8 Cr-3**

This professional practice experience includes online laboratory assignments and projects and the completion of on-site hours in the

health information department of a health care agency with adequate facilities to provide varied work opportunities. Students complete on-site hours under the supervision of a qualified Registered Health Information Administrator, Registered Health Information Technician, or other qualified personnel to whom they are assigned. The professional practice experience is designed to enable students to obtain actual work experience in health care agencies. Students will complete a minimum of 100 hours on site, which can be completed a full-time basis or part-time basis. Prerequisites: HM201 CPT and HCPCS Level II Coding, HM202 Health Data and Quality Management, HM203 Electronic Health Record Management, and HM204 Alternate Care Health Information Management. Corequisites: HM220 Health Information Management Leadership and HM221 Reimbursement Methodologies.

HP Honors Program Courses

Education & Language Studies Department

HP101 Introduction to Honors **C-1 Cr-1**

This course is the first step in completing the Honors Program and earning the Honors distinction. Students apply Da Vinci's major principles to independent and group tasks, thereby gaining a whole-brain approach to learning — the foundation for making original discoveries. They also develop personal, academic, and professional goals. In the process, students build an Honors campus community. The ED100 program requirement for graduation is waived for students who complete this course.

HP200 Honors Seminar **C-3 Cr-3**

This course can fulfill one of the requirements to complete the Honors program and earn the Honors distinction. Honors Seminars vary by topic, but all seminars are interdisciplinary and writing-intensive. The course emphasizes the development of critical and creative thought through class discussions, readings, and written assignments. In teams, students conduct academic and field research in the seminar topic, which culminates in a capstone project. Prerequisites: A minimum GPA of 3.25 and completion of HP101 Introduction to Honors with a grade of "B" or higher.

HS Human Services Courses

Social Sciences & Public Services Department

HS101 Introduction to Human Services **C-3 Cr-3**

This course provides an exploration of the broad field of human services, introduces theoretical systems for understanding human behavior, and examines professional ethics and standards. Communication techniques and procedures are stressed. A continual theme throughout is the need for self-awareness. Students complete New York State certification as a mandated reporter.

HS216 Introduction to Disabilities **C-3 Cr-3**

This course introduces disability as an aspect of the human experience and in relationship to a changing society. Topics include a global perspective of the prevalence and incidence of disability through historical and cultural concepts, as well as political and economic factors that help define disability and shape society's response to it. The course examines the self-determination movement and its impact on disability services. Prerequisite: HS101 Introduction to Human Services.

HS222 Theories of Counseling **C-3 Cr-3**

This course explores the theoretical frameworks of counseling, with emphasis on the ideas that form the structure of these theories. Consideration is given to their history, current status, and application.

Prerequisites: PY101 Introduction to General Psychology, and a grade of "C" or better in HS101 Introduction to Human Services.

HS231 Ethics, Policy & Law **C-3 Cr-3**

This course introduces the field of social services with emphasis on ethical and policy considerations faced by human service practitioners, chemical dependency counselors, and educators. Ethical decision-making, professional competence, self-disclosure, confidentiality, and related topics are covered as they apply to working in counseling and educational settings. It examines legislation affecting the role of the practitioner and the economic security of the client.

HS232 Counseling Techniques **C-3 Cr-3**

This course focuses on the acquisition and refinement of social work and counseling skills appropriate for the AAS practitioner. Methods used with diverse client systems within a variety of settings and problem areas are covered. A grade of "C" or better in HS101 Introduction to Human Services.

HS233 Group Counseling Skills **C-3 Cr-3**

This course focuses on the acquisition of group counseling skills and techniques applicable for work within human service consumer populations and age groups. Issues include substance abuse, mental health, conflict resolution skills, and trauma. Group techniques and skills are practiced. Prerequisite: A grade of "C" or better in HS101 Introduction to Human Services.

HS241 Chemical Dependencies **C-3 Cr-3**

This course provides an overview of drug abuse and alcoholism including pharmacology, causes and legal aspects of drug abuse, intervention and prevention, physiology, and psychological aspects of alcoholism. The role of the professional and non-professional in counseling and intervention is examined. Emphasis is placed on alternatives to chemical substance abuse and the self-destructing behaviors that produce them.

HS245 Case Management 1 **C-3 Cr-3**

This course uses a systems perspective to introduce the field of case management. Emphasis is on understanding and accessing the variety of service systems available to the client-consumer.

HS251 Internship 1 **C-1 P-6 Cr-3**

This course provides supervised, practical experience in a human service setting. In addition to a minimum of 90 hours of field experience, participation in a weekly seminar is required. Prerequisites: Matriculation in Human Services or Chemical Dependency Practitioner program, 25 credits completed toward the degree, GPA of at least 2.0, and a minimum grade of "C" in HS101 Introduction to Human Services. Corequisites: (Depending on Matriculation) HS222 Theories of Counseling or HS232 Counseling Techniques and one program elective, or AS201 Introduction to Alcoholism/Substance Abuse Counseling and HS231 Ethics, Policy & Law.

HS252 Internship 2 **C-1 P-6 Cr-3**

This course is a continuation of the supervised experience in a human service setting, with greater initiative and responsibility for the provision of services. In addition to the minimum of 90 hours of field experience, participation in a weekly seminar is required. Corequisite: HS251 Internship 1.

HS300 Independent Study in Human Services **Cr 1-4**

HT Hotel Technology Courses

Hospitality Department

HT101 Introduction to the Hospitality Industry **C-3 Cr-3**

This course provides an overview of the organizational structure

of hotels, restaurants, and clubs from a management perspective. Topics include analysis of the hospitality industry, career opportunities, management theory, practical management techniques, and social responsibility of the industry.

HT105 Front Office Procedures **C-3 Cr-3**

This course provides an overview of hotel operations beginning with the front office guest cycle. Information on front office computer technology, yield management, and reservation systems are presented. Emphasis is placed on the responsibilities and tasks of front office personnel.

HT201 Internship/Co-op **C-1 P-6 Cr-3**

This internship provides a variety of practical experiences such as hotel front office procedures, telecommunications, guest reception, cash handling and control, housekeeping, and convention sales and services. Field supervisors and MVCC program coordinators evaluate student performance. A minimum of six hours per week over 15 weeks, or a total of 90 hours is required for successful completion.

HT205 Housekeeping/Property Management **C-3 Cr-3**

This course provides an overview of the phases of staffing, planning, and organizing the technical details of each area of a hotel.

HT210 Hospitality/Human Resources Management **C-3 Cr-3**

This course provides an overview of the role of human resources in the food service and lodging industries. Topics include employee job description, recruitment, orientation, training, performance appraisal, and compensation. Current federal legislation and labor relations are presented with emphasis on EEO laws, OSHA standards, and union negotiation and grievance processes.

HT211 Convention Services Management **C-3 Cr-3**

This course introduces convention sales and marketing techniques. Topics include convention promotion, planning, and post convention evaluation.

HT215 Supervisory Leadership in Hospitality **C-3 Cr-3**

This course provides an overview of supervisory management skills for the hospitality industry. Topics include planning, organizing, coordinating, staffing, directing, controlling, evaluating, and leading. The development of technical, human relations, and conceptual skills is emphasized.

HT300 Independent Study in Hotel Technology **Cr 1-6**

HU Humanities Courses

Humanities Department

HU183 Fundamentals of Music Theory 1 **C-3 Cr-3**

This introduction to the fundamentals of music theory emphasizes rhythmic, melodic, and harmonic expressions. It is an introduction to music theory for those wishing to pursue more advanced music study and for those who want to know more about the elements of music. Previous musical experience is helpful but not required.

HU184 Fundamentals of Music Theory 2 **C-3 Cr-3**

This course is a continuation of HU183 Fundamentals of Music Theory 1 with increasing emphasis on traditional harmony with the addition of the study of seventh chords. Prerequisite: HU183 Fundamentals of Theory 1.

HU186 Music Appreciation **C-3 Cr-3**

This course develops musical perception, understanding, and appreciation. It features direct listening and live performances, and

demonstrations in a variety of musical styles. It is appropriate for those with no formal musical training.

HU187 Art Appreciation **C-3 Cr-3**

This course develops perception, understanding, and appreciation of the visual arts through an examination of the role of the artist in a diverse society. The artist is considered within cultural context through an introduction to Western and non-Western art history. Materials and techniques of art are studied with emphasis on the fundamental elements of artistic expression. A field trip to a gallery exhibit is required. Skill in art is not necessary.

HU188 Film Appreciation **C-2 P-2 Cr-3**

This course examines the development of film as a medium of artistic expression. Topics include cinematic vocabulary, camera techniques, editing, sound, auteur theory, and personalities. Feature films are analyzed during the laboratory component.

HU191 Acting 1: Principles of Acting **C-3 Cr-3**

This course introduces the principles of acting for the stage. Topics include relaxation, energizing, stage sense, and improvisation. Physical, emotional, and imaginative exercises help to prepare the beginning actor for the performance situation.

HU192 Acting 2: Characterization and Scene Study **C-3 Cr-3**

This course emphasizes the development of character within specific textual situations. Roles from written texts are analyzed, rehearsed, and performed. Emphasis is placed on the actors' physical and emotional work. Collaborative projects are required. Prerequisite: HU191 Acting 1: Principles of Acting.

HU195 Chorus 1 **P-2 Cr-1**

This course involves participation in a performing group devoted to the standard repertory of serious and light choral music. An audition is required.

HU204 History of Art 1 **C-3 Cr-3**

This course introduces the history of art from prehistoric times through the 16th Century. Topics include Classical, Medieval, Renaissance, and non-Western examples of painting, sculpture, and architecture. Art is studied within its cultural context with a focus on the interrelationship among the Arts. A field trip to an art exhibit is required. Prerequisite: EN101 English 1: Composition or EN106 English 1: Composition and Reading.

HU205 History of Art 2 **C-3 Cr-3**

This course introduces the history of art from the 17th Century to the present. Topics include Baroque, Rococo, Neoclassicism, Romanticism, Impressionism, Post-Impressionism, 20th Century, and non-Western examples of painting, sculpture, and architecture. Art is studied within its cultural context with a focus on the interrelationship among the Arts. A field trip to an art exhibit is required. Prerequisite: EN101 English 1: Composition or EN106 English 1: Composition and Reading.

HU210 The Arts & The Human Condition **C-3 Cr-3**

This course examines the interrelationships between health and the Arts, including the visual arts, music, literature, and film. The formal elements of each of the Arts are introduced, examined and compared. The course proceeds thematically through selected topics, such as the Cycle of Life, and Human Reactions to Disease and Disability.

HU220 Studies in Mexican Art & Culture **C-3 Cr-3**

This international course enhances cross-cultural skills, language skills, and an understanding of Mexican culture. Topics include indigenous and modern Mexican art and culture, and conversational Spanish.

HU224 Italian Art **C-3 Cr-3**

This course provides an historical survey of Italian art from Roman

times to the present. It examines the major stylistic trends in painting, sculpture, and architecture along with their influences. Prerequisite: EN101 English 1: Composition or EN106 English 1: Composition and Reading.

HU225 Modern Art **C-3 Cr-3**

This course provides an historical survey of modern art from the late 19th Century through the 1960s. It examines the major stylistic trends in painting, sculpture, and architecture along with their influences. Prerequisite: EN101 English 1: Composition or EN106 English 1: Composition and Reading. Corequisite: HU204 History of Art 1 or HU205 History of Art 2.

HU226 North American Art **C-3 Cr-3**

This course provides an introduction to the arts of North America from the 16th Century to the Modern Era. It explores major American visual trends and their influences in painting, sculpture, and architecture. Prerequisite: EN101 English 1: Composition or EN106 English 1: Composition and Reading.

HU227 World Art **C-3 Cr-3**

This course examines the global arts across time and cultures, including those of Africa, Asia, and the Americas. It considers the arts in the context of religious, social, economic, and political forces. It is appropriate for students interested in broadening their knowledge of arts with a focus on the global view. A field trip to an art exhibit is required. Prerequisites: EN101 English 1: Composition or EN105 English Composition for Speakers of Other Languages or EN106 English 1: Composition and Reading.

HU228 World Architecture **C-3 Cr-3**

This course introduces the history of World Architecture through an analysis of the built environment in terms of function, structure, form, and cultural and historical context. Topics include key architectural structures and styles that comprise the global community. Critical skills are used to compare and analyze architecture through reading, viewing images, writing, and discussion. Prerequisite: EN101 English 1: Composition, EN105 English Composition for Speakers of Other Languages, EN106 English 1: Composition and Reading.

HU280 An Introduction to Ethics **C-3 Cr-3**

This interdisciplinary course is both theoretical and practical. The theoretical aspect entails exploring the basic concepts and principles of moral philosophy, and the general thinking process for making moral judgments. The practical aspect involves the application of principles and strategies to specific cases derived from the humanities, such as imaginative literature, and from other disciplines, such as science and business. Prerequisite: EN102 English 2: Ideas & Values in Literature.

HU289 Interdisciplinary Studies in the Humanities: The Greek World **C-3 Cr-3**

This course examines the values and ideas of classical Greece as expressed in sculpture, architecture, literature, philosophy, and mythology. Selected major art, literary, and philosophic works from the period are studied. Links to current thought are examined. Prerequisite: EN102 English 2: Ideas & Values in Literature.

HU290 Interdisciplinary Studies in the Humanities: Medieval & Early Renaissance **C-3 Cr-3**

This course examines the values and ideas of Medieval and Early Renaissance Europe as expressed in art, literature, philosophy, and music. Selected major art, literary, and philosophic works from these periods are studied. Links to current thought are examined. Prerequisite: EN102 English 2: Ideas & Values in Literature.

HU291 Interdisciplinary Studies in the Humanities: The Modern Age **C-3 Cr-3**

This course examines the major philosophical positions of the

Modern Age in an effort to understand how these ideas came into being. Topics include Darwinism, Marxism, Freudian psychology, and Existentialism. The recent past is studied and shown to be the root of current thought. Prerequisite: EN102 English 2: Ideas & Values in Literature.

HU292 Topics in the Humanities **C-3 Cr-3**

This course explores a specific area or topic in the Humanities. Flexibility regarding traditional boundaries of disciplines, genre, time periods, and media give fresh perspectives and knowledge that relate to and illuminate the topic. See the Associate Dean of Humanities for the current offerings. Prerequisite: EN102 English 2: Ideas & Values in Literature.

HU295 Survey of Western Philosophy **C-3 Cr-3**

This course provides an historical survey of Western thought from the Pre-Socratics to contemporary Philosophers. Metaphysics, epistemology, social and political philosophies, and their leading practitioners are examined. Prerequisite: EN102 English 2: Ideas & Values in Literature.

HU296 Topics in Philosophy **C-3 Cr-3**

This course provides a topical examination of ethics and morality, religion, and social and political philosophies and their impact on contemporary thought. Conflicts between differing schools of thought and their societal implications are stressed. Prerequisite: EN102 English 2: Ideas & Values in Literature.

HU300 Independent Study in Humanities **Cr 1-4**

IL Illustration Courses

Art Department

IL105 Illustration Methods and Materials **P-6 Cr-3**

This course includes experimental work with techniques and media most commonly used in preparing illustrations for reproduction. Finished artwork is rendered and prepared in black-and-white and in color.

IL106 Sequential Art 1: Figure Illustration **P-6 Cr-3**

This course introduces the narrative use of the human figure in illustration. Conceptual and visual communication skills are challenged in producing a series of two-dimensional illustrations in black-and-white and color media. Emphasis is placed on the correct use of reference material, drapery and costuming of the figure, settings, and staging of the complete visual image.

IL201 Conceptual Illustration **P-6 Cr-3**

This course includes experimental work with techniques and media most commonly used in preparing illustrations for reproduction. Finished artwork is rendered and prepared in black and white and in color. Prerequisite: IL106 Sequential Art 1: Figure Illustration.

IL203 Painting for Illustrators **P-6 Cr-3**

This course provides the opportunity for experimental work with contemporary illustration techniques and media. It balances emphasis on creative problem-solving and individual expression with development of skill in drawing and techniques for rendering finished work. Prerequisite: IL106 Sequential Art 1: Figure Illustration.

IL204 Professional Practices for Illustrators **C-1 P-6 Cr-4**

This course prepares for entry into the illustration field as a practicing professional. Illustration portfolios are prepared and analyzed for content. A portfolio of quality work is created for professional presentation. Prerequisites: IL201 Conceptual Illustration and IL203 Painting for Illustrators.

IL205 Cartooning **C-1 P-4 Cr-3**

This course explores the art of cartooning. It builds upon understanding of the human form in illustration. It explores action effects, backgrounds, caricatures, strips, panels, layouts and inking, greeting cards, and history of the cartoon. Prerequisites: FA101 General Drawing and FA103 Figure Drawing 1.

IL206 Wildlife Drawing & Painting **P-6 Cr-3**

This course introduces the construction, delineation, and rendering of wild and domestic animals in art. The history of animals in the oldest school of art, sporting, is covered as well as an overview of the artistic avenues available to the animal artist.

IL207 Fantasy Illustration **P-6 Cr-3**

This course covers fantasy art commonly used in contemporary children's book illustration, comic book art, and the science fiction illustration. Emphasis is placed on the importance of research, character development, problem-solving, and the aesthetic quality of the illustration.

IL208 Sequential Art 2: Book Illustration **P-6 Cr-3**

This course provides an introduction to the styles and techniques used by the illustrator in the contemporary children's market. It covers the development of fiction and non-fiction illustrations for the preschool and elementary school audience. Emphasis is placed on the importance of research, character development, problem-solving, and the aesthetic quality of the illustration. Students complete illustrations designed to reinforce subject areas covered.

IL209 Sequential Art 3: Graphic Novel **P-6 Cr-3**

This course introduces students to the process of writing, editing, and creating graphic novels. Topics include history of graphic novels, brainstorming, quick sketching the use of composition, image sequencing and layout, elements of storytelling, producing high quality finished images, and both digital and physical publishing.

IL300 Independent Study in Illustration **Cr-1-4**

IS Information Systems Courses

Business, Cybersecurity & Computer Sciences Department

IS100 Introduction to Computers and Society **C-2 P-4 Cr-4**

This course satisfies the IS101 Computers and Society requirement for students with little or no prior computer experience. It focuses on providing a solid foundation in basic computer skills and terminology, and an understanding of how computer technology works. Experience is provided with a variety of microcomputer software applications, including word processing, electronic spreadsheets, and graphics, file management, and integrated software. Concepts and terms focus on preparing for a technology oriented society and using the computer as a tool for productivity, research, and communication.

IS101 Computers and Society **C-2 P-2 Cr-3**

This course provides knowledge of relevant computer skills and a solid foundation in the terminology and concepts of computer technology. Experience is provided with a variety of microcomputer software applications, including word processing, electronic spreadsheets, graphics, file management, and integrated software. Concepts and terms focus on preparing for a technologically oriented society and using the computer as a tool for productivity, research, and communication.

IS102 Computer Applications & Concepts 2 **C-2 P-2 Cr-3**

This course increases knowledge and productivity with the personal

computer. Students gain knowledge of hardware and software and, by working with popular business applications software packages, increase their overall computer competency. The course emphasizes the use of the computer in the management of information. Areas of study include the MS-DOS operating system, Windows operating environment, sharing files among applications, incorporating graphics, report generation, and communications. Current computing issues such as computer ethics, computer crime, and security are discussed. Prerequisite: IS101 Computers and Society or IS100 Introduction to Computers and Society.

IS120 Computer Operating Systems & Environments C-2 P-2 Cr-3

This course covers the role of computer operating systems. It emphasizes operating systems and environments used with Intel-compatible equipment and discusses additional platforms. Command-line, menu-driven, and graphical user interface (GUI) systems are covered. Topics include storage devices, operating environment, system startup, menus, memory management, software package installation, and multitasking. Prerequisite: IS101 Computers and Society or IS100 Introduction to Computers and Society; excluding students enrolled in Computer Science, Cybersecurity, Data Processing, Computer Information Systems, and Web Development and Information Design.

IS125 Introduction to Multimedia Applications for Business

C-2 P-2 Cr-3

This course covers graphic tools used in business environments, including multimedia programs such as graphic, animation, and web design software. Multimedia files are imported and exported into documents and presentations. Topics include web design theory; color and composition; and graphic, animation and presentation software. It culminates with the integration of multimedia concepts incorporated into an integrated business project/presentation. Prerequisite: IS101 Computers and Society or IS100 Introduction to Computers and Society.

IS130 Desktop Publishing for Business

C-2 P-2 Cr-3

This course introduces the principles of desktop publishing in a business environment. Professional quality business documents are designed and produced that combine text, graphics, illustrations, and photographs in documents such as letterheads, business cards, flyers, brochures, promotional documents, and newsletters. Prerequisite: IS101 Computers and Society or IS100 Introduction to Computers and Society.

IS200 Spreadsheet Concepts & Applications

C-2 P-2 Cr-3

This course expands the knowledge of those already familiar with the basic elements of electronic spreadsheets. It examines the various uses for a spreadsheet in business. Intermediate and advanced spreadsheet techniques are examined, including the power of functions, formatting, analytical graphics, and macros. Prerequisites: IS101 Computers and Society or IS100 Introduction to Computers and Society; and a Mathematics Placement test result appropriate for MA110 Elementary Statistics or MA115 Intermediate Mathematics.

IS201 Principles of Computer Security

C-3 Cr-3

This course provides a comprehensive view of the field of computer and network security. Topics include the types of threats to computer hardware and software, public key infrastructure (PKI), certificate authorities, the protocols and standards involved in establishing PKIs, intrusion detection systems, and the laws which govern aspects of computer security. Prerequisite: IS101 Computers and Society is recommended but not required.

IS208 Practical Computing for the Twenty-First Century Professional

C-3 Cr-3

This course introduces the concepts and issues related to the use of computers in the professional environment today. It examines the history of computer information systems as well as local and

wide-area networking, file formats, data compression, operating systems, and the application of internet technologies. It covers basic procedures for selecting, installing, configuring, and maintaining hardware and software components. Prerequisite: IS101 Computers and Society or IS100 Introduction to Computers and Society.

IS210 Database Design & Management

C-2 P-2 Cr-3

This course will introduce students to basic database concepts. The course will focus on designing and structuring databases to meet the objectives of management. Students will use a database management system to complete an in-depth exploration of query capabilities and report generation. The student will learn the creation and management of a working database from the ground up. When the student completes this course, they will have the ability to create tables, queries, forms, and reports within database software and understand the role of a database within a business setting.

IS220 Visual Basic with Business Applications

C-2 P-2 Cr-3

This course introduces event-driven programming for a better appreciation of Windows applications used in the business world. Controls, properties, and code are used to develop applications to solve business problems. Topics include decision-making statements, loops, multiple forms, and graphical displays. Prerequisites: IS200 Spreadsheet Concepts & Applications, and IS210 Database Design & Management.

IS240 Networking Essentials

C-3 Cr-3

This course provides an overview of networking concepts. Topics include LAN topologies, transmission media, protocols, network operating systems, and the OSI Model. Network security issues and network-to-network connections are also discussed. Through lecture and classroom demonstrations, students are exposed to the procedures involved in administering a LAN. Prerequisite: IS101 Computers and Society or IS100 Introduction to Computers and Society.

IS250 Web Development 1

C-2 P-2 Cr-3

This course focuses on the internet and World Wide Web as valuable resources in gathering and disseminating business information. Information is gathered with various techniques and evaluated as to its quality. Internet and World Wide Web (WWW) protocols and search engines are explored, and the techniques involved in creating a basic web page are covered. Prerequisite: IS125 Introduction to Multimedia Applications for Business.

IS280 Web Development 2

C-2 P-2 Cr-3

This course emphasizes the development of effective and interactive websites on the World Wide Web. Students create and code interactions to transform static websites into dynamic web applications. Focus is on hand-coded languages, such as PHP, ASP, VBS Script, and ColdFusion Markup Language. Students familiarize themselves with website and database interaction using MySQL as a driving source behind the site. Specifically, students are exposed to web development programs that use features such as cascading style sheets, templates, frames, and behaviors, as well as the many other features common in web development programs, such as inserting and editing HTML. Students also study database elements and utilize coding in order to manipulate and display data on a web page. Prerequisite: IS250 Web Development 1 or CI110 Principles of Programming.

IS300 Independent Study in Information Systems

Cr 1-3

IT Italian Courses

Education & Language Studies Department

IT101, 102 Elementary Italian 1, 2

C-3 Cr-3

This sequence teaches the fundamentals of Italian, including the

essentials of reading, writing, speaking, and listening within a cultural context. Prerequisites: No previous Italian instruction, or fewer than three years of Italian instruction more than two years ago.

IT191, 192 Review Italian 1, 2 **C-3 Cr-3**

This sequence continues the development of grammar, cultural understanding, reading, writing, and conversation skills, and is presented at an accelerated pace. Prerequisite: Three years of Italian instruction more than two years ago with a grade of B or better.

IT201, 202 Intermediate Italian 1, 2 **C-3 Cr-3**

This sequence reviews selected grammatical features, with emphasis on oral and written competency at the intermediate level supported by a study of cultural and literary materials. Prerequisite: Successful completion of the elementary or review sequence, or three years of Italian instruction fewer than two years ago with a grade of B or better.

IT301, 302 Advanced Italian 1, 2 **C-3 Cr-3**

This sequence expands the development of grammar, cultural understanding, conversation skills, writing, and reading through the study of literature. Prerequisite: Successful completion of the intermediate sequence, or four years of Italian instruction in which one year was Advanced Placement level.

LE Law Enforcement Courses

Social Sciences & Public Services Department

LE118 Police Procedures - Basic **C-4 P-2 Cr-5**

This course examines the history and contemporary aspects of law enforcement. It introduces students to fundamental police processes, particularly the role that discretion plays in policing. The bodies of law that are relevant to law enforcement are practically applied and critical thinking skills are developed and assessed through exercises both inside and outside the classroom. The use of force continuum is explained, practiced, and evaluated. Students begin to develop the physical skills and defense tactics necessary to transition into a law enforcement career.

LE119 Police Procedures - Intermediate **C-4 P-2 Cr-5**

This course introduces students to the intermediate skills required of police officers. Building on the foundation received through the successful completion of LE118 Police Procedures - Basic, students begin to learn more advanced techniques of police observation and patrol. Application of the scientific method in both accident and criminal investigation is developed. Ancillary New York State law is discussed and practically applied.

LE120 Police Procedures - Advanced **C-4 P-2 Cr-5**

Building on the foundations of the LE118 Police Procedures-Basic and LE 119 Police Procedures - Intermediate, this course immerses the students in the more advanced techniques of American policing. Students employ the laws, techniques, and methodologies required of the modern law enforcement officer. Essential proficiencies are applied through continued hands-on development. Students display competencies in advanced areas including crowd control techniques, responding to incidents of domestic violence, detecting and apprehending intoxicated drivers, and responding to unusual incidents.

LE121 Principles of Law for Police Officers **C-7 P-1 Cr-7.5**

In this course, students examine the operations of the criminal justice system with a specific emphasis on the role and responsibilities of police officers. There is a particular focus on the legal basis for law enforcement operations derived from the United States Constitution. In addition, students explore New York State Penal Law, Civil Procedure Law, Vehicle and Traffic Law,

and Juvenile Procedures. Routine patrol responsibilities are also explained.

LE122 Techniques of Investigation **C-6 P-0 Cr-6**

In this course, students study various topics, actions, and procedures required to investigate a crime. It provides students with proven techniques that assist in obtaining information critical to any investigation. This includes street traffic stops, as well as violation, misdemeanor, and felony investigations.

LE123 Policing in the Community **C-3 P-0 Cr-3**

This course covers community relations issues as well as the skills needed to address them. Topics include cultural diversity and special needs of the community. Emphasis is placed on ethical issues and the limitations of community resources and services, and crime prevention. The course also addresses effective and compassionate approaches to child abuse cases.

LI Library Resources Courses

Education & Language Studies Department

LI103 Information Literacy **C-3 Cr-3**

This course develops skills in information literacy, which includes finding, evaluating, and using electronic and print resources. It introduces the creation, dissemination, organization and use of information in academic libraries. It explores the impact of current technologies on the information cycle. Hands-on time is spent mastering tools and strategies for creating, locating, and using information. Tools and techniques are used to develop an annotated bibliography on an appropriate topic.

LI300 Independent Study in Learning Resources **Cr 1-4**

MA Mathematics Courses

Mathematics & Natural Sciences Department

MA089 Arithmetic **C-3 Cr-0**

This course is for students who, according to placement test results, need preparation for subsequent mathematics courses. It develops basic skills by focusing on language and concepts. Topics include whole numbers, integers, rational numbers, and decimals.

MA090 Essential Math Skills **C-3 Cr-0**

This course is for students enrolled in non-STEM programs who, according to placement test results, need preparation for subsequent mathematics courses. It develops problem solving skills with an emphasis placed on applications. Topics include arithmetic computations, measurement, geometry, percentage, ratio and proportion, linear equations, and an introduction to graphing lines. Prerequisite: An appropriate placement test result or MA089 Arithmetic.

MA091 Introductory Algebra **C-3 Cr-0**

This course is for students enrolled in STEM programs or for students who need to take either MA115 Intermediate Mathematics or MA171 Foundations of Mathematics 1 and who, according to placement test results, need preparation for subsequent mathematics courses. It develops basic skills and the understanding of elementary algebra. Topics include arithmetic computations, measurement and geometry, percentages, ratio and proportion, linear equations, polynomials, and an introduction to graphing lines. Prerequisite: An appropriate placement test score or MA089 Arithmetic.

MA096 Mathematical Literacy C-4 Cr-0

This course focuses on mathematics for everyday life and prepares students to take a college-level, non-STEM course in mathematics. It integrates fluency with numbers, proportional reasoning, data interpretation, algebraic reasoning, mathematical modeling, and communicating quantitative information. Mathematical concepts are investigated through cooperative learning activities based on real-life contexts. Prerequisite: An appropriate placement test score or MA089 Arithmetic.

MA099 Introduction to Elementary Algebra C-1 Cr-0

This course provides the skills necessary for the transition from MA090 Essential Math Skills for MA115 Intermediate Mathematics or MA171 Foundations of Mathematics 1. Operation properties, multi-step equations, polynomials, and graphing lines will be covered. Prerequisite: MA090 Essential Math Skills or MA096 Mathematical Literacy.

MA105 Technical Mathematics 1 C-2 P-4 Cr-4

This course covers the four fundamental operations on integers, rational numbers, and real numbers. It includes the study of weights and measures, exponents and radicals, factoring, and linear equations, with an emphasis on technical applications.

MA106 Technical Mathematics 2 C-3 P-2 Cr-4

This course is a continuation of MA105 Technical Mathematics 1, with further topics from algebra as well as from geometry and trigonometry, and an emphasis on technical applications. Prerequisite: MA105 Technical Mathematics 1.

MA108 Concepts in Mathematics C-3 Cr-3

This course is a survey of mathematics for students in those programs that do not require a mathematics sequence. It provides an appreciation of mathematical ideas in historical and modern settings. Topics include problem solving, logic, geometry, statistics, and consumer mathematics. Prerequisite: An appropriate placement test result, MA090 Essential Math Skills, MA091 Introductory Algebra, or MA096 Mathematical Literacy.

MA110 Elementary Statistics C-3 Cr-3 or C-2 P-2 Cr-3

This course introduces probability and statistics. Topics include graphs, tables, frequency distributions, measures of central tendency and dispersion, normal distribution, correlation and regression, probability, and inferential statistics. This course is available in two formats: lecture only, or lecture plus laboratory using technology. Prerequisite: An appropriate placement test result, MA090 Essential Math Skills, or MA091 Introductory Algebra, or MA096 Mathematical Literacy.

MA111 Intermediate Statistics C-3 Cr-3

This course is a continuation of MA110 Elementary Statistics emphasizing confidence intervals and hypothesis testing. Topics include single and two-sample analysis, single and multiple regression, chi-square testing, testing and estimating standard deviation and variance, one-way and two-way ANOVA. Emphasis is placed upon selecting the proper technique, satisfying its requirements, and correctly reporting the results. Prerequisites: Satisfactory completion of MA110 Elementary Statistics or an equivalent course.

MA115 Intermediate Mathematics C-3 P-2 Cr-4

This course introduces intermediate algebra-level knowledge and skills. Topics include exponents and radicals, polynomial and rational expressions, functions and relations and their graphs, inequalities, and systems of linear equations. Linear, quadratic, rational, and radical equations are solved. Applications are included. Prerequisite: An appropriate placement test result, MA091 Introductory Algebra, or equivalent.

MA121 Fundamentals of College Mathematics 1 C-4 Cr-4

This is the first of a two-course sequence for students in

programs that require mathematics through polynomial calculus. Algebraic manipulations, graphing skills and problem solving are emphasized. Topics include systems of linear equations including Cramer's Rule, quadratic equations, variation, factoring and fractions, vectors and oblique triangles, and an introduction to trigonometry and applications. Prerequisite: An appropriate placement test result or MA115 Intermediate Mathematics.

MA122 Fundamentals of College Mathematics 2 C-4 Cr-4

This is the second of a two-course sequence for students in programs that require mathematics through polynomial calculus. Topics include complex numbers, exponential and logarithmic functions, analytic geometry, limits, derivatives and integrals of polynomial functions, applications of the derivative, and area under a curve. Prerequisite: MA121 Fundamentals of College Mathematics 1.

MA125 College Algebra & Trigonometry C-4 Cr-4

This course prepares students for MA150 Pre-calculus. Topics include linear and quadratic equations; inequalities; rational expressions; trigonometric functions; graphs of linear, quadratic, piecewise, and trigonometric functions; and, systems of equations. Algebraic and trigonometric manipulations and problem-solving are emphasized. Prerequisite: An appropriate placement test result or MA115 Intermediate Mathematics.

MA131 Finite Mathematics C-3 Cr-3

This course emphasizes conceptual understanding and practical applications of logic, sets, probability, matrices, and linear programming. Prerequisite: An appropriate placement test result or MA108 Concepts in Mathematics.

MA139 College Algebra C-4 Cr-4

This course emphasizes algebraic manipulations and problem solving. Topics include equations and inequalities; systems of equations; factoring; radical and rational expressions; linear, quadratic, rational, exponential, and logarithmic functions; and their graphs. Applications are selected from business, economics, and the natural sciences. Prerequisite: An appropriate placement test result or MA115 Intermediate Mathematics.

MA140 Calculus for Business and Social Science C-4 Cr-4

This course is for those whose programs do not require the Calculus sequence. Topics include an intuitive study of limits, and the analytic geometry, differentiation and integration of polynomial, rational, exponential, logarithmic, and power functions. Applications are selected from business, economics, and the social sciences. Prerequisite: MA139 College Algebra.

MA150 Pre-calculus C-3 P-2 Cr-4

This course prepares students for calculus through a study of the properties and graphs of polynomial, rational, trigonometric, inverse trigonometric, exponential, and logarithmic functions. Topics include an introduction to mathematical argument and conic sections. Emphasis is placed on the function concept and the appropriate use of the language of mathematics. Prerequisite: An appropriate placement test result or MA125 College Algebra & Trigonometry.

MA151 Calculus 1 C-4 Cr-4

This is the first in a sequence of three courses in analytic geometry and calculus for students intending to transfer to programs requiring a thorough background in calculus. Topics include limits and continuity, differentiation of algebraic and trigonometric functions, and indefinite and definite integration. Applications are included. Prerequisite: An appropriate placement test result or MA150 Pre-calculus.

MA152 Calculus 2 C-4 Cr-4

This is the second in a sequence of three courses in calculus for students intending to transfer to programs requiring a thorough background in calculus. Topics include the integration

of trigonometric functions, the differentiation and integration of the logarithmic, exponential, and inverse trigonometric functions, further techniques in integration, L'Hopital's Rule, improper integrals, and infinite series. Applications are included. Prerequisite: MA151 Calculus 1.

MA171 Foundations of Mathematics 1 **C-3 Cr-3**

This is the first of a two-course sequence for students preparing to teach at the elementary school level. Topics include the study of real numbers through a development of natural numbers, whole numbers, integers, rational numbers, decimals, and irrational numbers, together with operations on them. Number theory is presented, along with a discussion of numeration systems including bases other than 10. The language and nature of reasoning, together with basic elements of set theory, are introduced. Problem-solving is emphasized. Prerequisite: An appropriate placement test result, MA091 Introductory Algebra, or MA099 Introduction to Elementary Algebra.

MA172 Foundations of Mathematics 2 (M2) **C-3 Cr-3**

This is the second of a two-course sequence for students preparing to teach at the elementary school level. Topics include elementary geometry of two and three dimensions, measurement, coordinate geometry and transformations, probability, and statistics. Prerequisite: MA171 Foundations of Mathematics 1.

MA175 Elementary Functions **C-3 Cr-3**

This course examines the elementary functions of mathematics with emphasis on their graphical properties. Topics include the polynomial, rational, exponential, logarithmic, trigonometric, and inverse trigonometric functions. Graphing technology is incorporated. Prerequisite: MA172 Foundations of Mathematics 2.

MA223 Fundamentals of College Mathematics 3 **C-4 Cr-4**

This course is designed for the Electrical Engineering Technology program. Topics include trigonometric identities and equations, derivatives and integrals involving trigonometric, exponential, and logarithmic functions, and MacLaurin and Fourier Series. Applications include area, volume, center of gravity, and periodic functions. Prerequisite: MA122 Fundamentals of College Mathematics 2.

MA253 Calculus 3 **C-4 Cr-4**

This is the third in a sequence of three courses in calculus for students intending to transfer to programs requiring a thorough background in calculus. Topics include polar and space coordinates multiple integration, partial differentiation, and the algebra and calculus of vectors. Applications are included. Prerequisite: MA152 Calculus 2.

MA260 Differential Equations **C-3 Cr-3**

This course introduces the concepts and theory of ordinary differential equations. Topics include existence and uniqueness of solutions, and separable, homogenous, exact, and linear differential equations. Methods involving integrating factors, undetermined coefficients, and variation of parameters, power series, numerical approximation, and systems of differential equations using differential operators are covered. Applications are drawn from geometry, chemistry, biology, and physics. Prerequisite: MA152 Calculus 2. (Spring Semester only)

MA275 Discrete Algebraic Structures **C-4 Cr-4**

This course introduces mathematical systems. Topics include methods of proof, sets, logic, functions, relations, graphs, trees, and algebraic systems. Prerequisite: MA151 Calculus 1. (Fall Semester only)

MA280 Linear Algebra **C-3 Cr-3**

This course begins with geometric concepts and transitions to more abstract reasoning. Topics include systems of linear equations,

matrix algebra, determinants, vector spaces, bases, linear transformations, Eigen values, and inner products. Prerequisite: MA152 Calculus 2. (Spring Semester only)

MA300 Independent Study in Mathematics

Cr 1-4

MD Media Marketing & Management Courses

Art Department

MD140 Principles of Advertising **C-3 Cr-3**

This course covers the theory, role, scope, and practice of modern advertising. It investigates how and why consumers respond to advertising and how persuasion motivates action. It explores consumer and advertising research techniques.

MD141 Digital Video & Copywriting **C-2 P-2 Cr-3**

This course introduces the field of broadcast advertising. It explores the artistic and technical potential of commercial production and covers the production of 30-second radio and 30-second television commercials. It includes hands-on experience with camcorders, non-linear video and audio editing systems, and state-of-the-art digital animation programs used by the television commercial industry.

MD151 Fundamentals of Media **C-3 Cr-3**

This course introduces the types and characteristics of vehicles that carry advertisements. It investigates advertising media — newspapers, magazines, television, radio, etc. — and their advantages and limitations.

MD152 Print Media and Production **C-3 Cr-3**

This course examines publications, direct mail, outdoor, and other print advertising vehicles. Reproduction processes, utilization, and the preparation for each process are discussed. It includes field trips to printing plants and the creation of print layouts.

MD161 Visual Communication **C-2 P-2 Cr-3**

This course covers the designing of advertising layouts in black-and-white media as well as color. Emphasis is placed on formulating basic design and drawing principles, with particular stress on application.

MD240 Advertising Management **C-3 Cr-3**

This course considers the function of the advertising manager and art director in developing an integrated communications campaign. It emphasizes individual and team solutions, and cases and problems. Prerequisites: MD140 Principles of Advertising and MD141 Digital Video & Copywriting.

MD253 Broadcast Media and Production **C-3 Cr-3**

This course introduces television and radio programming and audiences, media rate structures, and related material. Reproduction processes in broadcasting are discussed. It involves the creation of broadcast commercials along with field trips to radio and TV stations.

MD254 Media Planning **C-3 Cr-3**

This course analyzes media costs, media buying problems, inter-media comparisons, and overall media strategy. Media problems are solved based upon marketing, advertising, and budget considerations. Prerequisite: MD151 Fundamentals of Media.

MD255 Media Computer Applications **C-2 P-2 Cr-3**

This course covers the applications of data processing equipment to solving media problems. It includes media problem simulation using the DONMAR simulator. Prerequisite: MD151 Fundamentals of Media.

MD256 Digital Media Applications**C-1 P-4 Cr-3**

This course introduces digital imaging, word processing, and digital video editing techniques used by the media professional. The aesthetic and technological potential of the software is explored. The use of digital media and editing of computer-based imagery are emphasized. Advanced instruction is included in software and peripheral devices, including scanners, printers, file storage media, and video editing equipment. Prerequisite: MD141 Digital Video & Copyrighting.

MD300 Independent Study in Media Marketing & Management**Cr 1-4****MR Medical Records Courses****Health Professions Department****MR103 Medical Terminology****C-3 Cr-3**

This course concentrates on spelling, pronunciation, and the meaning of medical word components, common terms used in selected body systems, and medical abbreviations.

MR104 CPT Procedural Coding**C-1 P-2 Cr-2**

This course introduces indexing conditions and procedures using the Current Procedural Terminology. It covers how to code from actual medical records and introduces the current prospective payment system(s). (Spring semester) Prerequisite: MR103 Medical Terminology.

MR105 International Classification Systems**C-2 P-4 Cr-4**

This course introduces indexing diseases and operations using the International Classification of Disease. It covers how to code from actual medical records and introduces DRGs and the Prospective Payment System. (Spring semester) Prerequisite: MR103 Medical Terminology.

MR115 Law in Health Care**C-3 Cr-3**

This course introduces the legal aspects of health information, with emphasis placed on civil law and how health care settings are affected by law and by non-governmental rulemaking bodies. Topics include a review of the history of common law, the primary sources of law, tort law, the court system, corporate liability, medical staff issues, and consent to treatment, confidentiality, reporting obligations, and patient rights. It discusses the principles guiding the control, security, and usage of health information. (Spring semester)

MR208 Pharmacology for Allied Health**C-3 Cr-3**

This course covers the pharmacological, pathophysiological, therapeutic, and diagnostic aspects of medicine. It includes the concepts and medical word components for body systems and disorders encountered in health care. Discussions include pharmacological agents and the diagnostics test(s) used for disease processes, the selection of a particular pharmacological intervention, how its effectiveness is monitored using diagnostic interventions, and the value of laboratory tests. Prerequisite: MR103 Medical Terminology. (Spring semester.)

MR300 Independent Study in Medical Terminology**Cr 1-4**

This course concentrates on spelling, pronunciation, and the meaning of medical word components, common terms used in selected body systems, and medical abbreviations. (Spring semester.)

MT Mechanical Engineering Technology Courses**Physical Sciences, Engineering & Applied Technologies Department****MT107 Basic Machine Shop Practice****C-1.5 P-3 Cr-3**

This course introduces the theory and practices of metal removal, as practiced in industry. The set-up and safe operation of conventional machine tools are stressed, along with their capabilities and limitations. Common processes such as drilling, grinding, milling, threading, and turning are used. Topics include speeds and feeds, metal cutting theory, cutting fluids, selection of tooling, fixturing, precision measurement, and layout procedures, along with basic blueprint reading and sketching.

MT112 Architectural Drafting**C-1 P-4 Cr-3**

This course is an introduction to the standard drawing techniques and design concepts used for residential and light commercial buildings. Topics include foundations, framing, windows and doors, structural sections, floor plans, elevations, specifications, building codes, and perspectives. Prerequisite: MT140 Drafting and Design Using AutoCAD.

MT114 Manufacturing Processes**C-2 P-2 Cr-3**

This course introduces traditional processes used in manufacturing and methods of processing raw materials into manufactured components. Materials such as plastics, metals, composites, and elements of micro-fabrication and nano-fabrication are covered. Assembly methods include plastics joining, fasteners, and automation.

MT121 Mechanical Drafting**C-2 P-6 Cr-5**

This course covers the fundamentals of engineering drawing with an emphasis on the development of drawing skills. Topics include lettering, sketching, geometric construction, orthographic projections, dimensioning, sectioning, auxiliary views, screw threads, graphs-charts, pictorial drawings, and developments.

MT126 Statics: Mechanical**C-2 P-2 Cr-3**

This course is a study of force systems and their actions on bodies at rest. Topics include force systems, equilibrium of force systems, distributed forces, friction, moments of inertia, centroids, and bending and shear diagrams. The laboratory component emphasizes computer analysis. Prerequisite: MA121 Fundamentals of College Mathematics 1 or a higher level mathematics course which includes trigonometry.

MT129 Statistical Quality Control**C-2 Cr-2**

This applied statistics course provides measuring tools for quality control and process control in manufacturing. Topics include frequency distributions; measures of central tendency and of dispersion; natural tolerances, control charts for variables and for attributes; probability theory and applications to sampling and to operational characteristic (O-C) curves; acceptable quality level (AQL) sampling plans; Pareto charts; and, random number tables.

MT139 Mechanical Systems**C-2 P-4 Cr-4**

This course is a study of the basic mechanical components in a complex mechatronics system. Topics include basic functions and physical properties of mechanical components and the roles they play in the system such as materials, lubrication requirements and surface properties, as well as troubleshooting techniques and strategies used to identify, localize and correct malfunctions. Concepts in systemic preventative maintenance and mechanical component safety are presented along with technical documentation such as data sheets and specifications of mechanical elements.

MT140 Drafting and Design Using AutoCAD**C-1 P-4 Cr-3**

This course provides the foundation and problem-solving skills necessary to develop and interpret engineering drawings using the computer-aided drafting software (AutoCAD). Topics include assembly and detail drawing composition; design for assembly/manufacturing (DFA/DFM); geometric dimensioning and tolerancing; tolerance control and standard fits; fasteners; gearing; sheet metal developments; weldments; functional drafting techniques; and the development of 2D and 3D CAD generated drawings and system operations.

MT141 Machining Fundamentals**C-2 P-4 Cr-4**

This course introduces the theory and practices of metal removal as applied in industry. The set-up and safe operation of conventional machine tools is stressed, along with their capabilities and limitations. Common processes such as drilling, grinding, milling, threading, and turning are utilized. Topics include speeds and feeds, metal cutting theory, cutting fluids, selection of tooling, fixturing, precision measurement, and layout procedures. Prerequisites: MT140 Drafting and Design Using AutoCAD, and either MA105 Technical Mathematics 1 or MA121 Fundamentals of College Mathematics 1. (Spring semester.)

MT149 Pneumatic and Hydraulic Systems**C-2 P-2 Cr-3**

This course presents a study of fluid power technology using fluids or compressed air as the transfer media. Complete hydraulic and pneumatic systems, including power sources, reservoirs, pumps, compressors, lines, valves, and actuators. Additional topics include troubleshooting strategies used to identify, localize and correct malfunctions in pneumatic and hydraulic systems, preventative maintenance, and safety issues.

MT155 Introduction to Solid Modeling**C-1 P-4 Cr-3**

This course is an introduction into the use of three-dimensional solid modeling CAD software. Topics include creating models using features such as protrusions, cuts, rounds, blends, revolutions, and sweeps. Model planning and design intent are stressed. Assemblies, drawings, documentation, and detailing are also covered, as well as output and interfaces with common software such as spreadsheets and word processing.

MT170 Oxy-Acetylene Welding Procedures**C-2 P-6 Cr-5**

This course covers the theory, methods, and use of acetylene equipment to oxy-weld and cut in all positions. Welding supply fee required.

MT174 Electric Arc Welding Procedures**C-2 P-6 Cr-5**

This course provides proficiency in oxy-acetylene welding procedures, including the theory and use of electric arc welding. Topics include welding ferrous and nonferrous metals in all positions, and the theory of pipe design and cutting. Welding supply fee required.

MT203 Design of Machine Elements**C-2 P-2 Cr-3**

This course addresses the methods and theory of practical machine design. Topics include stress analysis, shaft design, kinematics of linkages, springs, gears, chains, belts, bearings and welding joints. The application of computer aided design software to some of the analysis problems are covered. An introduction to finite element analysis software are presented. Prerequisites: MT140 Drafting and Design Using AutoCAD and MT230 Strength of Materials: Mechanical.

MT204 Automatic Controls**C-2 P-2 Cr-3**

This course includes the theory and use of hydraulic, pneumatic, and electrical devices to activate and regulate the displacement and position of machine components, basic energy principles applied to mechanical and electrical systems, relay ladder logic, and motor circuits. Prerequisite: MA106 Technical Mathematics 2 or higher level mathematics course containing algebra.

MT207 Computer-Aided Manufacturing (CAM)**C-1 P-4 Cr-3**

This advanced processes course covers the fundamental theory and application of CAM (computer-aided manufacturing) technology. Programming methods include conversational, G-M Code, and Symbolic FANUC Automatically Programmed Tools. Tool selection and calibrations, part zero, tool offsets, program editing, troubleshooting, and fixturing are also stressed. Rapid prototyping, Computer Integrated Manufacturing (CIM), Flexible Manufacturing Systems (FMS), group technology, robotics, and CAD/CAM systems are also discussed. (Fall semester.) Prerequisites: MT141 Machining Fundamentals.

MT209 Materials Science**C-2 P-2 Cr-3**

This course covers the processing and performance of engineering materials as well as their physical and chemical properties. Topics include the chemistry of metals, plastics, and ceramics. Phase diagrams, heat treatment of metals, and micrographs are studied in the laboratory. Prerequisites: MA121 Fundamentals of College Mathematics 1 and either CH131 College Chemistry or CH141 General Chemistry 1, and MT230 Strength of Materials: Mechanical or ES261 Mechanics of Materials.

MT221 Tolerance & Assembly Drafting**C-1 P-6 Cr-4**

This course integrates previous and current coursework and applies it to the design of manufactured parts. Designing for easier and more economical manufacturing is emphasized. Topics include assigning tolerances based upon how the part is to function, common manufacturing process tolerances, limit dimensions, avoiding tolerance accumulation, datums, introduction to geometric dimensioning and tolerancing, ASME Y-14.5M-1994, and functional gaging. Prerequisite: MT140 Drafting and Design Using AutoCAD.

MT222 Tool & Design Drafting**C-1 P-6 Cr-4**

This course introduces the fundamentals of tool design. Topics include break-even charts, tool materials, work-holding principles, 3-2-1 basis of location, jig and fixture design for different processes, presswork tooling, punch and die set, gaging and assembly tooling. Prerequisites: MT221 Tolerance & Assembly Drafting. (Spring Semester.)

MT223 Electrical-Electronic Drafting**C-1 P-4 Cr-3**

This course covers basic electrical principles and electronic components, and several types of drawings to support design and documentation of electrical circuits. Topics include device symbols, schematics, ladder diagrams, logic diagrams, architectural electrical drawings, and basic electrical circuit principles such as voltage, current, resistance, Ohms law, and power. Prerequisites: MT140 Drafting and Design Using AutoCAD or CT102 Engineering Drawing and MicroStation CAD.

MT225 Applied Mechanics & Strength of Materials**C-3 P-2 Cr-4**

This course introduces the statics and strength of materials while emphasizing their uses in practical design situations. Topics include unit conversions, force vectors, moment of a force, and equilibrium of concurrent and coplanar force systems, stress, strain, shear and bending moment diagrams, and bending and deflection of beams. Prerequisite: MA106 Technical Mathematics 2 or higher level mathematics course which includes trigonometry.

MT226 Industrial Materials**C-2 P-3 Cr-3.5**

This course introduces the properties of commonly used materials. Topics include the method used to evaluate material that will be used in the manufacturing of a part. Prerequisites: MA105 Technical Mathematics 1 and MT114 Manufacturing Processes.

MT229 Building Systems Drafting**C-1 P-4 Cr-3**

This course covers the various types of service system drawings, such as heating, ventilation, and air conditioning (HVAC), water supply, drainage distribution, fire protection, and control systems.

Residential and commercial applications are emphasized, along with CAD drawing methods. Prerequisite: MT112 Architectural Drafting.

MT230 Strength of Materials: Mechanical C-3 P-2 Cr-4

The course introduces the fundamentals of strength of materials. Topics in stress analysis are included. Laboratory activities focus on testing procedures, reporting, and computer analysis. Prerequisites: MT126 Statics: Mechanical, CT121 Statics, or ES271 Engineering Statics.

MT231 Lean Six Sigma C-3 P-2 Cr-4

This course covers basic functions and challenges of managers in the manufacturing and business environment, focusing on lean manufacturing, small businesses, and entrepreneurship. Topics include: Total Quality Management, continuous improvement, value-added activities and analysis, waste analysis, Just-In-Time, applications of Statistical Quality Control, and other current management methods and techniques. Lab activities may include off-site projects. Prerequisite: MT114 Manufacturing Processes or MA121 Fundamentals of College Mathematics 1.

MT242 Advanced MicroStation CAD C-1 P-4 Cr-3

This is an advanced level course using MicroStation. Topics include theory and operational concepts for three-dimensional CAD drawings and models, solid modeling, rendering, display, and editing techniques. Prerequisites: CT102 Engineering Drawing and MicroStation CAD, or permission of the Associate Dean for Physical Sciences, Engineering & Applied Technologies.

MT247 Introduction to Robotics C-2 P-4 Cr-4

This course introduces the application of automated material-handling devices in the manufacturing environment. Topics include classification of robots and their work envelopes, system components, programming methods, sensors and applications, economic justification, safety consideration, and industrial applications. Automatic guided vehicles and automatic storage/retrieval systems are discussed.

MT251 Advanced AutoCAD C-1 P-4 Cr-3

This is an advanced course using AutoCAD. Topics include menu customization, theory and operational concepts for three-dimensional CAD drawings and models, solid modeling, rendering and editing techniques. Prerequisites: MT140 Drafting and Design Using AutoCAD or permission of the Associate Dean for Physical Sciences, Engineering & Applied Technologies.

MT252 Fluid Mechanics C-3 P-2 Cr-4

This course covers the fundamental topics and applications of fluid mechanics. Topics include fluid properties, fluid statics, conservation of energy and mass, pipe and duct flow, pumps, and measurement of fluid properties and states. An introduction to heat transfer is included, applying theory to thermal and hydraulic systems. Prerequisite: MA121 Fundamentals of College Mathematics or a higher level mathematics course which includes trigonometry, or permission of the Associate Dean for Physical Sciences, Engineering & Applied Technologies.

MT256 Advanced Solid Modeling C-1 P-4 Cr-3

This course covers advanced solid modeling concepts and techniques. Topics include creating complex parametric models and assemblies using all feature types; creating detail and assembly drawings with various sectioning and view techniques; measurements; surfaces; and motion and analysis models. Model and assembly pre-planning are emphasized. Prerequisite: MT155 Introduction to Solid Modeling or permission of the Associate Dean for Physical Sciences, Engineering & Applied Technologies.

MT270 Welding Procedures for MIG and TIG C-2 P-6 Cr-5

This course covers the theory and use of TIG (Tungsten Inert Gas) and MIG (Gas Metallic Arc) welding, including non-ferrous and

ferrous metals in all positions. Topics include plasma welding, cutting, and safety procedures. Prerequisite: MT170 Oxy-Acetylene Welding Procedures. Welding supply fee required.

MT271 Metallurgy for Welders C-2 P-4 Cr-4

This course provides a fundamental knowledge and understanding of metallurgy as applied to welding. Topics include heat treating, physical testing, and metallography.

MT272 Advanced Electric Arc Welding Procedures C-2 P-6 Cr-5

This course continues with instruction of the principles and practices of gas arc (TIG) and gas metallic arc (MIG) welding on ferrous and non-ferrous metals and pipe. Topics include special arc cutting techniques such as air carbon arc, oxygen arc, underwater cutting, plasma cutting, along with theory and safety. Welding supply fee required. Prerequisite: MT174 Electric Arc Welding Procedures.

MT273 Welding Certification C-2 P-6 Cr-5

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. Welding supply fee required. Prerequisite: MT272 Advanced Electric Arc Welding Procedures.

MT276 Welders Ornamental Iron & Blacksmithing C-2 P-4 Cr-4

This course covers the design and fabrication of wrought iron and sculpture. Topics include the theory of blacksmithing and the use of the forge on various metals. Safety is stressed. Welding supply fee required.

MT277 Welders Blueprint Reading & Metal Fabrication C-2 P-6 Cr-5

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

MT278 Welding Inspection & Quality Control Testing C-2 P-4 Cr-4

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. Welding supply fee required.

MT291 Introduction to Machining C-2 P-6 Cr-5

This course introduces fundamental concepts of machining. Topics include safety, blueprint reading, precision measurement tools, machining a work piece to drawing specification, use of manual machines (milling, lathe, etc.), proper tooling and work-holding methods, and how to determine sequential machining operations of complex parts.

MT292 Introduction to CNC Milling C-2 P-6 Cr-5

This course introduces fundamental concepts of CNC milling centers. Topics include safety, blueprint reading, shop math, machining a work piece to drawing specification, introduction to CNC programming, set-up for milling machines, use of CNC milling machines, proper tooling and work-holding methods, and how to determine sequential machining operations of complex parts. Corequisite: MT291 Introduction to Machining.

MT293 Advanced CNC Milling C-2 P-6 Cr-5

This course covers advanced concepts of CNC milling centers. This course is the third in the series of assessment-based courses in the CNC/Machinist curriculum. Evaluation is based on the ability to demonstrate knowledge and experience in all topics of study. Topics include safety, blueprint reading, Geometric Dimensioning and Tolerancing (GD&T), machining a work piece to drawing

specification, CNC programming for vertical milling machines, use of CNC vertical milling machines, proper tolling and work-holding methods, and how to determine sequential machining operations of complex parts. Corequisite: MT292 Introduction to CNC Milling.

MT294 Introduction to CNC Turning Centers C-2 P-6 Cr-5

This course introduces fundamental concepts of CNC Turning centers. Topics include safety, blueprint reading, machining a work piece to drawing specification, introduction to CAM programming software, use of CAD to create drawings, introduction to CNC programming for lathes, use of CNC lathe, proper tooling and work-holding methods, and how to determine sequential machining operations of complex parts. Corequisite: MT293 Advanced CNC Milling.

MT295 Advanced CNC Turning Centers C-2 P-6 Cr-5

This course introduces advanced concepts of CNC Turning centers. Topics include safety, blueprint reading, live tools, C axis programming, soft Jaws, machining a work piece to drawing specifications, CAM programming software, use of CAD to create drawings, manual programming for lathes, set-up of CNC lathe, proper tolling and work-holding methods and how to determine sequential machining operations of complex parts. Corequisite: MT294 Introduction to CNC Turning Centers.

MT296 Multi-Axis CNC Machining C-2 P-6 Cr-5

This course introduces fundamental concepts of Multi-Axis CNC Turning and Milling centers. Topics include safety, blueprint reading, machining a work piece to drawing specification, CAM programming software, CNC programming for Multi-Axis lathes, CNC programming for 4 and 5 axis machining centers, use of CNC milling machines and lathes, proper tooling and work-holding methods, advanced machining setups and tolling for milling machines and lathes, and topics on CNC wire EDM machining. Corequisite: MT295 Advanced CNC Turning Centers.

MT297 CNC Capstone C-2 P-6 Cr-5

In this capstone course students utilize and demonstrate the skills learned in the CNC/Machinist program. Students design, program, manufacture, and inspect the part they design. CAM and CAD software are utilized for design and programming purposes. The final project is manufactured and inspected to design specifications. Corequisite: MT296 Multi-Axis CNC Machining.

MT300 Independent Study In Mechanical Technology Cr 1-5

NU Nursing Courses

Health Professions Department

NU001 Introduction to Nursing 1 C-3 Cr-0

This course introduces students to study habits and strategies for success in nursing courses, as well as a selection of concepts and skills essential to nursing. It is designed to help the student be more successful in NU101 Nursing 1 Fundamentals of Nursing. Topics include the role of the nurse as a health care team member, introduction to the nursing process, Maslow's Hierarchy of Needs Theory, and basic concepts of health, illness, wellness, and healing. The course explores legal, ethical, and cultural issues in nursing and ethnic diversity. Skills essential to nursing, such as health teaching, communication, documentation, and taking of vital signs are introduced. The course examines the pathways to nursing careers, and the goals and responsibilities of enrollment in an AAS nursing curriculum.

NU101 Nursing 1 (Fundamentals of Nursing) C-3 P-6 Cr-5

This course explores the art and science of nursing and provides the foundation for all subsequent nursing courses. The physical,

physiological, psychological, sociocultural, and spiritual needs of the client are emphasized in the promotion of health and wellness. The roles and responsibilities of nursing practice in contemporary society are explored. Basic concepts of Maslow's Hierarchy of Needs Theory, the nursing process, communication, critical thinking, leadership and management principles, ethical and legal aspects, and scientific principles of nursing and nursing skills are introduced. Clinical practicums are provided in a variety of health care facilities. Prerequisites: An appropriate Mathematics Placement test result, high school chemistry with laboratory or its equivalent, and BI216 Human Anatomy & Physiology 1. Mandatory Corequisite: NU111 Nursing Pharmacotherapeutics 1. (Fall semester.)

NU102 Nursing 2A (Family-Centered Nursing During the Pregnancy Cycle) (7.5 weeks) C-2 P-6 Cr-4

This course focuses on the physical, physiological, cultural, spiritual, and psychological needs experienced by the expanding family during pregnancy, labor, delivery, and postpartum periods. The nursing process, Maslow's Hierarchy of Needs Theory, and critical thinking are integrated to meet the needs of the family in the perinatal cycle. Clinical experiences are provided in general hospital units and community agencies. Prerequisites: NU101 Nursing 1 with a minimum grade of 75 or advanced standing and NU111 Nursing Pharmacotherapeutics 1 with a minimum grade of 75 or advanced standing. Corequisite: BI127 Human Anatomy & Physiology 2. Mandatory Corequisite: NU103 Nursing 2B (Mental Health and Psychiatric Nursing Throughout the Life Cycle). (Spring semester.)

NU103 Nursing 2B (Mental Health and Psychiatric Nursing Throughout the Life Cycle) (7.5 weeks) C-2 P-6 Cr-4

This course addresses the foundations of mental health and psychiatric nursing. It examines threats to the basic psychological needs of security, love and belonging, self-esteem, and self-actualization throughout the life cycle. The nursing process, Maslow's Hierarchy of Needs Theory, and critical thinking are integrated to meet the needs of the client experiencing a disruption in mental health. Interpersonal relationships between the nurse and client are emphasized as a therapeutic modality. Clinical practicums are provided in mental health and psychiatric settings. Prerequisites: NU101 Nursing 1 with a minimum grade of 75 or advanced standing and NU111 Nursing Pharmacotherapeutics 1 with a minimum grade of 75 or advanced standing. Corequisite: BI217 Human Anatomy & Physiology 2. Mandatory Corequisite: NU102 Nursing 2A (Family-Centered Nursing During the Pregnancy Cycle). (Spring semester.)

NU111 Nursing Pharmacotherapeutics 1 C-1 Cr-1

This course introduces the concepts pertaining to the pharmacodynamics and pharmacokinetics of medications and dosage calculation for medication administration. Mandatory Corequisite: NU101 Nursing 1. (Fall Semester only.)

NU201 Nursing 3 (Threats to Basic Human Needs Throughout the Life Cycle: Part 1) C-6 P-12 Cr-10

This course focuses on the pathophysiologic and psychosocial responses in clients experiencing disruptions in oxygenation, nutrition, and metabolic function. It analyzes the role of the professional registered nurse in assisting clients to adapt to these stressors. The nursing process, Maslow's Hierarchy of Needs Theory, and critical thinking are integrated to meet the needs of the client experiencing a disruption in a medical/surgical setting. Concepts of nursing leadership and management are applied in providing care for a group of clients. A clinical practicum in a medical/surgical setting provides opportunities to assess and meet the needs of selected clients throughout the life cycle. Prerequisites: NU102 Nursing 2A, NU103 Nursing 2B, all with a minimum grade of 75 or advanced standing; and BI217 Human Anatomy & Physiology 2 with a minimum grade of 70. Corequisite: BI201 Microbiology. (Fall semester.)

NU202 Nursing 4 (Threats to Basic Human Needs Throughout the Life Cycle: Part 2) C-6 P-12 Cr-10

This course focuses on the pathophysiologic and psychosocial responses in clients experiencing disruptions in elimination, cognition and sensation, musculoskeletal function, protection, and cellular aberration. The nursing process, Maslow's Hierarchy of Needs Theory, and critical thinking are integrated to meet the needs of the client experiencing a disruption in a medical/surgical setting. It explores the political, economic, social, and cultural influences on nursing practice and health care. It assists the second-year student to become a contributing member within the discipline of nursing. A clinical practicum in a medical/surgical setting provides opportunities to assess and meet the needs of selected clients throughout the life cycle. A 64-hour capstone experience assists in the transition to entry-level graduate nurse. Prerequisite: NU201 Nursing 3 with a minimum grade of 75. (Spring semester.)

NU300 Independent Study in Nursing Cr 1-4

OP Photonics Courses

Physical Sciences, Engineering & Applied Technologies Department

OP161 Introduction to Photonics C-3 P-3 Cr-4.5

This course, the first of three optical courses in the Photonics program, covers properties of light, reflection, refraction, thin lenses, interference, diffraction, optical instruments, lasers, fiber optic components, fiber optic systems, optical information processing, and holography.

OP261 Geometrical Optics C-3 P-3 Cr-4.5

This course introduces the design and evaluation of optical systems using geometrical optics. Topics include: Gaussian optics and first-order system design, photometric theory applied to optical systems, matrix techniques in optics, optical instruments, exact-ray tracing methods, nature of Seidel aberrations, and optical system design software. Prerequisite: MA152 Calculus 2. Corequisite: PH262 Engineering Physics 2.

OP262 Physical Optics C-3 P-3 Cr-4.5

This course covers topics in the complex representation of waves, interaction of light with matter, interference, polarization, Fresnel and Fraunhofer diffraction, Fourier optics, coherent optical systems, optical data processing, and holography. Prerequisite: OP261 Geometrical Optics.

PE Physical Education Courses

Athletics, Physical Education & Recreation Department

PE101 Bowling Cr-.5

This course is for any skill level from beginner to advanced. It focuses on learning and improving proper form, scoring, appropriate etiquette, and general rules for the sport. Additional fees charged.

PE102 Golf Cr-.5

This course presents the rules, playing etiquette, and skills necessary for playing golf. Instructional classes occur on campus and at a local golf course. Additional fees charged.

PE103 Tennis Cr-.5

This skills-development course includes instruction in equipment selection and fundamentals of serving, strokes, and scoring. Rules and their application during singles and doubles play are addressed. Emphasis is placed on leisure and fitness benefits.

PE104 Badminton Cr-.5

This course introduces the fundamental and advanced skills in badminton. Instruction in playing skills, rules, and strategies is provided. Focus is placed on the leisure and fitness benefits.

PE110 Racquet Sports P-1 Cr-.5

This course introduces the fundamental and advanced skills in badminton and racquetball. Instruction is provided in playing skills, rules, and strategies. Focus is placed on leisure and fitness benefits.

PE111 Strength Training 1 P-1 Cr-.5

This course provides proper free-weight training techniques for implementing a personal weight program. It develops individualized and strength training routines that can become lifetime commitments.

PE112 Speed Training P-1 Cr-.5

This course provides proper speed training techniques for improving fitness and athletic ability. Emphasis is placed on dynamic stretching, core strength, and sport specific speed/direction change.

PE130 Swimming for Beginners Cr-.5

This course helps non-swimmers and beginners to develop confidence in, on, or about the water. It includes adjustment and safety skills, floating, front and back kicks, arm strokes, entries, and conditioning skills. Emphasis is placed on leisure and fitness benefits.

PE131 Basic Swimming Cr-.5

This course provides those with basic swimming abilities the opportunity to develop more efficient skills and conditioning levels. It covers the improvement of the front crawl, backstroke, elementary backstroke, sidestroke, and breaststroke. Prerequisite: PE130 Swimming for Beginners or equivalent abilities, determined by instructor.

PE133 Aerobic Swimming Cr-.5

This course presents a variety of aquatic activities encouraging fitness development. It introduces concepts of conditioning swims, water exercise, and tube training. It presumes basic confidence and comfort being in the water.

PE134 SCUBA Diving Cr-1

This course introduces the concepts of safe SCUBA diving. It covers elementary SCUBA techniques and safety practices. Instructional classes will be in the MVCC swimming pool. Upon completion, certification can be pursued by participating in open water dives. Additional fees charged.

PE143 Basketball Cr-.5

This course is an introduction to the sport of basketball, including basic skills and techniques. An opportunity to experience a positive leisure activity is provided.

PE151 Personal Fitness Cr-.5

This course introduces general fitness concepts with focus on the five health-related components of fitness: aerobic capacity, body composition, flexibility, muscular endurance, and muscular strength. Participation in laboratory activities develops these components.

PE152 Jogging Cr-.5

This course helps participants understand the value of jogging as a personal fitness activity at any level of ability or experience. It includes information about training methods, the training effects of progressive exercise, shoe and clothing selection, and safety in training, dealing with aches and pains, and preparing for competition. Workouts demonstrate program progression and show examples of training methods.

PE153 Aerobic Fitness**Cr-.5**

This course provides an understanding of the five health-related components of fitness (aerobic capacity, body composition, flexibility, muscular endurance, and muscular strength) and how aerobic exercise contributes to their development. Exercise sessions are dedicated to developing total fitness.

PE154 Fitness Center**Cr-1**

This course introduces students to a comprehensive fitness program, including strength training, cardiovascular endurance, and flexibility enhancement. Students develop the basic knowledge to pursue fitness as a lifetime endeavor.

PE155 Police Fitness Training**P-15 Cr-.5**

This course covers the physiological capacity for successful completion of the fitness requirement for an entry-level police officer as prescribed by the Municipal Police Training Council of the State of New York. The NYS Police Officer minimum fitness requirements are incorporated.

PE156 Total Body Fitness**P-1 Cr-.5**

This course introduces the students to the basic fundamental Total Body Fitness exercises, which are Yoga and Pilates-inspired positions. Many of the poses and exercises strengthen one or more muscle groups, while simultaneously stretching others. Many of the exercises also will challenge balance. The focus will be on the essential foundations of the primary poses to encourage the student to practice safely with ease and stability. There also will be a focus on managing stress through mindfulness and breath.

PE157 Walking for Fitness**Cr-.5**

This course introduces the low-impact, cardiovascular endurance activity of walking. Proper techniques of walking, warm-up, and cool-down are introduced and practiced. Instruction is provided in injury prevention, weight management, and goal setting as vital components of a fitness program.

PE158 Basic Yoga**P-1 Cr-.5**

This course introduces basic yoga principles. Emphasis is placed on increasing flexibility, body awareness, and focusing the breath. Activities include major poses and routines designed to increase knowledge of yoga and its role in lifetime fitness.

PE162 Self-Defense**P-1 Cr-.5**

This course introduces basic self-defense moves, escapes from grabs, using restraining holds, kicking techniques, and punching. Escaping and restraining will be done with partners. Punching and kicking will be done against targets and pads held by partners. This is not formal martial arts training; this is an introduction only. Emphasis is placed on preventative measures for personal protection.

PE164 Tai Chi**P-1 Cr .5**

This course introduces the skills and principles of Tai Chi. Students learn and practice Tai Chi postures of a Yang style form. Partner exchanges called sensing hands are included later in the practice.

PE170 First Aid**Cr-1**

This course provides knowledge and skills for handling most situations that require emergency first-aid care. It provides the opportunity to work toward National Safety Council First Aid/CPR certifications as well as automated external defibrillation (AED) skills.

PE171 CPR**Cr-.5**

This course teaches rescue breathing, CPR, two-rescuer CPR, and automated external defibrillation (AED) skills. Students may complete certification from the American Heart Association basic life support (BLS) for health care providers.

PE172 Health & Wellness**C-1.5 P-1 Cr-2**

This course assists in making intelligent health-conscious decisions through topics such as wellness, aging, sexuality, drugs and alcohol, and communicable diseases. It introduces activities and skills for leading healthy lifestyles including fitness assessment, weight management, and exercise.

Intercollegiate Athletics

These courses are designed for competition at the intercollegiate athletic level. Organization, conditioning, and practice sessions prepare students for competition as members of an MVCC intercollegiate team. Team rosters may be determined according to program limitations, with players selected on ability and availability. NJCAA athletic eligibility must be met prior to competition and all students must pass a physical exam administered by a qualified health care professional. Varsity courses each carry 1.0 credit for completion of one season of participation on a varsity team.

PE178 Varsity Lacrosse – Women**PE179 Varsity Soccer – Women****PE182 Varsity Lacrosse – Men****PE183 Varsity Ice Hockey****PE184 Varsity Bowling****PE185 Varsity Soccer – Men****PE186 Varsity Basketball – Men****PE188 Varsity Baseball****PE189 Varsity Tennis – Men****PE191 Varsity Volleyball****PE192 Varsity Tennis – Women****PE193 Varsity Basketball – Women****PE194 Varsity Softball****PE195 Varsity Cross Country****PE196 Varsity Indoor Track****PE197 Varsity Golf****PE198 Varsity Track & Field****PE211 Strength Training 2****P-1 Cr-.5**

This course provides proper training techniques for implementing a personal weight program. It is a continuation of PE111 Strength Training 1, isolating and intensifying workouts for specific muscle groups to maximize muscle strength and development. Prerequisite: PE111 Strength Training 1.

PE230 Lifeguard Training**P-4 Cr-2**

This course is for those who have an interest in developing a high degree of proficiency in swimming, water safety, and lifeguard skills. It provides the opportunity to work on requirements to become a certified lifeguard per NYS Health Department standards.

PE234 SCUBA Diving 2**P-2 Cr-1**

This course, a Specialty (Level 2) Open-Water Diver program, teaches advanced diving skills in underwater navigation, deep diving, and dry-suit diving. Successful completion of classroom, pool, and open-water work leads to internationally recognized Specialty (Level 2) Diver Certification. Prerequisite: PE134 SCUBA Diving or Level 1 Certification or instructor permission. Additional fees charged.

PE300 Independent Study in Physical Education**Cr 1-2**

PH Physics Courses

Physical Sciences, Engineering & Applied Technologies Department

PH106 Science of Sound C-3 P-2 Cr-4

This course introduces basic concepts of sound and human hearing. Topics include the history and development of basic acoustics and electricity, microphones, loudspeakers, signal processing, monitoring and recording systems, and an introduction to current digital audio. This course is not applicable as an electrical elective for Electrical majors. Prerequisites: An appropriate Mathematics Placement test result, MA090 Essential Math Skills, or MA091 Introductory Algebra.

PH112 Science of Light 1 C-3 P-2 Cr-4

This course introduces the concepts of light and optics. Topics include the historical development of optical instruments, electromagnetic spectrum, lenses and image formation, light-sensitive materials and processes, color filters, Kirlean imaging, and holography. Examples are chosen from a variety of fields, including photography, human vision, and nature. Prerequisite: An appropriate Mathematics Placement test result, MA090 Essential Math Skills, or MA091 Introductory Algebra.

PH113 Science of Light 2 C-3 P-2 Cr-4

This course is a continuation of PH112 Science of Light 1 and applies scientific principles to the analysis of the materials and processes of imaging. Topics include the historical development of color theory, color emulsions and their processing, physics of light sources, diffraction, interference, sensitometry, image evaluation, and digital image processing. Prerequisite: PH112 Science of Light 1.

PH114 Science of Digital Imaging C-3 P-2 Cr-4

This course provides an overview of the science underlying the field of digital imaging. Topics include the historical development of digital imaging technology, introduction to computers, color theory and color calibration, how image input and output devices work, the science of digital image manipulation, computer generation and display of 3D images, and real-world applications and their impact upon the individual and society. Image manipulation software is used to demonstrate and explore concepts. Prerequisite: An appropriate Mathematics Placement test result, MA090 Essential Math Skills, or MA091 Introductory Algebra.

PH115 Science of Multimedia C-3 P-2 Cr-4

This course examines the scientific and computer concepts to understand and use multimedia methods. Topics include an introduction to computers, color science, digital imaging, analog and digital sound concepts, video theory, animation techniques, authoring software, and multimedia distribution on the Internet as well as the testing and quality control of multimedia productions. Hardware and software packages are used to explore and demonstrate concepts.

PH116 Science of Multimedia 2 C-3 P-2 Cr-4

This course extends the scientific and computer concepts developed in PH115 Science of Multimedia to 3D multimedia. It provides hands-on experience using a professional 3D graphics engine. Topics include vectors and vector operations, transformation theory, design of 3D Graphical User Interfaces, 3D lighting, 3D cameras, multi-texturing, 3D optimization techniques, mesh generation, third-party model generation, 3D node hierarchy, using a 2D mouse in a 3D world, generation of physically accurate simulations, and 3D game development. Hardware and software packages are used to explore and demonstrate concepts. Prerequisites: PH115 Science of Multimedia and an appropriate Mathematics Placement test result, MA121 Fundamentals of College Mathematics 1, or MA125 College Algebra and Trigonometry.

PH131 Physics Fundamentals

C-2 P-4 Cr-4

This conceptual survey of physics emphasizes verbal reasoning and understanding in a classroom and laboratory format. It covers mechanical energy, sound, electricity, optics, thermal energy, and atomic nuclear energy. This course does not satisfy the graduation requirements for science and technology majors. Prerequisite: An appropriate Mathematics Placement test result, MA090 Essential Math Skills, or MA091 Introductory Algebra.

PH141 Astronomy: The Solar System

C-3 P-2 Cr-4

This course covers the history of astronomy, the tools of the astronomer, the earth as an astronomical body, and the solar system. Laboratory sessions may be scheduled in the evening. Prerequisite: An appropriate Mathematics Placement test result, MA090 Essential Math Skills, or MA091 Introductory Algebra.

PH142 Astronomy: Stars, Galaxies, and the Universe C-3 P-2 Cr-4

This course covers these topics: the sun and other stars, multiple star systems, the Milky Way and other galaxies, nebulae, intergalactic material, cosmology and the evolution of stars, pulsars, and black holes. Laboratory sessions may be scheduled in the evening. Prerequisite: An appropriate Mathematics Placement test result, or MA090 Essential Math Skills, or MA091 Introductory Algebra.

PH151 General Physics 1

C-3 P-2 Cr-4

This non-calculus Physics course for technology, business administration, computer science, and liberal arts and sciences students covers topics in mechanics, wave motion, and heat. Prerequisite: An appropriate Mathematics Placement test result, MA121 Fundamentals of College Mathematics 1, or MA125 College Algebra & Trigonometry.

PH152 General Physics 2

C-3 P-2 Cr-4

This course is a continuation of PH151 General Physics 1 and includes topics in electricity and magnetism, geometrical and physical optics, and modern physics. Prerequisite: PH151 General Physics 1.

PH261 Engineering Physics 1

C-3 P-3 Cr-4

This is a calculus-based physics course for mathematics, physics, and engineering students. Topics include translational motion, particle dynamics, work and energy, momentum and impulse, rotational kinematics, rigid body motion, gravitation, vibrational motion, wave motion, and acoustics. Prerequisites: MA151 Calculus 1.

PH262 Engineering Physics 2

C-3 P-3 Cr-4

This calculus-based physics course in electricity, magnetism, geometrical optics, and physics optics is for mathematics, physics, and engineering students. Topics include Coulomb's Law, the electric field, potential, capacitance, Ohm's Law, DC circuits, the magnetic field, charged particle ballistics, induced EMF, inductance, Maxwell's Equations, alternating current circuits, geometrical optics, and physical optics. Prerequisites: MA152 Calculus 2 and PH261 Engineering Physics 1.

PH265 Modern Physics and Thermodynamics

C-3 C-3 Cr-4

This calculus-based course provides an introduction to thermodynamics as well as an overview of major developments in physics from the early 20th century through today. Topics include heat, kinetic theory, thermodynamics, Einstein's special theory of relativity, quantum nature of light, wave nature of particles, atomic structure, molecular physics, nuclear physics, particle physics, and cosmology. Prerequisites: MA253 Calculus 3 and PH262 Engineering Physics 2.

PH270 Waves and Oscillations

C-3 Cr-3

This course introduces the physical description of waves and oscillatory motion and the mathematical techniques used in

analyzing such phenomena. Topics include harmonic oscillators, wave packets, normal modes, electromagnetic waves, interference, diffraction, Fourier analysis, and eigenvectors. Co-requisites: MA260 Differential Equations and MA280 Linear Algebra.

PH300 Independent Study in Physics **Cr 1-4**

PM Physical Education Student Option Courses

Athletics, Physical Education & Recreation Department

PM101 Soccer - PE Student Option **P-2 Cr-1**

This course covers fundamental to advanced individual and team skills as well as concepts related to the game of soccer. It develops an understanding of how to present skills to players in an individual or team setting. For Physical Education emphasis students.

PM102 Volleyball - PE Student Option **P-2 Cr-1**

This course covers the concepts of volleyball skills and tactics, with attention to skill analysis and application to the game. Opportunities for practice teaching, analysis of team and individual performance, and class competitions are offered. For Physical Education emphasis students.

PM103 Basketball - PE Student Option **P-2 Cr-1**

This course covers the concepts and skills in the playing of basketball. It develops an ability to demonstrate fundamentals in teaching basketball skills. Developing drills for practice and understanding of game situations are provided. For Physical Education emphasis students.

PM105 Tennis - PE Student Option **P-2 Cr-1**

This course covers skills and rules of the sport of tennis, proper etiquette, how to teach skills with drills appropriate for skill levels, and how to administer skill tests. It involves participation in singles and doubles class competition. For Physical Education emphasis students.

PM106 Golf - PE Student Option **P-2 Cr-1**

This course covers concepts and skills in the playing of golf. It includes the fundamentals of the golf swing as applied to a variety of golf clubs and course contours. Class sessions are held on campus and at an area golf course. For Physical Education emphasis students.

PM109 Swimming - PE Student Option **P-2 Cr-1**

This course covers concepts of aquatic skills and safety. It includes study and practice in five basic swimming strokes, physical laws as applied to swimming, physical effects of swimming, personal safety, and elementary rescue forms. Concepts of teaching skill and aquatic games are studied. For Physical Education emphasis students.

PM110 Racquet Sport - PE Student Option **C-2 Cr-1**

This course covers fundamental and more advanced individual skills and strategy necessary for playing the games of badminton and racquetball. It includes how to present skills to the beginner in an organized manner. For Physical Education emphasis students.

PM111 Total Fitness Training – PE Student Option **P-2 Cr-1**

This course provides students with proper training techniques for development of muscular strength, cardiovascular endurance, and flexibility programs. Emphasis is placed on teaching students the physiological principles and proper safety mechanics of fitness components. For Physical Education emphasis students.

**PM300 Independent Study in Physical Education -
Physical Education Student Option** **Cr 1-2**

PS Political Science Courses

Social Sciences & Public Services Department

PS101 American National Government **C-3 Cr-3**

This course introduces the discipline of political science through the study of American government. Topics include the concept of the political system, democracy in theory and practice, the historical background and content of the Constitution, Federalism, and the role of the Supreme Court in civil rights. It stresses these aspects of the American political system: public opinion, voting behavior, the electoral system, political parties, and modern campaigning techniques.

PS102 Introduction to Public Policy **C-3 Cr-3**

This course introduces public policy, a field of study that integrates political, social, and economic theories and insights, and addresses the general question, "Who gets what, when, and how in society?" To answer this question, the history of public policy in the United States is studied, and how public policy is defined, developed, and applied within the federalist system of government. The role of governmental and non-governmental institutions in policy-making is examined from several theoretical perspectives. Contemporary issues in public policy are studied through the application of these theories to key substantive areas, including crime and justice, health care, social welfare, education, and the environment.

PS202 Comparative Politics **C-3 Cr-3**

This course covers the convergence of theories, methods, and concepts associated with political science and comparative politics. It introduces knowledge about politics and political science in a comparative perspective and develops a framework of classifications or typologies to deal with the complexity of political life. A specific effort is made to survey major ideological strains, from communism to fascism, and to link them to recent and current regimes and movements.

PS203 State and Local Government **C-3 Cr-3**

This course covers the organization, operation, and issues of state, county, and city government. Emphasis is placed on comparative politics in the 50 states and the current problems of federalism. Local governmental units and issues are considered in the study of developments on that level.

PS204 American Foreign Policy **C-3 Cr-3**

This course examines post-World War II American foreign policy. It focuses upon the nature and shaping of foreign policy, the foreign policy process, and the improvements needed in that process. Prerequisite: PS101 American National Government or PS202 Comparative Politics.

PS205 International Politics **C-3 Cr-3**

This course covers the skills necessary to analyze contemporary international politics. It focuses upon international politics as a political system, examines the types of actors (individuals, groups, or institutions) who make decisions determining the course of international politics, and discusses how nations deal with one another in international interactions. Prerequisite: PS101 American National Government or PS202 Comparative Politics.

PS206 Grant Writing **P-3 Cr-3**

This course focuses on the preparation of written reports, grants, correspondences, proposals, and research in the public, private, and non-profit sectors. Analytical, theoretical, and practical writing techniques are explored, as is writing in a comprehensive, well-organized, and convincing manner. Legal and ethical issues that face government are explored and critiqued. Emphasis is placed on contemporary information and technologies. Prerequisites:

EN101 English 1: Composition, PS101 American National Government, PS102 Introduction to Public Policy, and IS101 Computers and Society.

PS209 Introduction to Peace Studies **C-3 Cr-3**

This course examines the ways in which groups use nonviolent techniques to resolve common inter- and intra-group conflicts. Historical and cross-cultural examples of nonviolent conflict resolution are analyzed. The context in which conflicts are created and resolved is discussed, including the significance of the values of society, power relations, systems of stratification, and social institutions.

PS300 Independent Study in Political Science **Cr 1-4**

PT Photography Courses

Art Department

PT101 Photography 1 **C-2 P-2 Cr-3**

This course provides an understanding of principles as applied to all phases of photography. It covers instruction in photo optics, camera equipment, film and paper emulsion, photographic chemicals, filters and lens attachments, lighting, composition, and exposure control.

PT102 Photography 2 **C-1 P-4 Cr-3**

This course provides advanced technical skills in photography. Topics include advertising, portrait, and industrial photography. It includes the use of 35mm, 2 1/4, and view cameras. Laboratory procedures such as densitometry, studio lighting, sheet and roll film processing, and enlarging are covered. Prerequisite: PT101 Photography 1.

PT103 Video and Narrative **C-2 P-2 Cr-3**

This course allows students to develop a body of video work that addresses both linear and non-linear narrative structures and explores the creation of meaning through the combination of sound, movement, and narrative progression. Students incorporate both DSLR video and smartphone video in the development of coursework. Discussions and readings include historical and theoretical explorations of video as an art form and means of visual communication. Students further hone their technical skills using current video software and applications while gaining practical experience with a variety of equipment options and techniques for video capture. Prerequisite: PT106 Multimedia Photography.

PT104 Studio Techniques **C-2 P-2 Cr-3**

This course covers the concepts and techniques of advertising and illustrative photography. It emphasizes studio work using view cameras. Topics include the advanced uses of the view camera, lighting techniques and applications, color correction, and studio techniques.

PT105 Publishing Techniques for Photography **C-1 P-4 Cr-3**

This course covers the techniques used to reproduce photographs for print production. Reproduction for newspaper, magazine, and bookwork is discussed. Halftones, duotones, and posterizations are produced using the vertical and horizontal process cameras. Darkroom processing and offset prepress procedures are included.

PT106 Multimedia Photography **C-2 P-2 Cr-3**

This course introduces the techniques of multimedia production. The techniques of DSLR video production are explored and students shoot and edit video captured from HD DSLR cameras. Students produce videos focusing on technical skills and storytelling through multimedia elements.

PT111 Art Sources **C-2 P-2 Cr-3**

This course introduces the fundamental aspects of creativity, design, and the exploration of art forms as applied to the creation and enhancement of photographic applications. It covers the sources of creativity, design principles, and the understanding and practice of art movements.

PT126 Basic Photography **C-2 P-2 Cr-3**

This course introduces photography and the photograph as a medium of the graphic communicator. It covers photographic principles and procedures, including how to operate a 35mm adjustable camera, develop black-and-white film, make contact prints, and enlargements. The aesthetics of the photograph, and its use as a medium of graphic communications, is emphasized.

PT127 Creative Techniques in Photography **C-2 P-2 Cr-3**

This course introduces techniques used to create, edit, and manipulate photographs through both traditional and digital processes. Basic photographic principles and procedures are covered. Topics include the operation of SLR and DSLR cameras; wet lab photographic processes; digital methods and techniques; and alternative printing processes and media. The use of multiple forms of photographic media as a means of creative communication is emphasized.

PT201 Photojournalism **C-2 P-2 Cr-3**

This course covers newspaper and magazine photography through realistic assignments, critiques, and reference to accepted practices. The work of prominent photojournalists is viewed and discussed. Photographic projects are required, including a photo essay, to demonstrate skill in documenting a subject through photography. Prerequisites: PT101 Photography 1.

PT202 Alternative Processes **C-1 P-4 Cr-3**

This course encourages work with experimental photography by exploring and exploiting photographic materials and techniques for creative ends. The mixing of photography with other media is encouraged. Printing processes once popular and now regaining interest are explored. Prerequisite: PT101 Photography 1, PT126 Basic Photography, or PT214 Fine Art Photography 1.

PT203 Topics in Photography **C-1 P-3 Cr-3**

This course provides an opportunity to expand on the course offerings of the Photography program. Topics change each semester to reflect trends within the medium. Prerequisites: PT102 Photography 2 and PT103 Video and Narrative.

PT204 Photography Seminar **P-6 Cr-3**

This course is focused on helping students develop a professional approach to the industry. Projects are customized by inclination and requirements, and a personal direction is encouraged. Key aspects of entering the field, such as portfolio presentation and personal marketing are addressed. Emphasis is placed on refining the student's portfolio and credentials so that they can confidently take the next step in their personal plans for joining the professional photography industry. Prerequisites: PT104 Studio Techniques and PT202 Alternative Processes.

PT205 History of Photography 1 **C-3 Cr-3**

This course surveys the history of photography, beginning with the camera obscura of the Middle Ages through the beginning of the 20th century. It emphasizes the artistic intent and purpose of the photographer.

PT206 History of Photography 2 **C-3 Cr-3**

This course focuses on the development of photography in the 20th century. It explores technological innovations throughout the 20th century and their impact on photography. It reinforces the premise that photography is a vital means of communication in the field of visual communications. It covers the interdisciplinary nature of 20th

century photography, and how it lends itself well to science, art, and communications.

PT207 Digital Photography Practice **C-2 P-2 Cr-3**

This course introduces techniques used to create, edit, and manipulate photographs through digital processes. Topics include image capture and input methods, workflow, editing in the digital darkroom, and output techniques for black and white as well as color images. Students operate a DSLR camera, and are introduced to Adobe Lightroom and Adobe Photoshop. Photographic composition and aesthetics, and their use as a form of visual communication, are emphasized.

PT208 Advanced Photography and Digital Printmaking **C-2 P-2 Cr-3**

This course covers advanced imaging techniques to create both digital and printed images. It emphasizes working with software and printers, including color calibration, paper profiles, and printer types. Students develop advanced skills in the use of computer-based imagery and digital media. It strikes a balance between the stimulation of creativity and the acquisition of technical knowledge. Prerequisite: PT207 Digital Photography Practice.

PT210 Portrait and Fashion Photography **C-2 P-2 Cr-3**

Portrait and fashion photography equips students with the skills necessary for portraiture. Emphasis is placed on lighting and posing arrangements and combinations. The influences and techniques of notable figures within the genre of portrait and fashion photography are explored. The course incorporates DSLR video components and current professional practices.

PT214 Fine Art Photography 1 **P-6 Cr-3**

This course introduces black and white photography as a fine art medium. It covers basic camera operation, film processing, and printing. Emphasis is given to individual expression and personal vision. A brief history of fine art photography is included. Students also study basic principles of slide production as it relates to creating a portfolio for transfer. The aesthetics of the photograph and its use as a medium of visual communication are emphasized. Studio lab fee: \$30.

PT222 Fine Art Photography 2 **P-6 Cr-3**

This course is intended to move beyond basic black-and-white processes and techniques to expand the range of creative possibilities and personal expression. Color printing, experimental techniques, alternative photographic processes, and image manipulation are emphasized. The course will include a survey of contemporary fine art photography. Prerequisite: PT214 Fine Art Photography 1. Studio laboratory fee: \$60.

PT300 Independent Study in Photography **Cr 1-4**

PY Psychology Courses

Social Sciences & Public Services Department

PY101 Introduction to General Psychology **C-3 Cr-3**

This course introduces the many and varied facets of psychology. Emphasis is on interactions of individuals in their cultural, social, and economic environments as determined by their cognitive, behavioral, and emotional experiences and training.

PY201 Learning: Behavior Analysis **C-3 Cr-3**

This course explores the mechanisms that underlie human learning. Emphasis is placed on the examination of the behavioral approach to the study of human learning. Prerequisite: PY101 Introduction to General Psychology.

PY202 Childhood & Adolescence **C-3 Cr-3**

This course examines the psychological changes that take place between birth and adolescence. Emphasis is placed on the cognitive, social, emotional, language, and physical dimensions of developmental change. The psychological pathologies unique to this segment of the lifespan are discussed. Prerequisite: PY101 Introduction to General Psychology.

PY203 Abnormal Psychology **C-3 Cr-3**

This course covers the historical views of abnormality as well as current classification of abnormal behavior. It emphasizes the comparison of perspectives on causes and treatments of abnormal behavior. Prerequisite: PY101 Introduction to General Psychology.

PY204 Social Psychology **C-3 Cr-3**

This course deals with theoretical and applied aspects of the individual in social contexts. Attention is given to interpersonal relations and group dynamics, for better understanding of functioning in social situations. Topics include conformity, aggression, interpersonal attraction, and communication. Prerequisite: PY101 Introduction to General Psychology.

PY205 Adulthood and Aging **C-3 Cr-3**

This course examines the adjustments faced by the individual from midlife through old age. Emphasis is placed on the effect of role changes on the individuals view of self and their ability to function. Methods to ease role transitions are covered. Prerequisite: PY101 Introduction to General Psychology.

PY206 Theories of Personality **C-3 Cr-3**

This course investigates a variety of personality theories, including biological factors, psychoanalysis, humanism, existentialism, and behaviorism. Emphasis is placed on the contribution of each theory to the field. Prerequisite: PY101 Introduction to General Psychology.

PY207 Life-Span Developmental Psychology **C-3 Cr-3**

This course explores the changes that take place in human development from conception to death. Cognitive, emotional, social, and physical developments are covered at each chronological stage. Emphasis is placed on biological and environmental influences across the life-span. Prerequisite: PY101 Introduction to General Psychology. Students who have successfully completed PY202 Childhood and Adolescence and/or PY205 Adulthood and Aging may not take PY207 Life-Span Developmental Psychology.

PY208 Death, Dying & Bereavement **C-3 Cr-3**

This course increases personal knowledge about death as an aspect of the life process and assesses the impact of dying and bereavement from psychosocial, cultural, and historical as well as developmental, medical, and legal perspectives. Human roles relating to the distinct needs of dying persons and their friends and families are examined. Prerequisite: PY101 Introduction to General Psychology.

PY209 Forensic Psychology **C-3 Cr-3**

This course examines the relationship between psychopathology and criminality, and describes the legal context in which forensic psychology is practiced. Unlike other disciplines of psychology, which are therapeutic or rehabilitative in nature, it is concerned with the prevention, detection, and reduction of crime. Prerequisites: PY101 Introduction to General Psychology and PY203 Abnormal Psychology.

PY210 Evaluation, Research & Measurement in Behavioral Science **C-3 Cr-3**

This course examines research methodology in the behavioral sciences including observational and recording methods, the evaluation of performance (psychometrics), and quasi-

experimental research. Emphasis is placed upon the application of the methodologies to research designs and the interpretation of psychological reports. Prerequisite: PY101 Introduction to General Psychology.

PY212 Adolescent Psychology **C-3 Cr-3**

This course explores physical, social, emotional, moral, and cognitive development during adolescence. It examines theories and research about adolescent development. Topics include the changing role of relationships with peers and parents, gender and identity development, problem behaviors, and appropriate interventions to reduce risky behavior and promote successful development. The influence of the social and cultural context on development is considered. Fifteen hours of observation of adolescents in a 7th-12th grade school setting must be completed. Prerequisite: PY101 Introduction to General Psychology.

PY213 Human Sexuality **C-3 Cr-3**

This course provides an overview of the bio-psychosocial perspectives of human sexuality. It covers the personal and biological aspects of human sexuality, and its historical and cultural perspectives. Topics include sexuality across the lifespan, sexual identity development, and variation of the human sexual experience. Prerequisite: PY101 Introduction to General Psychology.

PY215 Health Psychology **C-3 Cr-3**

This course explores the psychological and behavioral processes in health, illness, and health care. Emphasis is placed on psychological, behavioral, and cultural factors that contribute to physical health and illness. Topics include health research, stress and pain management, and behavioral health. Prerequisite: PY101 Introduction to General Psychology.

PY300 Independent Study in Psychology **Cr 1-4**

RC Respiratory Care Courses

Health Professions Department

RC101 Basic Science for Respiratory Care **C-2 Cr-2**

This course addresses topics in mathematics, physics, chemistry, and microbiology related to respiratory care practice. Mathematical areas include graphing, nomograms, and basic statistics. Physics and chemistry topics include the states of matter, humidity, gas pressure, gas laws, acids, bases, buffers, fluid dynamics, compliance, resistance, elastance, and surface tension. A four-week module provides an introduction to microbiology at the end of the semester. Emphasis is placed on microbes that commonly involve the respiratory system. The course delivery mode is a hybrid online/on-site combination requiring attendance at microbiology lab sessions on the Utica Campus the last two weeks of class. Prerequisites: An appropriate Mathematics Placement test result, MA090 Essential Math Skills, or MA091 Introductory Algebra, or equivalent. A minimum grade of "C" is required. (Fall semester)

RC103 Cardiopulmonary Pharmacology **C-3 Cr-3**

This course presents the principles of pharmacology, drug actions, dosage calculations, and agents administered in cardiopulmonary care. It covers indications, side effects, hazards, and mechanisms of action, general categories, and classification of drugs. Respiratory, cardiovascular, neuromuscular, sedative-narcotic, and anti-infective agents are reviewed. Prerequisites: An appropriate Mathematics Placement test result, MA090 Essential Math Skills, MA091 Introductory Algebra, or equivalent. A minimum grade of "C" is required. (Fall semester)

RC111 Principles of Respiratory Care 1 **C-3 P-3 Cr-4**

This is the first course in the curriculum sequence to study the theory

and practice of respiratory care. Topics include cardiopulmonary anatomy and physiology (including lung and cardiac function, mechanics of breathing, oxygen and carbon dioxide exchange, and control of ventilation), gas administration therapies, humidity and aerosol therapies, and bronchial hygiene techniques. Prerequisites: An appropriate Mathematics Placement test result, MA090 Essential Math Skills, or MA091 Introductory Algebra, or equivalent. A minimum grade of "C" is required. (Fall semester)

RC112 Principles of Respiratory Care 2 **C-3 P-3 Cr-4**

This is the second course in the curriculum sequence to study the theory and practice of respiratory care. Topics include lung expansion therapies, airway management, acid-base balance, and the interpretation of arterial blood gas results. Detailed information required to initiate, maintain and monitor patients from mechanical ventilation is provided. Prerequisites: A full year of high school general chemistry with laboratory (with a minimum grade of 70) within seven years or equivalent course with a minimum grade of "C," RC101 Basic Science for Respiratory Care, RC103 Cardiopulmonary Pharmacology, and RC111 Principles of Respiratory Care 1. Corequisites: BI216 Human Anatomy & Physiology 1, RC115 Cardiopulmonary Diseases, and RC131 Clinical Practicum 1 or Program Coordinator consent. Minimum grade of "C" required. (Spring semester)

RC115 Cardiopulmonary Diseases **C-3 Cr-3**

The initial portion of this course stresses the integral components of data collection, assessment, and evaluation necessary for the development of an effective care plan for patients with cardiopulmonary disorders. The remainder emphasizes the etiology, manifestations, and treatment of a variety of cardiopulmonary diseases. Case study presentations use critical thinking skills. Prerequisites: A full year of high school general chemistry with laboratory (with a minimum grade of 70) within seven years or equivalent courses with a minimum grade of "C," RC101 Basic Science for Respiratory Care, RC103 Cardiopulmonary Pharmacology, and RC111 Principles of Respiratory Care 1. Corequisites: BI216 Human Anatomy & Physiology 1, RC112 Principles of Respiratory Care 2, and RC131 Clinical Practicum 1, or Program Coordinator consent. Minimum grade of "C" required. (Spring semester)

RC131 Clinical Practicum 1 **P-9 Cr-3**

This initial 135-hour hospital experience provides the supervised practice of routine respiratory therapies in a community clinical setting. Theories and skills learned in the classroom and laboratory are applied in actual patient care situations. The safe administration of therapies, maintenance of records, and infection control procedures are stressed. Prerequisites: Documented health physical examination within three months, including specific test results, liability insurance coverage, and current CPR for Healthcare Providers Certification are required for all students before the start of this course. A full year of high school general chemistry with laboratory (with a minimum grade of 70) within seven years or equivalent course with a minimum grade of C, RC101 Basic Science for Respiratory Care, RC103 Cardiopulmonary Pharmacology, and RC111 Principles of Respiratory Care 1. Corequisites: BI216 Human Anatomy & Physiology 1 and RC115 Cardiopulmonary Diseases, or Program Coordinator consent. Minimum grade of "C" required. (Spring semester)

RC213 Principles of Respiratory Care 3 **C-1 P-3 Cr-2**

This is the third course in the curriculum sequence to study the theory and practice of respiratory care. Topics include cardiopulmonary diagnostics and monitoring, special procedures (i.e., bronchoscopy and thoracentesis), critical care pharmacology, home care, and advanced management for the patient requiring mechanical ventilation. Prerequisites: BI217 Human Anatomy & Physiology 2, RC112 Principles of Respiratory Care 2, RC115

Cardiopulmonary Diseases, and RC131 Clinical Practicum 1.
Corequisites: RC232 Clinical Practicum 2, or Program Coordinator consent. Minimum grade of "C" required.

RC214 Acid Base Physiology **C-2 Cr-2**

This course covers the concepts of fluid and electrolyte balance, and the implications of the cardiopulmonary/renal systems on acid-base homeostasis in the body. Focus is placed on the application of acid-base physiology in the clinical arena and its impact on patient management. Emphasis is placed on interpretation of fluid and electrolyte imbalance, and their interrelationships. Prerequisite: BI217 Human Anatomy & Physiology 2 or instructor consent. Minimum grade of "C" required.

RC215 Principles of Respiratory Care 4 **C-1 P-3 Cr-1**

This is the fourth course in the curriculum sequence to study the theory and practice of respiratory care. This concentrated offering presents topics related to neonatal and pediatric respiratory care. Content areas include neonatal and pediatric diseases, pharmacology, airway management, mechanical ventilation, high-frequency oscillation, and extracorporeal membrane oxygenation (ECMO). Prerequisites: RC233 Clinical Practicum 3, RC214 Acid Base Physiology, and BI209 Basic Pathophysiology. Corequisite: RC234 Clinical Practicum 4 or Program Coordinator consent. Minimum grade of "C" required. (Summer session)

RC232 Clinical Practicum 2 **P-18 Cr-6**

This course provides opportunities to practice routine procedures and adult critical care during 270 hours of experience in a variety of clinical sites. Specialty rotations include pulmonary function testing, cardiac catheterization, cardiac diagnostics, respiratory homecare, polysomnography, radiology, and cardiothoracic surgery. Safe practice, critical thinking and problem solving are key components. Prerequisites: BI217 Human Anatomy & Physiology 2, RC112 Principles of Respiratory Care 2, RC115 Cardiopulmonary Diseases, and RC131 Clinical Practicum 1. Corequisites: RC213 Principles of Respiratory Care 3, or Program Coordinator consent. Minimum grade of "C" required. (Fall semester)

RC233 Clinical Practicum 3 **P-8 Cr-6**

This course involves 270 hours of experience in at least four clinical affiliates. Emphasis is placed on adult critical care experiences. Specialty rotations include a physician preceptorship, routine pediatric care, and Advanced Cardiac Life Support (ACLS) completion. Prerequisites: RC213 Principles of Respiratory Care 3, and RC232 Clinical Practicum 2 or Program Coordinator consent. Minimum grade of "C" required. (Spring semester)

RC234 Clinical Practicum 4 **P-15 Cr-5**

This course provides opportunities to perform all aspects of respiratory care with emphasis on neonatal, pediatric and adult critical care during 225 hours of experience in a variety of clinical sites. Requirements are completed for American Heart Association (AHA) Neonatal Resuscitation Protocol (NRP) and Pediatric Advanced Life Support (PALS). Specialty rotations include extended ventilator care, critical care monitoring and patient assessment. Adult rotations provide a capstone experience to facilitate the transition from student to entry-level practitioner. Safe practice, critical thinking, problem solving and time management are key components. Prerequisite: RC232 Clinical Practicum 3. Corequisite: RC215 Principles of Respiratory Care 4. Minimum grade of "C" required. (Summer session)

RC300 Independent Study in Respiratory Care **Cr 1-6**

RE Recreation & Leisure Services Courses

Athletics, Physical Education & Recreation Department

RE100 Introduction to Recreation **C-3 Cr-3**

This course introduces the history, theory, and philosophy of the recreation movement and its relation to individuals and the groups in our changing society. Emphasis is placed on an orientation to recreation as a vocation within the structure of community recreation (governmental, public, and commercial).

RE102 Recreation Safety & Liability **C-3 Cr-3**

This course provides an understanding of the risk management process in recreation programming and facility management. Emphasis is placed on the concepts of liability and negligence as related to the leisure delivery services system, with a focus on risk reduction and increased safety. Studies culminate in completion of group-assigned risk management plans.

RE105 Recreation Leadership and Activity Development **C-2 P-2 Cr-3**

This course develops skills and techniques used in leading individual and group activities for all ages. The 11 program areas in the field of Recreation and Leisure are covered. Emphasis is placed on developing lesson plans and presenting activities. Field trips are included. Corequisite: RE100 Introduction to Recreation.

RE106 Outdoor Recreation and Leisure Activities **C-2 P-2 Cr-3**

This course investigates the field of outdoor recreation and leisure. Outdoor activities develop knowledge of group dynamics and leadership skills. Federal, state, and private programs are studied through field trips and speakers. There is a strong focus on today's environment and its effect on outdoor activity.

RE204 Fitness Programming & Management **C-2 P-2 Cr-3**

This course provides an in-depth look at aspects of physical fitness and methods of measuring. It covers management techniques as they apply to fitness center facilities. Laboratory sessions offer hands-on experience leading and participating in fitness activities.

RE205 Recreation Internship 1 **C-1 P-6 Cr-3**

This course provides the opportunity to gain supervised practical experience in a recreation setting related to an area of professional interest. In addition to 90 hours of field experience, participation in a weekly seminar is required. Corequisite: RE100 Introduction to Recreation.

RE207 Recreation Internship 2 **C-1 P-6 Cr-3**

This course provides a continuation of the supervised experience in recreational settings. Greater initiative and responsibility are assumed at the internship site. In addition to 90 hours of field experience, participation in a weekly seminar is required. Corequisite: RE205 Recreation Internship 1, or permission of the Associate Dean of the Athletics, Physical Education & Recreation Department.

RE210 Recreation Program & Facility Management **C-3 Cr-3**

This course applies activity, leadership, and risk management skills to leisure programming and facility management. Emphasis is placed on current programming and management concepts. Topics include personnel management; budgeting and purchasing practices; maintenance and repairs related to equipment, supplies, and facilities; program formats and scheduling techniques; and the evaluation process. Prerequisites: RE105 Recreation Leadership and Activity Development and RE106 Outdoor Recreation and Leisure Activities, or permission of the Associate Dean of Athletics, Physical Education & Recreation.

RE214 Therapeutic Recreation**C-3 Cr-3**

This course explores leisure delivery services designed to meet the needs of special populations in unique structured settings and community placements. Emphasis is placed on understanding the five functional domains in relation to the individuals need for recreation and leisure services. Community involvement, lesson planning, and leading activities are required.

RE300 Independent Study in Recreation Leadership**Cr 1-4**

RT Radiologic Technology Courses

Health Professions Department

RT100 Patient Care I/Ethics**C-1 Cr-1**

This course prepares the radiologic technology student to evaluate and meet the physical, cultural, and emotional needs of the patient. Topics include basic arrhythmia and basic life support. Prerequisites: An appropriate MVCC Math Placement Test result. Corequisites: RT101 Fundamentals of Radiography, RT102 Radiographic Procedures/Pathology I, RT103 Clinical Education Fundamentals, and BI216 Human Anatomy & Physiology 1.

RT101 Fundamentals of Radiography**C-2 Cr-2**

This course provides an introduction to the basic concepts of radiographic physics and exposure. Topics include detailed history of x-ray, radiographic tube construction, process of x-ray production, x-ray beam characteristics, and the photographic and geometric properties of the radiographic image. The foundations of radiography and the practitioners' role in the health care delivery system are discussed. Prerequisites: An appropriate MVCC Math Placement Test result. Corequisites: RT100 Patient Care I/Ethics, RT102 Radiographic Procedures/Pathology I, RT103 Clinical Education Fundamentals, and BI216 Human Anatomy & Physiology 1.

RT102 Radiographic Procedures/Pathology I**C-1 P-4 Cr-3**

This course introduces basic terminology, principles of radiographic procedures, and directional terms in relation to the human body. Students practice under simulated conditions in a laboratory setting before actually performing on patients in a clinical setting. Topics include proper use of radiographic equipment and patient safety issues. Prerequisites: An appropriate MVCC Math Placement Test result. Corequisites: RT100 Patient Care I/Ethics, RT101 Fundamentals of Radiography, MR103 Medical Terminology, and BI216 Human Anatomy & Physiology 1.

RT103 Clinical Education Fundamentals**P-9 Cr-3**

This course introduces basic terminology, principles of radiographic procedures, and directional terms in relation to the human body. Students practice under simulated conditions in a laboratory setting before actually performing on patients in a clinical setting. Topics include proper use of radiographic equipment and patient safety issues. Prerequisites: An appropriate MVCC Math Placement Test result. Corequisites: RT100 Patient Care I/Ethics, RT101 Fundamentals of Radiography, MR103 Medical Terminology, and BI216 Human Anatomy & Physiology 1.

RT104 Patient Care II/Pharmacology & IV Therapy**C-1 Cr-1**

This course provides students with basic pharmacologic principles and practices, knowledge of the administration or radiopaque contrast media, and related emergency medications. IV Therapy instruction component provides basic knowledge and theory related to IV therapy with regard to fluid administration, anatomy and physiology, venipuncture, infection prevention, and complications. Prerequisite: RT100 Patient Care I/Ethics. Corequisites: RT105 Image Production & Evaluation I, RT106 Radiographic Procedures/Pathology II, RT107 Clinical Education Intermediate I, and BI217 Human Anatomy & Physiology 2.

RT105 Image Production & Evaluation I**C-2 Cr-2**

This course provides students with a knowledge base in factors that govern the image production process. Film-screen imaging with related accessories, including radiographic grids, is emphasized. The components, principles, and operation of digital imaging systems found in diagnostic radiology are discussed. Prerequisites: RT100 Patient Care I/Ethics, RT101 Fundamentals of Radiography, RT102 Radiographic Procedures/Pathology I, and RT103 Clinical Education Fundamentals. Corequisites: RT104 Patient Care II/Pharmacology & IV Therapy, RT106 Radiographic Procedures/Pathology II, and RT107 Clinical Education Intermediate I.

RT106 Radiographic Procedures/Pathology II**C-1 P-4 Cr-3**

This course introduces students to the skills necessary to perform the routine radiographic procedures with confidence. Through laboratory demonstration, supervised lab practice, and image evaluation, students receive instruction on the proper positioning of the patient to achieve a finished radiographic image displaying specific structures on particular body parts. The course also includes pathologic indications for each projection and appropriate adjustments for certain pathologic conditions that may affect the patient's ability to assume certain positions. Proper equipment manipulation and patient safety issues are discussed throughout the course. Prerequisite: RT101 Fundamentals of Radiography, RT102 Radiographic Procedures/Pathology I, RT103 Clinical Education Fundamentals. Corequisites: RT104 Patient Care II/Pharmacology & IV Therapy and RT107 Clinical Education Intermediate I.

RT107 Clinical Education Intermediate I**P-15 Cr-5**

In this course, students experience day-to-day real life situations in health care which are essential to foster a professional demeanor, compassionate behavior, desirable work ethic, and the skills necessary to perform radiographic procedures and produce radiographic images for the diagnosis. This clinical component complements the clinical competencies learned. Prerequisite: RT103 Clinical Education Fundamentals. Corequisites: RT104 Patient Care II/Pharmacology & IV Therapy, RT105 Image Production & Evaluation I, and RT106 Radiographic Procedures/Pathology II.

RT108 Clinical Education Intermediate II**P-24 Cr-8**

In this course, students obtain clinical expertise in an actual radiology department setting and experience day-to-day real life situations in health care. Professional demeanor, compassionate behavior, desirable work ethic, and the skills necessary to perform radiographic procedures and produce radiographic images for diagnosis are practices. Students develop clinical skills which complement the clinical competencies learned. Prerequisites: RT107 Clinical Education Intermediate I and MR103 Medical Terminology.

RT109 Radiation Biology I**C-2 Cr-2**

This course is the first in a two-semester sequence in Radiation Biology. Topics include an introduction to basic concepts of physics that relate to radiation absorption and scatter, analysis of ionizing and nonionizing radiation, the electromagnetic spectrum, the process of interaction between radiation and matter, sources of radiation both natural and artificial, and units of measure. Basic concepts of molecular and cell biology in the context of the sequence of events that occur after absorption of energy from ionizing radiation and consequences on living systems are discussed. Prerequisite: RT101 Fundamentals of Radiography. Corequisites: RT200 Advanced Procedures/Sectional Anatomy, RT201 Image Production & Evaluation II, and RT202 Clinical Education Advanced.

RT200 Advanced Procedures/Sectional Anatomy**P-2 Cr-1**

This course introduces advanced procedures that require the use of contrast media and the pathologies indicated for these exams.

Topics include general and specialized procedures involving the use of contrast agents of the reproductive tracts as well as the spinal column; basic anatomy of the brain, chest, abdomen, and pelvis as viewed in a cross section of the anatomy. Patient and equipment safety, proper room set-up, supervised lab practices, and film evaluation sessions are demonstrated and practiced. Phantoms are used to help assess the student's ability to perform proper positioning of the skull and facial bones. Prerequisite: RT101 Fundamentals of Radiography. Corequisites: RT109 Radiation Biology I, RT201 Image Production & Evaluation II, and RT202 Clinical Education Advanced.

RT201 Image Production & Evaluation II **P-2 Cr-2**

This course provides a knowledge base in factors that govern and influence producing and recording radiological images. Film and electronic imaging with related accessories are emphasized. Theory application and accessory/equipment quality measurements are demonstrated. Prerequisite: RT105 Image Production & Evaluation I. Corequisites: RT109 Radiation Biology I, RT200 Advanced Procedures/Sectional Anatomy, RT202 Clinical Education Advanced.

RT202 Clinical Education Advanced **P-18 Cr-6**

This course provides advanced clinical experience in day-to-day real life situations in health care which are essential to foster a professional demeanor, compassionate behavior, desirable work ethic, and the skills necessary to perform radiographic procedures and produce radiographic images for diagnosis. Students develop clinical skills which complement the clinical competencies learned. Prerequisite: RT108 Clinical Education Intermediate II. Corequisites: RT109 Radiation Biology I, RT200 Advanced Procedures/Sectional Anatomy, and RT201 Image Production & Evaluation II.

RT203 Radiographic Physics **C-2 Cr-2**

This course explores the basic concepts of the science and technology of x-ray imaging. Topics include the study of matter, energy, the electromagnetic spectrum, and ionizing radiation. Prerequisite: RT101 Fundamentals of Radiography. Corequisites: RT204 Radiation Biology 2, RT205 Advanced Imaging Procedures/Pathology, and RT207 Clinical Education Mastery.

RT204 Radiation Biology II **C-2 Cr-2**

This course is the second in a two semester sequence in Radiation Biology. Topics include radiation effects on organ systems, somatic and genetic damage factors, mutagens responsible for genetic mutations, the doubling dose concept, acute radiation syndromes, embryologic effects during pregnancy, and occupational and non-occupational dose limits. Additional instruction is provided on safety and regulation issues. Prerequisite: RT109 Radiation Biology I. Corequisites: RT203 Radiographic Physics, RT205 Advanced Imaging Procedures/Pathology, and RT207 Clinical Education Mastery.

RT205 Advanced Imaging Procedures/Pathology **C-1 Cr-1**

This course provides an overview of advanced imaging topics including equipment; computers in imaging; basic principles of the various health science professions; career planning; forensic radiography; and the principles, practices and policies of healthcare organizations. Theories of disease causation and the pathophysiologic disorders that compromise healthy systems are introduced. Prerequisite: RT102 Radiographic Procedures/Pathology I, RT106 Radiographic Procedures/Pathology II, RT200 Advanced Procedures/Sectional Anatomy. Corequisites: RT203 Radiographic Physics, RT204 Radiation Biology II, and RT207 Clinical Education Mastery.

RT207 Clinical Education Mastery **P-18 Cr-6**

This course provides capstone clinical experience in day-to-day real life situations in health care that are essential to foster a professional demeanor, compassionate behavior, desirable work

ethic, and skills necessary to perform radiographic procedures and produce radiographic images for diagnosis. Students develop clinical skills to complement the clinical competencies learned. Prerequisite: RT103 Clinical Education Fundamentals, RT107 Clinical Education Intermediate I, RT108 Clinical Education Intermediate II, RT202 Clinical Education Advanced. Corequisites: RT203 Radiographic Physics, RT204 Radiation Biology II, and RT205 Advanced Imaging Procedures/Pathology.

SA Study Abroad Courses

Humanities Department

SA300 Study Abroad **Cr 1-15**

Students who participate in the MVCC semester abroad register for this course before they leave. Prerequisite: Permission of the Associate Dean of Humanities.

SL English as a Second Language Courses

Education & Language Studies Department

SL055 English Skills Workshop 1 **P-3 Cr-0**

This course assists beginner-level, non-native English speakers in improving their English skills, including reading, writing, and listening. Skills are evaluated at the beginning of the course, and a prescriptive program is designed to meet the individual needs. Mandatory Corequisite: SL101 ESL 1: Beginning English Skills 1.

SL101 ESL 1: Beginning English Skills 1 **C-15 Cr-15**

This thematically-based course provides non-native English speakers with English sufficient to fulfill the basic functions of their lives in an American community. Basic listening and speaking, reading, writing, and grammar are practiced with the goal of preparing students for further English language instruction. Prerequisite: An appropriate placement test result. Corequisite: SL055 English Skills workshop 1.

SL102 ESL 2: Beginning English Skills 2 **C-15 Cr-15**

This course expands on non-native English speakers' abilities in all language skill areas. Building on the basic language skills of SL101, this course further develops students' abilities to read and write, speak, and understand English. Students further their exposure to and understanding of the fundamental skills that prepare them to move on to more academically-oriented ESL courses. Prerequisites: A minimum grade of "C" in SL101 Beginning English Skills1, or an appropriate placement test result.

SL105 ESL 3: Intermediate Reading **C-4 Cr-4**

This course prepares non-native English speakers for basic academic reading. Emphasis is placed on finding main ideas, recognizing supporting details, understanding vocabulary in context, skimming and scanning, and interpreting and analyzing texts. Prerequisite: A minimum grade of "C" in SL102 ESL 2: Beginning English Skills 2 or an appropriate placement test result.

SL106 ESL 3: Intermediate Composition **C-4 Cr-4**

This course introduces non-native English speakers to academic writing. Students learn to write focused, unified paragraphs and short compositions through the process of idea generation and development, paragraph organization, and revision. Students use grammar appropriate for specific purposes and develop self-editing skills. Prerequisite: A minimum grade of "C" in SL102 ESL 2: Beginning English Skills 2 or an appropriate placement test result.

SL107 ESL 3: Intermediate Grammar**C-4 Cr-4**

This course introduces the non-native English speaker to the grammar necessary to speak and write academic English effectively. Topics include verb tenses, varied sentence structures, and modals at the intermediate level. Prerequisite: A minimum grade of "C" in SL102 ESL 2: Beginning English Skills 2, or an appropriate placement test result.

SL108 ESL 3: Intermediate Listening & Speaking**C-4 Cr-4**

This course introduces non-native English speakers to the idiomatic usage and listening and speaking skills necessary for academic settings. Main ideas and supporting points are listened for, summarized, and discussed in distinguishing between literal and idiomatic meanings. Prerequisite: A minimum grade of "C" in SL102 ESL 2: Beginning English Skills 2 or an appropriate placement test result.

SL115 ESL 4: Advanced Reading**C-4 Cr-4**

This course prepares advanced non-native English-speaking students for academic reading at the level necessary for college coursework. It focuses on developing vocabulary and strengthening interpretive reading and critical thinking skills as well as also introducing library search strategies. Students must earn a minimum grade of "C" or better to pass the course. Prerequisite: A minimum grade of "C" in SL105 ESL 3: Intermediate Reading or an appropriate placement test result.

SL116 ESL 4: Advanced Composition**C-4 Cr-4**

This courses introduces non-native English speakers to the writing of well-organized and well-developed essays. It focuses on form and content, improving the clarity and sophistication of written expression in English. Students must earn a minimum grade of "C" or better to pass the course. Prerequisite: A minimum grade of "C" in SL106 ESL 3: Intermediate Composition or appropriate placement test result.

SL117 ESL 4: Advanced Grammar**C-4 Cr-4**

This course prepares non-native English speakers to use grammar for effective written and oral communication in academic settings. Topics include advanced verb tenses, relative clauses, and conditionals. Students apply grammar concepts in speaking and writing activities. Students must earn a minimum grade of "C" or better to pass the course. Prerequisite: A minimum grade of "C" in SL107 ESL 3: Intermediate Grammar or an appropriate placement test result.

SL118 ESL 4: Advanced Listening & Speaking**C-4 Cr-4**

This course prepares students to understand, benefit from, and succeed in college level coursework requiring advanced English comprehension, speaking and note-taking skills. The course focuses on live, audio-taped and/or video-taped lectures on content area topics from which the students practice note-taking skills, oral and written summaries and paraphrases, and discussions of content. The course also includes oral reports and group discussions. Students must earn a minimum grade of "C" or better to pass the course. Prerequisite: A minimum grade of "C" in SL108 ESL 3: Intermediate Listening and Speaking or an appropriate placement test result.

SL120 Pronunciation in Practice**C-2 P-2 Cr-3**

This course teaches non-native English speakers the fundamentals of American English pronunciation. Emphasis is placed on the pronunciation of language in real speaking contexts to improve oral comprehensibility of speech through intensive practice of stress, rhythm, and intonation. Prerequisite: A minimum grade of "C" in SL102 ESL 2: Beginning English Skills 2 or an appropriate placement test result.

SM Sports Management Courses

Athletics, Physical Education & Recreation Department**SM101 Foundations of Sports Management****C-3 Cr-3**

This course provides an overview of sports management in terms of its scope, principles, issues, future trends, and career opportunities. It also examines the job responsibilities and competencies required of sport managers in a variety of sports or sports-related organizations. The course also provides students with an overview of the different facets and career opportunities that are available in the field of sport management.

SM102 Sport and Society**C-3 Cr-3**

This course examines the social dimensions of sport in a modern industrialized society. Topics include sexism and racism in sport; sport and the mass media; deviance in sport; sport and social mobility; and the relationship of sport with religious, political, and economic structures.

SM111 Sport Event Practicum 1**P-3 Cr-1**

This course focuses on the use and development of basic knowledge and skills necessary for work in college athletics. This course is offered in the Fall sport season (soccer, cross-country, basketball). A 45-hour practicum in a specific sport under the supervision of a coach or athletic liaison reinforces of professionalism, organization, leadership, and sport specific duties within the world of college athletics.

SM112 Sport Event Practicum 2**P-3 Cr-1**

This course focuses on the use and development of basic knowledge and skills necessary for work in college athletics. This course is offered in the Spring sport season (baseball, lacrosse, softball, track, and tennis). A 45-hour practicum in a specific sport under the supervision of a coach or athletic liaison reinforces professionalism, organization, leadership, and sport specific duties within the world of college athletics.

SM201 Leadership for Sport Professionals**C-3 Cr-3**

This course introduces students to theories, approaches, and styles of leadership, as well as the role that ethics and ethical decision-making play in shaping effective leadership. Students analyze leadership practices within different sport settings. Students examine best practices from multiple sport levels and structures. Critical issues in sport leadership such as gender and ethnicity are examined as well. Students begin to explore their own leadership philosophies. Emphasis is placed on the promotion of personal leadership philosophies.

SO Sociology Courses

Social Sciences & Public Services Department**SO101 Introduction to Sociology****C-3 Cr-3**

This course gives an understanding of and a feeling for the society in which we live. Concepts and theories discussed relate to humanity, its culture and society, and to those forces that contribute to the smooth operation of this society as well as forces that contribute to conflict and social problems. Topics include culture, socialization, stratification, population, and patterns of social organization.

SO202 Marriage and Family Living**C-3 Cr-3**

This course explores two of the major social institutions, marriage and family. Sociological theory provides an understanding of the interconnection between these institutions and other social institutions, such as the economy, religion, education, and government. Changing forms and functions of marriage and family are examined in historical and cross-cultural perspectives, while

aspects and issues confronting contemporary families are topics of importance. Prerequisite: SO101 Introduction to Sociology.

SO203 Urban Sociology **C-3 Cr-3**

This course traces the history of cities and urban development. It examines urban areas as dynamic centers of opportunity and social change on macro and micro levels. Incorporating insights and theories drawn from sociology and related disciplines, it looks at the impact of the global environment on cities of today. Prerequisite: SO101 Introduction to Sociology.

SO204 Contemporary Issues in Society **C-3 Cr-3**

This course examines current and persistent social issues confronting human society. Emphasis is placed on analysis of the history, causes, and dimensions of social issues such as population, the urban environment, consumer concerns, poverty, crime and criminal justice, racism, sexism, and drug and alcohol abuse. Prerequisite: SO101 Introduction to Sociology.

SO205 Racial and Ethnic Minorities **C-3 Cr-3**

This course explores racial and ethnic subcultures that exist in American society. The emphasis is on those values and behaviors that contribute to the social boundaries of the group, provide a structure for interaction with outside groups, and maintain the group's integrity as a minority subculture. The adaptive strategies employed by minorities as well as dimensions of disadvantage experienced by minorities within American society are explored. Prerequisite: SO101 Introduction to Sociology.

SO206 The Social Significance of Gender **C-3 Cr-3**

This course assumes that human life is gendered and that gendered social expectations limit and enrich individuals and groups. Theories of sex and gender development, the history of social movements related to gender equity, and the impact of intersecting systems of stratification are emphasized. The influence of social forces including biology, religion, family, sexuality, education, the polity, economics, media, law, medicine, social sciences, social policy, and systems of stratification are examined. Prerequisite: SO101 Introduction to Sociology.

SO207 Sociology: Comparative Religion **C-3 Cr-3**

This course utilizes a socio-historical and comparative approach to study the development of world religions, their basic beliefs, and the relationship between religion and society. As one of the oldest of all social institutions, religion has been and continues to be a major force within society and thus this course looks at the impact these belief systems have on our world. No one religion is emphasized; rather the sociological functions of religion and how religions serve these functions within their historical and cultural context are compared and contrasted. Prerequisite: SO101 Introduction to Sociology.

SO208 Sociology of Aging **C-3 Cr-3**

Societies throughout the world address issues associated with the aging in a variety of ways, including how societies define the role of the elderly and how social institutions adapt to changes in the elderly population. This course explores historical developments, cross-cultural adaptations, societal problems, and issues related to health and well-being of aging populations. Prerequisite: SO101 Introduction to Sociology.

SO210 Deaf Culture & Community **C-3 Cr-3**

This course introduces aspects of deaf culture and the deaf community. The distinctions between the two are reviewed and characteristics of both are identified. The language, norms of behavior, values, traditions and possessions (materials) of the deaf are covered. The evolution of a pathological view of the deaf to a cultural one is analyzed from a historical and sociological perspective. Intercultural issues relating to the role of hearing people within the deaf community are covered.

SO300 Independent Study in Sociology **Cr 1-4**

SP Spanish Courses

Education & Language Studies Department

Specialized courses serve special avocation or professional language needs and provide insights into the ways another culture communicates and lives. The courses include an introductory study of pronunciation, basic grammatical structures, the specialized vocabulary, and aspects of the culture. These elements are practiced by communicating in the language mainly through listening and speaking. The use of the language laboratory is required in certain courses.

SP101, 102 Elementary Spanish 1, 2 **C-3 Cr-3**

This sequence teaches the fundamentals of Spanish, including the essentials of reading, writing, speaking, and listening within a cultural context. Prerequisites: No previous Spanish instruction, or fewer than three years of Spanish instruction more than two years ago. This course is closed to native speakers of Spanish. Native speakers should consult their advisor for guidance in appropriate course placement.

SP191, 192 Review Spanish 1, 2 **C-3 Cr-3**

This sequence continues the development of grammar, cultural understanding, reading, writing, and conversation skills, and is presented at an accelerated pace. Prerequisite: Three years of Spanish instruction more than two years ago with a grade of "B" or better.

SP201, 202 Intermediate Spanish 1, 2 **C-3 Cr-3**

This sequence reviews selected grammatical features, with emphasis on oral and written competency at the intermediate level supported by a study of cultural and literary materials. Prerequisite: Successful completion of the elementary or review sequence, or three years of Spanish instruction fewer than two years ago with a grade of "B" or better.

SP301, 302 Advanced Spanish 1, 2 **C-3 Cr-3**

This sequence expands the development of grammar, cultural understanding, conversation skills, writing, and reading through the study of literature. Prerequisite: Successful completion of the intermediate sequence, or four years of Spanish instruction in which one year was Advanced Placement level.

SP303 Modernism to Feminism in Spanish Classical Literature **C-3 Cr-3**

This course, taught in Spanish, provides an opportunity for students who wish to gain a deeper and more complex understanding of the modern literary movements of Spanish literature. The authors and works studied in this course complement and solidify the students' knowledge of the literary movements introduced in previous courses. This course also develops critical thinking and all major linguistic skills. Prerequisites: SP301 Advanced Spanish 1 or SP302 Advanced Spanish 2.

SS Social Sciences Courses

Social Sciences & Public Services Department

SS218 Methods of Research **C-3 Cr-3**

This course focuses on understanding and applying scientific methodology to an area of inquiry within the social sciences. It covers quantitative and qualitative methods of research including survey research, interviewing, archival analysis, experimentation, and participant observation. Using data-gathering techniques, a number of mini-research projects are conducted. The application of statistical techniques to data analysis is stressed. Computer software applications are used to analyze data from a variety of sources. Research teams are formed to design and implement final research

projects. Prerequisites: SO101 Introduction to Sociology and CJ101 Introduction to Criminal Justice or PS102 Introduction to Public Policy.

ST Science and Technology Courses

Physical Sciences, Engineering & Applied Technologies Department

ST101 Introduction to STEM C-3 Cr-3

This course introduces the many aspects of Science, Technology, Engineering, and Mathematics (STEM) to students who are interested in continuing or pursuing a career in the STEM-related disciplines. The course focuses on applications, innovations, and careers in STEM. Attention is given to current trends in the STEM fields and their effect on everyday life.

ST290 STEM Internship C-1 P-6 Cr-3

This course familiarizes students with the working environment of their fields of study. Academic concepts are reinforced through practical work experience. Students are assisted in making career choices and provided with familiarity with STEM-related work places. Students participate as contributing members of local public and/or private agencies/firms, acquiring real-world experience prior to graduation. Prerequisites: Matriculated into a STEM-related program, 3.0 GPA, 30 semester hours of earned credit (including transfer credit), and permission of the Associate Dean of the Department.

TC Telecommunications

Social Sciences & Public Services Department

TC110 Introduction to Public Safety Telecommunications C-3 Cr-3

This is an introductory course designed to establish the basic skills needed to be a public safety telecommunicator. Students will learn the various topics, knowledge, and actions that will ultimately provide the foundation for employing sound telecommunicator procedures and techniques. Upon successful completion of this course, students will receive certification for the APCO Institute's public safety telecommunicator course which meets industry accepted national basic training standards for public safety telecommunicators.

TC112 Customer Service in Public Safety Telecommunications C-3 Cr-3

This course builds on skills learned in TC110 Introduction to Public Safety Telecommunications. This course addresses all aspects of customer service in the field of public safety telecommunications. The course focuses on delivering quality customer service to the variety of individuals that receive services. Additionally, the course will focus on active listening and working as part of a team. Prerequisites: TC110 Introduction to Public Safety Telecommunications.

TC290 Public Safety Telecommunications Internship C-1 P-6 Cr-3

This course promotes an interest in public safety telecommunications for students pursuing a related course of study. It reinforces academic concepts through practical work experience, assists in making career choices, and provides familiarity with the work of public safety telecommunications. Students participate in a minimum of 90 hours of field experience at an agency with telecommunication operations. Attendance and participation in seminar discussion are mandatory. Permission of the Internship Director is required. Prerequisites: TC110 Introduction to Public Safety Telecommunications and CJ106 Ethics in Criminal Justice.

TH Theater Courses

Humanities Department

TH193 Introduction to the Theater C-3 Cr-3

This course introduces the foundations of theater art. Emphasis is placed on the theatrical production process. Topics include theater spaces, directing, acting, scene design, and professional work opportunities. Theater experiences from the Greek festival theater to the present are discussed.

TH194 Technical Theater C-2 P-2 Cr-3

This course provides an introduction to the theory and practice of stage craft. Topics include construction, scene painting, and the mounting and rigging of scenery.

TH195 Musical Theater C-3 Cr-3

This course is a survey of the musical theater from the late 19th century to the present. Emphasis is placed on the American musical, its historical antecedents, and recent production trends.

TH196 Theater Practicum P-2-6 Cr-1-3

This course requires hands-on participation in a variety of theater activities, including set construction, stage management, running crew work, performance, and others. Placement is made by the program advisor and technical director. Prerequisites: Instructional faculty approval, HU191 Acting 1: Principles of Acting, or HU192 Acting 2: Characterization and Scene Study.

TH197 Playwriting C-3 Cr-3

This course teaches the fundamental of playwriting while stressing the role of the text in theatrical production. Prerequisite: EN102 English 2: Ideas & Values in Literature.

TH198 Introduction to Theatrical Design C-3 Cr-3

The course introduces the theory and practice of theater production design. Emphasis is placed on lighting, set, and sound design.

TH283 Topics in Theater C-3 Cr-3

This course provides the opportunity to explore a specific area or topic in the theater. Flexibility regarding traditional boundaries of disciplines, genre, time periods, and media give fresh perspectives and knowledge of theater. Prerequisite: TH193 Introduction to the Theater.

TM Transportation Management Courses

Business, Cybersecurity & Computer Sciences Department

TM101 Supervisor Operations 1 C-3 Cr-3

This course develops the ability to carry out policy and program directions. Supervisory courses teach leadership, administration programs, and engage in the development of programs and materials within limitations established by management.

TM102 Supervisor Operations 2 C-3 Cr-3

This course covers the challenges in pupil transportation systems. It explores risk management techniques, student passenger management, personal skills to improve the ability to succeed as a manager, and legal issues surrounding public school transportation. Prerequisite: TM101 Supervisor Operations 1.

TM300 Independent Study in Transportation Management Cr 1-4

UA Remotely Piloted (Unmanned Aerial) Courses

Physical Sciences, Engineering & Applied Technologies Department

UA101 Introduction to Remotely Piloted Aircraft Systems C-3 Cr-3

This course presents the history of Remotely Piloted Aircraft Systems and their current and future use in civil industry. Topics include aircraft, ground communications, and launch and recovery systems emphasizing human integration into the overall system.

UA120 Remotely Piloted Aircraft Systems Operational & Industrial Operations C-2 P-3 Cr-3

This course explores the core technologies of Remotely Piloted Aircraft Systems as applied to commercial applications. It examines the integration of payload and programming with operational best practices and flight planning as they relate to mission application. Prerequisite: UA101 Introduction to Remotely Piloted Aircraft Systems.

UA121 Mechanics of Remotely Piloted Aircraft Systems C-2 P-3 Cr-3

This course explores the integration and operation of component systems common to Remotely Piloted Aircraft Systems. Systems include core technologies, control systems, autopilots, data links, power plants (motors), servos/actuators, power sources, sensors, and communication technologies. Students design, build, test, program, and fly unmanned aerial vehicles. Prerequisite: ET112 Electronics of Remotely Piloted Aircraft Systems.

UA215 Remotely Piloted Aircraft Systems Mission Planning and Operations C-2 P-3 Cr-3

This explores the core procedures of remotely piloted aircraft systems as applied to commercial applications. Topics include preflight planning and post flight debriefing and assessment. Corequisite: UA217 Remotely Piloted Aircraft Systems Operations 1.

UA217 Remotely Piloted Aircraft Systems Operations 1 C-2 P-3 Cr-3

This course provides a systems approach to piloting multi-rotor Remotely Piloted Aircraft Systems. Payload and sensor operations will be covered along with datalinks and autonomous systems. Students develop operational skillsets to determine which Remotely Piloted Aircraft System to utilize and the appropriate role. This course also introduces Remotely Piloted Aircraft Systems Crew Resource Management (CRM) concepts, mission planning, and pertinent regulations. Corequisite: UA215 Remotely Piloted Aircraft Systems Mission Planning and Operations.

UA218 Remotely Piloted Aircraft Systems Operations 2 C-2 P-3 Cr-3

This course provides a systems approach to piloting fixed-wing Remotely Piloted Aircraft Systems. Payload and sensor operations will be covered along with datalinks and autonomous systems. Students develop operational skillsets to determine which Remotely Piloted Aircraft System to utilize and the appropriate role. This course also introduces Remotely Piloted Aircraft Systems Crew Resource Management (CRM) concepts, mission planning, and pertinent regulations. Prerequisite: UA217 Remotely Piloted Aircraft Systems Operations 1.

UA221 Special Topics in Remotely Piloted Systems Operations C-2 P-3 Cr-3

In this capstone course students research, develop, and execute a mission plan(s) of their choice. Some students may elect to work

on a separate project, based on instructor guidance. Students may work with an industry professional to co-sponsor and secure a mission objective for that industry. A portfolio of specific benchmarks and results will be required. Prerequisite: UA218 Remotely Piloted Aircraft Systems Operations 2.

WE Weather Studies Courses

Mathematics & Natural Sciences Department

WE101 Introduction to Weather Studies C-3, P-2, Cr-4

This course introduces the science of weather while highlighting the important concepts of that science. It provides the opportunity to work with current weather data and graphic products which have been specifically designed for the course by atmospheric scientists and educators at the American Meteorological Society. Fundamental scientific principles are studied through their application to everyday weather events. Meteorology and the dynamic atmosphere are observed by following weather as it happens, in near real-time and/or by using recent real-world data and case studies. There is an emphasis on using the analysis and decision-making skills employed by meteorologists to diagnose weather patterns, understand air motions, and predict future atmospheric conditions. Prerequisite: An appropriate placement test result, MA090 Essential Math Skills, or MA091 Introductory Algebra.

WS Workplace Success Courses

Business, Cybersecurity & Computer Sciences Department

WS101 Gateway to Business Success C-3 Cr-3

This course explores the relationship between the development of academic proficiency skills and their relationship to communication within the business environment. Topics include self-assessment, international relations, technology and online learning skills, service learning, campus and community support resources, research skills, career planning and the development of transferable skills, and academic integrity.

WS102 Workplace Literacy C-3 Cr-3

This course provides a range of success in the workplace, including successful interviewing techniques and communication skills. Other skills include decision-making, problem-solving, team management, and listening and speaking. Leadership styles and cultural diversity in the workplace are also discussed.

WS103 Gateway to Customer Communication C-3 Cr-3

This course covers essential concepts and skills needed for communication in customer service. Critical skills include listening techniques, verbal, and nonverbal communication, and use of technology. Topics include customer information, customer surveys and suggestions, the handling of complaints and adjustments, techniques for dealing with difficult and angry customers, credit services, maintenance, technical service, and the development of new programs.

STATE UNIVERSITY OF NEW YORK

The State University of New York (SUNY), the nation's largest comprehensive university system, SUNY was established in 1948 out of a commitment to opportunity and access, and designed to meet diverse needs across a vast geographic landscape. Since its founding, the SUNY system has evolved to meet the changing needs of New York's students, communities, and workforce. SUNY initially represented a consolidation of 29 unaffiliated institutions. All of these colleges, with their unique histories and backgrounds, united for a common goal: To serve New York State.

Today, the system includes 64 schools, a mix of 29 state-operated campuses and five statutory colleges — including research universities, liberal arts colleges, specialized and technical colleges, health science centers, land-grant colleges—and 30 community colleges. These institutions offer programs as varied as ceramics engineering, philosophy, fashion design, optometry, maritime studies, law, medical education, and everything in between. The University also operates hospitals and numerous research institutes.

SUNY is embedded in virtually every community in New York State: Remarkably, 93 percent of New Yorkers live within 15 miles of a SUNY campus, and nearly 100 percent live within 30 miles. In many communities, SUNY is also the region's largest employer. While SUNY students are predominantly New York State residents, hailing from every one of the state's 62 counties, the University also draws students from every other state in the United States, the District of Columbia, four U.S. territories, and 160 nations from around the world. One out of three New York State high school graduates choose SUNY, and the total enrollment of nearly 445,000 full-time and part-time students represents 37 percent of New York State's higher education student population. SUNY also employs 88,000 faculty and staff and counts more than 3 million living alumni, residing in New York State and throughout the world.

Serving nearly 1.3 million students, including nearly 600,000 in credit-bearing courses and programs, and more than 700,000 through continuing education and community outreach programs. SUNY attracts the best and brightest scholars, scientists, artists, and professionals and boasts nationally and internationally recognized faculty in all major disciplines. Faculty are regular recipients of prestigious awards and honors.

The State University is governed by a Board of Trustees, appointed by the Governor, which directly determines the policies to be followed by the 34 State-supported campuses. Community colleges have their own local boards of trustees whose relationship to the SUNY board is defined by law. The state contributes one-third to 40 percent of their operating cost of one-half of their capital costs.

The State University motto: “To learn, to search, to serve.”

University Centers and Doctoral Degree Granting Institutions(1)

- University at Albany
- New York State College of Ceramics at Alfred University
- Binghamton University
- University at Buffalo
- New York State College of Agriculture and Life Science at Cornell University
- New York State College of Human Ecology at Cornell University
- New York State School of Industrial and Labor Relations at Cornell University
- New York State College of Veterinary Medicine at Cornell University
- SUNY Downstate Medical Center

- SUNY College of Environmental Science and Forestry
- SUNY College of Optometry
- SUNY Polytechnic Institute
- Stony Brook University
- Upstate Medical University

University Colleges (1)

- Buffalo State College
- Purchase College
- State University College at Brockport
- State University College at Cortland
- State University of New York Empire State College
- State University College at Fredonia
- State University College at Geneseo
- State University College at New Paltz
- State University College at Old Westbury
- State University College at Oneonta
- State University College at Oswego
- State University College at Plattsburgh
- State University College at Potsdam

Colleges of Technology (1)

- Alfred State College
- State University of New York at Canton
- State University of New York College of Agriculture and Technology at Cobleskill
- State University of New York College of Technology at Delhi
- Farmingdale State College
- Maritime State College
- Morrisville State College

Community Colleges (2)

- SUNY Adirondack
- SUNY Broome
- Cayuga Community College
- Clinton Community College
- Columbia-Greene Community College
- Corning Community College
- Dutchess Community College
- Erie Community College
- Fashion Institute of Technology
- Finger Lakes Community College
- Fulton-Montgomery Community College
- Genesee Community College
- Herkimer County Community College
- Hudson Valley Community College
- Jamestown Community College
- Jefferson Community College
- Mohawk Valley Community College
- Monroe Community College
- Nassau Community College
- Niagara County Community College
- North Country Community College
- Onondaga Community College
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- Westchester Community College

(1) Although the format State University College reflects the formal action of the SUNY Trustees taken from enabling resolutions, it is also acceptable to use State University of New York College at...

(2) SUNY Trustees' code of standards for community colleges provides that when possible and desirable the designation of its sponsorship or service area shall be incorporated into the name of a community college.

Accurate as of July 2017

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Faculty at Mohawk Valley Community College

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Scot Connor, Assistant Professor; AAS, Mohawk Valley Community College; BFA, Syracuse University; MFA, Academy of Art College (CA). Award: 2012 Heart of the Hawk

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Rosemary Fuoco, Associate Professor; AAS, Mohawk Valley Community College; BS, SUNY Polytechnic Institute; MS, SUNY College at Oswego

Lindsey Geary, Associate Professor; AS, Mohawk Valley Community College; BS, MS, Florida State University. Awards: 2013 Altitude Award, 2013 Heart of the Hawk

Karen Getman, Instructor; AAS, SUNY Morrisville College of A&T; BA, SUNY Polytechnic Institute; MS, Fort Hays State University

Nicholas Gioppo, Associate Professor; BS, Youngstown State University; MS, Bowling Green State University

Andrew Glidden Jr., Associate Professor; AOS, Culinary Institute of America; BS, Johnson & Wales University (RI); MS, Syracuse University. Awards: 2016 Excellence in Faculty Services, 2017 SUNY Chancellor's Award for Excellence in Faculty Services

George Goerner, Professor; BS, Indiana University; MS, SUNY University at Binghamton; MS, SUNY College at Cortland. Award: 2014 SUNY Chancellor's Award for Excellence in Faculty Services

Leslie Goerner, Associate Professor; BA, Indiana University; MA,

PhD, SUNY University at Binghamton

Robert Gould, Associate Professor; BS, SUNY College at Cortland; MA, University of North Carolina at Chapel Hill

Alexander Haines-Stephan, Assistant Professor; BA, SUNY College at Geneseo; MS, Utica College

Christi Harrington, Professor; BFA, University of Michigan-Ann Arbor; MFA, New York Academy of Art

Alan Hazen, Instructor; MS, Eastern Kentucky University

Michael Higgins, Instructor; MBA, SUNY College at Oswego

Luke Hobaica, Instructor; BS, SUNY Oswego

David Hoffman, Associate Professor; AOS, SUNY Cobleskill College of A&T; BS, Rochester Institute of Technology; MS, SUNY College at Oswego

Lori Hughes, Instructor; MS, Worcester State College

William Hunt, Assistant Professor; Certificate, SUNY University at Buffalo; BS, Rochester Institute of Technology; MEd, SUNY University at Buffalo. Award: 2016 Eye of the Hawk Award, 2016 SUNY Chancellor's Award for Excellence in Teaching

Robert Huyck, Associate Professor; AS, Adirondack Community College; BS SUNY College at Oneonta; MBA, SUNY College at Oswego. Awards: 2015 Excellence in Teaching

Douglas Hyldelund, Associate Professor; AAS, Mohawk Valley Community College; BFA SUNY College at Fredonia; MA, SUNY Empire State College

William Hysell, Professor; BS, University of Rio Grande (OH); MEd, Ohio University. Awards: 2008 Excellence in Teaching, 2009 SUNY Chancellor's Award for Excellence in Teaching, 2010 Heart of the Hawk, 2015 Excellence in Faculty Services, 2016 SUNY Chancellor's Award for Excellence in Faculty Services

Edwin Isenberg, Associate Professor; BA, MA, Wayne State College (NE). Awards: 1993 Excellence in Teaching, 1994 SUNY Chancellor's Award for Excellence in Teaching

Thomas Jennings, Associate Professor; BS, Purdue University W. Lafayette (IN); BS, MS, Rensselaer Polytechnic Institute

Brian Judycki, Professor; BA, SUNY University at Albany; MS, SUNY Polytechnic Institute

William Judycki, Professor; AAS Mohawk Valley Community College; BS, Rochester Institute of Technology; MS, Syracuse University

Donald Kelly, Professor; BS, Utica College; BA, SUNY University at Albany; MS, University Alaska, Fairbanks. Awards: 1998 MVCC Adjunct Faculty Award, 2012 Excellence in Teaching, 2013 SUNY Chancellor's Award for Excellence in Teaching

Michelle Kelly, Assistant Professor; BS, MS, SUNY College at Brockport

Richard Kelly, Assistant Professor; BS, SUNY College at Cortland; MS, Utica College

Pattina Keniston, Instructor; BS, SUNY Empire State College. Award: 2011 Heart of the Hawk

Jedediah Kimball, Professor; BFA, University of Utah; MFA, New York Academy of Art. Awards: 2013 Excellence in Scholarship/Creative Activities, 2014 SUNY Chancellor's Award for Excellence in Scholarship/Creative Activities, 2016 Aeries Award, 2016 Heart of the Hawk

Kenneth Klein, Associate Professor; AOS, Hudson Valley Community College; BS, SUNY College at Oswego

Jennifer Krohn, Associate Professor; BS, Virginia Commonwealth University; MS, James Madison University

Gary Kulis, Associate Professor; BA, University of Maine at Presque Isle; MA, SUNY University Center at Binghamton

Jerome LaLonde, Professor; BA, MS, Syracuse University

Mary LaPaglia, Assistant Professor; Certificate, Faxton-St. Luke's School of Radiography; AS, Herkimer County Community College; BS, SUNY Empire State College; MA, Trident University International (CA)

Yixiong Liang, Associate Professor; BA, MA, Nankai University of China; PhD, Temple University

Samuel Lilly, Assistant Professor; AS, Mohawk Valley Community College; BSN, Keuka College; MSN, Walden University (MN)

Kyle Lince, Associate Professor; BS, MS, SUNY Polytechnic Institute

Tia Lock, Assistant Professor; AAS, Herkimer County Community College; BS, SUNY Polytechnic Institute; MS, SUNY College at New Paltz

Todd Marshall, Instructor; MA, Cornell University; PhD, Cornell University

Stacey McCall, Assistant Professor; BA, Elms College (MA); MA, SUNY University at Albany

Maureen McCleary, Associate Professor; BA, Utica College; MS, SUNY Upstate Medical University

Gabriel Melendez, Associate Professor; BSC, University of El Salvador; MA, University of Tennessee: Knoxville

Brittnee Mexico, Instructor; MEd, Utica College

Thomas Mihevc, Assistant Professor; BS, Rochester Institute of Technology; MS, SUNY Polytechnic Institute

Amanda Miller, Assistant Professor; BS University of West Florida; MS, University of Oregon

Christine Miller, Professor; AAS, Mohawk Valley Community College; BFA, SUNY College at Fredonia; MFA, SUNY College at New Paltz. Awards: 2007 Excellence in Scholarship/Creative Activities, 2008 SUNY Chancellor's Award for Excellence in Scholarship/Creative Activities

Robert Mineo, Instructor; BA, SUNY College at Fredonia; MS, SUNY Polytechnic Institute

Rosemary Mink, Professor; BA, SUNY College at Fredonia; MA, Syracuse University. Awards: 2014 Eye of the Hawk Award, 2016 Heart of the Hawk

David Nackley, Associate Professor; AAS, Mohawk Valley Community College; BS, SUNY College at Oneonta; MS, Utica College. Awards: 2013 Excellence in Teaching, 2014 SUNY Chancellor's Award for Excellence in Teaching, 2015 Heart of the Hawk, 2016 Heart of Hearts

Frank Noti, Instructor; AS, Mohawk Valley Community College; BEEd, SUNY College at Oneonta; MSE, SUNY College at Cortland

Nelissa Nowicki, Assistant Professor; BA, Skidmore College; MA, Boston College; MS, Syracuse University

Jose Ocasio, Instructor; Certificate, AAS, Mohawk Valley Community College

Brian O'Key, Instructor; AA, Edison State Community College (OH); BS, SUNY Upstate Medical University; MS, SUNY College at Oswego; MS, Syracuse University

Carolyn Pace, Professor; BA, MA, PhD, Syracuse University. Awards: 1999 Excellence in Teaching, 2000 SUNY Chancellor's Award for Excellence in Teaching

Thomas Palumbo, Instructor; MS, SUNY Polytechnic Institute

Fumin Pan, Assistant Professor; BS, Yuzhou University; MS, University of Massachusetts-Amherst; MS, Zhejiang University; PhD, University of Massachusetts-Amherst

Michelle Parker, Instructor; BSN, Utica College; MSN, SUNY Polytechnic Institute

David Patent, Instructor; MA, San Francisco State University

John Pawloski, Assistant Professor; BA, Hillsdale College (MI); MA,

Kalamazoo College (MI)

Russell Penner, Assistant Professor; AS, BS, Liberty University (VA); MS, Syracuse University

Lorie Phillips, Program Coordinator-Professor; AAS, SUNY Upstate Medical University; BS, SUNY Polytechnic Institute; MS, SUNY College at Cortland

Alexander Piejko, Professor; AAS, Mohawk Valley Community College; BFA, MFA, Syracuse University. Awards: 2008 Excellence in Scholarship/Creative Activities, 2009 SUNY Chancellor's Award for Excellence in Scholarship/Creative Activities, 2017 Heart of the Hawk

Cheryl Plescia, Professor; AAS, Mohawk Valley Community College; BA, Hamilton College; MSW, Syracuse University. Awards: 2014 Excellence in Teaching, 2015 SUNY Chancellor's Award for Excellence in Teaching

Alisia Pooley, Instructor; Certificate, Onondaga Community College; BA, SUNY College at Oswego

Dina Radeljas, Assistant Professor; AAS, Mohawk Valley Community College; BS, MS, SUNY Polytechnic Institute; PhD, Capella University

Anna Radlowski, Assistant Professor; BA, Wells College; MA, Wesleyan University (CT)

Maria Ramos, Professor; AAS Mohawk Valley Community College; BS, Utica College; MS, Rensselaer Polytechnic Institute. Awards: 1997 Excellence in Teaching, 1998 SUNY Chancellor's Award for Excellence in Teaching, 2017 Excellence in Faculty Services

Todd Rankins, Associate Professor; Certificate, Riverside School of Aeronautics; AAS, Herkimer County Community College; BA, SUNY Polytechnic Institute

James Rice, Instructor; BA, SUNY University at Albany; MS, Utica College

James Roberts, Assistant Professor; BA, Utica College; MA, SUNY University at Binghamton. Award: 2017 Altitude Award

Nathan Roscup, Instructor; BS, SUNY University at Buffalo; MS, Northeastern University (MA). Award: 2016 Eye of the Hawk Award

Norayne Rosero, Professor; AA, Mohawk Valley Community College; BA, SUNY College at Oneonta; MS, SUNY College at Potsdam. Awards: 2007 Excellence in Faculty Services, 2008 SUNY Chancellor's Award for Excellence in Faculty Services, 2016 SUNY Distinguished Teaching Professorship

Ricardo Rosero, Associate Professor; AAS, Mohawk Valley Community College; BS, Clarkson University; MS, SUNY College at Oswego

Roman Santos, Associate Professor; BA, Brigham Young University (UT); MA, University of Phoenix; MA, San Diego State University (CA)

Renee Sbiroli, Assistant Professor; BS, SUNY College at Oswego

Barbara Scantlebury, Associate Professor; BA, University of West Indies (Barbados); MEd, University of Manchester (England); PhD, University of Salford

Thomas Schink, Assistant Professor; AS, Corning Community College; BA, MA, SUNY College at Potsdam

George Searles, Professor; BA, Marist College; MA, SUNY College at New Paltz; PhD, SUNY University at Binghamton. Awards: 1984-1985 MVCC Award for Excellence in Service; 1985 SUNY Chancellor's Award for Excellence in Teaching; Carnegie Foundation, NYS Professor of the Year 2002; Advancement of Teaching NYS Professor of the Year 2002; 2003 NYS United Teachers Higher Education Member of the Year; 2003 SUNY Chancellor's Award for Excellence in Scholarship/Creative Activities

Scott Selden, Associate Professor; AAS, Mohawk Valley Community College; BFA, SUNY College at Fredonia; MA, SUNY Empire State College

Erin Severs, Assistant Professor; BA, Knox College (IL); MA, University of Maine/Orono (ME)

Amit Sharma, Instructor; MS, Washington State University

Brandon Shaw, Assistant Professor; AAS, Mohawk Valley Community College; BS, SUNY College at Oneonta; MS, University of New England (ME). Awards: 2010 Pride of the Hawk, 2013 Heart of the Hawk

Rialda Shulman, Assistant Professor; BA, MS, Utica College

Michael Sisti, Instructor; BS, University of Vermont

Guy Snedeker, Instructor; BA, Eisenhower College of R.I.T.; MA, MS, Syracuse University. Award: 2013 Heart of the Hawk

Gina St. Croix, Assistant Professor; BS, SUNY College at Cortland; MED, SUNY College at Potsdam. Awards: 2011 Heart of the Hawk, 2016 Excellence in Teaching, 2017 SUNY Chancellor's Award for Excellence in Teaching

Matthew St. Croix, Instructor; BS, MS, Saint John Fisher College

Derrick Stevens, Instructor; BS, Tennessee Technological University; PhD, North Carolina State University.

John Susenburger, Associate Professor; BS, Northwest Missouri State University; MBA, St. John's University

John Swistak, Associate Professor, BS, Syracuse University; MS, Rochester Institute of Technology; MBA, Rensselaer Polytechnic Institute

Melissa Thomas, Assistant Professor; BA, SUNY Polytechnic Institute; MA, The Sage College-Albany Campus

Richard Thomas, Professor; BA, MS, Cornell University

Thomas Townsley, Assistant Professor; MA, Syracuse University. Awards: 2016 Excellence in Scholarship/Creative Activities, 2017 SUNY Chancellor's Award for Excellence in Scholarship/Creative Activities

Alina Treis, Professor; BA, College of Saint Rose; BA, University of Bombay; MA, PhD, SUNY University at Albany

Christine VanNamee, Instructor; BS, SUNY College at Brockport; MBA, SUNY Polytechnic Institute

James Vitale, Professor; AAS, Mohawk Valley Community College; BFA, SUNY College at Buffalo; MFA, Syracuse University. Awards: 2011 Excellence in Scholarship/Creative Activities, 2011 SUNY Chancellor's Award for Excellence in Scholarship/Creative Activities, 2017 Excellence in Teaching

Brandon Walcutt, Instructor; MBA, University of North Florida

Tracy Weimer, Instructor; AAS, Mohawk Valley Community College; BSN, MSN, Grand Canyon University (AZ)

Justin Wilcox, Associate Professor; AAS, Mohawk Valley Community College; BBA, SUNY Polytechnic Institute; MBA, SUNY Polytechnic Institute

Jason Yager, Associate Professor; AS, Butler County Community College (KS); BS, MBA, SUNY Polytechnic Institute. Awards: 2007 Excellence in Professional Service, 2008 SUNY Chancellor's Award for Excellence in Professional Service

William Zogby, Associate Professor; BS, University of Scranton; MBA, Syracuse University; MA, Northeastern University (MA)

Staff at Mohawk Valley Community College

Michael Anderson, Building Maintenance Helper

Patricia Antanavige, Coordinator of Adult Learner Services; BS, Ball State University (IN). Awards: 2015 Excellence in Professional Service, 2016 SUNY Chancellor's Award for Excellence in Professional Service

Peggy Axel, Library Cataloging Coordinator; BS, Utica College

Sarah Barcomb, Youth Build Project Coordinator; MSE, SUNY College at Cortland

Kathryn Barefoot, Assistant Registrar; AA, Suffolk County Community College; BS, Utica College

Todd Barretta, Light Motor Equipment Operator

Ryan Barsuch, Supervising Public Safety Officer; BA, SUNY College at Oswego

Marcel Bembry, Senior Clerk; AAS, Mohawk Valley Community College

Philip Benson, Admissions Counselor; BA, SUNY College at Cortland

Nicole Benton, Placement Testing; BA, SUNY University at Albany

Jeffrey Berg, Building Maintenance Helper

Salina Billins, Completion Coach; MS, Utica College

Daniel Boggs, Accessibility Services; Accommodation Specialist; BS, City University of New York

David Bolinski, Senior Building Maintenance Mechanic

Maureen Boufas, Assistant Director of Financial Aid; AAS, Herkimer County Community College; BS, SUNY Polytechnic Institute

Kathleen Bouse, College Services Associate

Dylan Bowen, Building Maintenance Helper

Marcia Bramhall, ASC Customer Service Representative

Lynn Breen, ASC Director

Elaine Brown, Laboratory Assistant; BSN, Excelsior College; MS, Syracuse University

Nicole Bruzzese, College Services Associate; BA, Colgate University

Verryll Bryant, Building Maintenance Helper

Lisa Bullet, Data Processing Clerk

Kevin Burch, Campus Safety Officer

Timothy Burke, Educational Opportunity Center Program Technical Assistant; AA, BT, SUNY Morrisville College of A&T

Charles Burkhart, Data Processing Clerk; AAS, Herkimer County Community College

Karin Capuana, Office Specialist 1. Awards: 2013 Excellence in Classified Services, 2014 SUNY Chancellor's Award for Excellence in Classified Services

Kim Carhart, Senior Account Clerk; AAS, Mohawk Valley Community College

James Carkner, Senior Public Safety Officer

Jason Carpenter, Assistant to Associate Dean of the Department for Athletics, Physical Education & Recreation; BS, SUNY College at Oneonta; MS, United States Sports Academy

Erica Carrock, Events Coordinator; BA, Utica College

Richard Cavoli, Building Maintenance Helper

Lisa Chamberlin, Health Retention Specialist; BSN, Syracuse University

Louise Charbonneau, Librarian-Professor; BA, University of Quebec Montreal; MLS, PhD, SUNY University at Albany. Awards, 2011 Excellence in Librarianship, 2012 SUNY Chancellor's Award for Excellence in Librarianship

Norma Chrisman, Educational Technology Specialist; AAS, Herkimer County Community College. Awards: 2010 Pride of the Hawk, 2011 Excellence in Professional Service, 2012 SUNY Chancellor's Award for Excellence in Professional Service

Karl Christiansen, Campus Safety Officer

Edgardo Colon, Senior Public Safety Officer

Esmeralda Colon, Housekeeper

Stephen Cook, Coordinator of the Center for Academic Excellence in Cyber Defense; MS, Utica College

Deborah Cornish, Technical Assistant; AAS, Mohawk Valley Community College; BA, University of New Hampshire

Matthew Cornmire, Building Maintenance

Alun Coss, Building Maintenance Mechanic

Tracy Coulson, College Advisor; BA, SUNY College at Cortland; MPA, SUNY University at Binghamton. Awards: 2013 Eye of the Hawk Award, 2015 Excellence in Professional Service, 2016 SUNY Chancellor's Award for Excellence in Professional Service

Kalyn Credle, Resident Director - Academic Initiatives; AA, Adirondack Community College; BA, SUNY Purchase

Sean Crossan, Senior Manufacturing Consultant; BS, Rochester Institute of Technology

Diana Crowley, Building Maintenance Worker

Stephanie Cuda, Senior Office Specialist I

Sandra Cummings, Coordinator of Student Activities; AAS, Mohawk Valley Community College; BA, SUNY Polytechnic Institute

Johana Dainotto, Account Clerk

Karen Dean, Senior Administrative Assistant; AAS, Mohawk Valley Community College. Award: 2012 Pride of the Hawk

Stuart Deane, Maintenance Worker

Taylor Decker, International Admissions Counselor; BA, Lynchburg College

Carolyn DeJohn, Coordinator of Community Education; BA, SUNY University at Binghamton. Awards: 2013 Pride of the Hawk, 2014 Excellence in Professional Service, 2015 SUNY Chancellor's Award for Excellence in Professional Service, 2017 Aeries Award

David Del Pico, Assistant Building Superintendent

Jennifer DeMayo, Principal Account Clerk; AAS Mohawk Valley Community College; BFA SUNY College at Oswego

Brittany Dielemans, Coordinator of Civic Responsibilities; BS, Springfield College; MS, Post University

Carol Dinger, Library Clerk

Steffani DiPierro, College Services Associate; BA, SUNY University at Albany

Elizabeth DiRaimo, Financial Aid Advisor; AS, BS, SUNY Empire State College

Angela DiSpirito, Data Processing Clerk

Candice Docherty, Multimedia Advertising Designer; BFA, Cazenovia College

Lizabeth Doherty, Coordinator of Career Services; BS, Elmira College; MEd, University of Texas at Austin. Award: 2011 Pride of the Hawk

Salina Doherty, College Services Associate; AA, Herkimer County Community College

Oleg Donchuk, Programmer Analyst; BS, Kharkov Institute of Business Administration; MA, SUNY Polytechnic Institute. Award: 2011 Pride of the Hawk

Frank Drayton, Youth Build Case Manager; BA, SUNY Polytechnic Institute

Fred Dyer, Building Maintenance Worker

Jerry Dygert, Light Motor Equipment Operator

Daniel Eddy, Student Advisor & Engagement Specialist; ML, SUNY Oswego

Debra Edick, Administrative Assistant; AAS, Mohawk Valley Community College. Award: 1993 Excellence in Classified

Services, 2015 SUNY Chancellor's Award for Excellence in Classified Services

Angela Elias, Senior Office Specialist I; AAS, Mohawk Valley Community College

Carmen Elwell, Librarian-Instructor; BA, University of Minnesota Duluth; MLS, University of Wisconsin

Jennifer Fanelli, Media Content Coordinator; AAS, Mohawk Valley Community College; BA, Utica College. Award: 2016 Altitude Award

Jeffrey Farr, Light Motor Equipment Operator

Teresa Fava-Schram, Coordinator Workforce Development; BS, Fashion Institute of Technology

Donna Felitto, College Services Associate. Awards: 2014 Excellence in Classified Services

Joseph Fiorenza, Building Maintenance Mechanic

Matthew Fikes, Technical Assistant-Institutional Assessment; BA, SUNY College at Oswego

Kelly Fleming, Volunteer Project Coordinator; AS, BPS, SUNY Empire State College

Lisa Flo, Information Tech Representative; AAS, Mohawk Valley Community College

Sabrina Fryman, Auditor II; AAS, Jefferson Community College; BS, MBA, Cameron University

Brittany Fuller, College Services Associate

Kayleigh Gapp, Administrative Assistant

Emily Gifford, Coordinator of International Students Services; BA, University of New Hampshire; MA, School for International Training (VT)

Rachel Golden, Completion Coach; AAS, Mohawk Valley Community College; BS, Utica College; BS, SUNY University at Buffalo; MS, Touro College

Luciann Gould, Publications Coordinator; BFA, Syracuse University

Paula Graveling, College Services Associate

Kati Griffiths, Resident Director - Community Development; BS, St. Lawrence University

Alison Grimshaw, Building Maintenance Worker

David Guido, Building Maintenance Mechanic

Richard Gurdo, Campus Safety Officer

Joshua Hall, Financial Aid Advisor; BA, SUNY College at Purchase; MA, SUNY College at New Paltz

Michael Hayes, Technical Assistant; AAS, Mohawk Valley Community College; AOS, Utica School of Commerce; BS, Utica College

Charles Hendricks, Network Specialist; AAS, Mohawk Valley Community College; BS, SUNY Polytechnic Institute

Michael Henningsen, Assistant Director of Career & Transfer Services; AS, Broome Community College; BS, SUNY College at Brockport; MS, Canisius College. Award: 2014 Pride of the Hawk

Kathe Herting, Senior Office Specialist I

Chrono Ho, Visual Media Coordinator; BBA, SUNY Polytechnic Institute

Matthew Hoffman, Senior Public Safety Officer

De'Anna Hopkinson, Student & Residential Life Specialist; AAS Mohawk Valley Community College

Brandon Horender, Project Coordinator-Dual Credit; AS, Herkimer County Community College; BA, SUNY University at Albany

Jocelyn Ireland, Librarian-Instructor; BA, Albion College (MI); MS, SUNY University at Albany

Thomas Jeff, Programmer Analyst; AAS, Herkimer County Community College; BA, SUNY Polytechnic Institute

Justin Johnson, Completion Coach; MA, SUNY University at Albany

Matthew Johnson, Building Maintenance Helper

Ronald Jones, Technical Assistant; AAS, Mohawk Valley Community College; BA, SUNY Polytechnic Institute

Dino Jukic, Senior Public Safety Officer

Aiko Kane, Library Clerk. Award: 2011 Excellence in Part-Time Service

Dena Kennelty, Data Processing Clerk

Stacy Kenyon, Financial Systems Accountant; BS, SUNY Empire State College

Maimun Khan, Completion Coach; BA, George Washington University; MEd, Boston University

Jeff Kimball, Programmer Analyst; AS, Mohawk Valley Community College; BS, SUNY Polytechnic Institute; MS, Syracuse University

Alma King, Senior Financial Aid Advisor; AS, Utica College

James Kinney, Campus Safety Officer

Marie Kohl, Coordinator of Annual Funds & Alumni Relations; AAS, Mohawk Valley Community College; BS, SUNY University at Albany; MS, Northeastern University

Michael Kopec, Labor Supervisor

Marek Koscinski, Technical Assistant; Certificate, AOS, Mohawk Valley Community College

Kathy Kotary, Intake and Process Support; AS, Mohawk Valley Community College

Kathleen Kresa, Data Processing Clerk; AA, Mohawk Valley Community College; BA, SUNY College at Potsdam

Karen Kuznia, Office Specialist II

Eric LaForest, Building Maintenance Worker

Paul LaPorte, Cyber & Network Program Coordinator; BS, SUNY Polytechnic Institute

Brett Lasalle, Assistant Director of Facilities & Operations; AS Mohawk Valley Community College

Jeanne Litz, Senior Office Specialist I

Jean Longo, ASC Senior Accounts Representative

Craig Loomis, Light Motor Equipment Operator

Linda Loudon, Staff Accountant; AAS, SUNY Cobleskill College of A&T; BS, Utica College

Nancy Maier, Building Maintenance Helper

Patty Maldonado, Housekeeper

Tamara Mariotti, Coordinator of Accessibility Resources; AAS, SUNY College of Technology at Alfred; BS, SUNY College at Cortland. Award: 2017 Pride of the Hawk

Michael Marusic, Senior Manufacturing Consultant; AAS, Fulton-Montgomery Community College; BT, SUNY Polytechnic Institute; MBA, Rensselaer Polytechnic Institute

Katelyn McAllister, Building Maintenance Helper

Paul McBee, Maintenance Worker

Dawson McDermott, Coordinator of Academic Advisement; AA, Jefferson Community College; BA, SUNY College at Oswego; MEd, Middle Tennessee State University. Awards: 2013 Eye of the Hawk Award, 2016 Pride of the Hawk

Kelly McNamara, Technical Assistant; AS, Mohawk Valley Community College; BS, MS, SUNY College at Brockport

Robert Miller, Building Maintenance Helper

Thomas Monaghan, Heat, Ventilation and Air Conditioning Building Superintendent. Award: 2004 Excellence in Classified Services

Kendrick Morrison, Assistant Director of Admissions; AAS, Herkimer County Community College; BS, Utica College

Ronald Moskal, Building Maintenance Helper

Mark Murphy, Supervisor of Residence Hall Facilities; AA, Mohawk Valley Community College

Sergey Myalik, Manager of End-User Computing; AOS, Mohawk Valley Community College; BS, Bridgewater University (England)

Cathy Myers, Office Specialist I. Awards: 2016 Excellence in Classified Services, 2017 SUNY Chancellor's Award for Excellence in Classified Services

James Myers, Coordinator of Research & Analysis; AAS, Mohawk Valley Community College; BS, Utica College. Award: 1992 Excellence in Classified Services

Dominick Nicotera, Licensed Mental Health Practitioner; MSW, Syracuse University

Debra O'Donnell, Data Processing Clerk. Award: 1997 Excellence in Classified Services

Diane O'Donnell, Housekeeper

Michael O'Donnell, Senior Public Safety Officer

Deborah Otis, Educational Systems Assistant; AAS, Mohawk Valley Community College; BS Elmira College; MS, Utica College

Katelyn Ouderkerk, Accessibility Resources Transitional Support Specialist; BS, Daemen College

Theresa Paladino, Financial Aid Advisor; AAS, Mohawk Valley Community College. Awards: 2014 Pride of Pride, 2014 Pride of the Hawk

Joyce Palmer, Coordinator of Expendable & Fixed Asset Procurement; BS, SUNY Polytechnic Institute

Gary Parker, Technical Assistant; AAS, Mohawk Valley Community College; BS, SUNY College at Brockport

Mary Parry, Programmer Analyst; AAS, Mohawk Valley Community College; BA, SUNY Empire State College

Rosemarie Pastorella, Student Veterans Specialist; AAS, Mohawk Valley Community College; BA, SUNY Polytechnic Institute

Rhona Patterson, Upward Bound Program Coordinator; AAS, AS, Mohawk Valley Community College; BA, Utica College. Award: 2014 Aeries Award

Lesley Paul, Senior Office Specialist I

Vincent Pellizzi, Educational Applications Assistant; AAS, Mohawk Valley Community College; BS, SUNY Polytechnic Institute

Rebecca Pepperine, Career and Employee Relations; AAS, Mohawk Valley Community College; BA, SUNY Polytechnic Institute; MA, SUNY College at Oneonta; CAS, SUNY University at Stony Brook; CAS, Loyola University Maryland

Sean Peters, Building Maintenance Helper

Pete Peterson, Building Maintenance Helper. Award: 2003 Excellence in Classified Services

Edward Pierce, Building Maintenance Helper

Anne Popeo, College Nurse; AAS, Mohawk Valley Community College; BS, BPS, SUNY Polytechnic Institute

Daniel Porcelli, Bursar; AAS, Mohawk Valley Community College. Awards: 2012 Pride of Pride, 2012 Pride of the Hawk

Lisa Powell, Senior Account Clerk; AAS Mohawk Valley Community College; BS, SUNY Polytechnic Institute

Joseph Puchyr, Building Maintenance Helper

David Pula, Painter

Kristen Raab, Tutor/Mentor-Writing; AS, Mohawk Valley Community College; BS, MS, Utica College

Justin Rahn, College Advisor; AAS, Mohawk Valley Community College; BA, Nazareth College; MS, Kansas State University. Award: 2013 Eye of the Hawk Award

Breanne Rathbun, Tutor/Mentor-Mathematics; BS, Rensselaer Polytechnic Institute

Alexander Ree, Building Maintenance Helper

Kalynn Riedman, Admissions Counselor; AA, Mohawk Valley Community College; BBA, SUNY College at Oswego

Jonathan Ritzel, Construction Trainer; AAS, Mohawk Valley Community College

Erica Roberts, Administrative Assistant; AS, Mohawk Valley Community College; BS, SUNY Polytechnic Institute

Gary Robertson, Building Maintenance Helper

Matthew Rodriguez, Building Maintenance Helper

Claire Rudka, Enrollment Associate; AAS, SUNY Morrisville College of A&T. Awards: 2013 Pride of the Hawk, 2013 Pride of Pride

Lori Rycraft, Data Processing Clerk; AAS, Mohawk Valley Community College. Award: 2007 Excellence in Classified Services

Seyed Safizadeh-Shabastary, Technical Assistant-Educational Technology; AS, Mohawk Valley Community College

Jay Salsberg, Senior Offset Printing Machine Operator; AS, Mohawk Valley Community College. Awards: 2015 Excellence in Classified Services, 2016 SUNY Chancellor's Award for Excellence in Classified Services

Omar Sanchez, Building Maintenance Worker

Mark Saxe, Supervisor of Building Services

Robin Saxe, Community Resource Specialist; AA, Munson-Williams-Proctor Arts Institute; BS, SUNY College at Oneonta

Timothy Schloicka, Senior Public Safety Officer

Barbara Seaton, Technical Assistant; BA, BS, Upper Iowa University. Awards: 2002 Excellence in Professional Service, 2003 SUNY Chancellor's Award for Excellence in Professional Service

Safet Sehovic, Building Maintenance Helper

Kevin Siembab, Student Services Specialist; AA, Herkimer County Community College; BS, SUNY Polytechnic Institute

Linda Sloat, Senior Office Specialist I

David Smith, Technical Assistant; AS, SUNY Delhi College of Technology; BS, SUNY Polytechnic Institute

Donna Smith, Senior Office Specialist I

Nolan Snyder, Technical Assistant; AAS, Herkimer County Community College. Awards: 2015 Pride of the Hawk, 2016 Pride of Pride

Jenny Spinelli, Advisement Specialist; BS, Cazenovia College; MS, SUNY College at Plattsburgh

Anthony Stanwick, Building Maintenance Worker

Sergey Staskevich, Educational Applications Assistant; AS, Mohawk Valley Community College

Ardwin Stepanick, Data Base Administrator; AAS Mohawk Valley Community College; BS, Utica College

Justin Suits, Building Maintenance Helper

Geri Sultenfuss, Senior Office Specialist I. Awards: 2002 Excellence in Classified Services

James Sunderhaft, Assistant Registrar; BS, SUNY Polytechnic Institute; MPA, Walden University

Courtney Taurisano-Sprague, Development Assistant; MA, Jones International University (CO)

Linda Tettamant, Youth Academic Program Coordinator; BS, SUNY Polytechnic Institute; BA, Utica College; MA, University of Phoenix

Martin Tracy, Supervising Public Safety Officer
Lisa Tripoli, Data Processing Clerk
Tina Trybalski, College Services Associate; AAS, Mohawk Valley Community College
Cassie Tuff, Senior Public Safety Officer; BS, Cazenovia College; MA, University of North Dakota
Gretchen Tyoe, Housekeeper
Michael Vallese, Campus Safety Officer
Jon-David Velleto, Technical Assistant; AAS, Mohawk Valley Community College
Mary Vescio, College Services Associate; BA, LeMoyne College
Gerald Villarreal, Assistant Director of Residence Life; AAS, SUNY Cobleskill; BBA, SUNY Cobleskill; MA, SUNY Stony Brook
Kelly Virkler, Licensed Mental Health Practitioner; MS, Syracuse University
Katherine Voce, Marketing Assistant; BA, Utica College; MS, SUNY Polytechnic Institute
Lily Wadsworth, Librarian-Instructor; MS, SUNY University at Albany
Matthew Wagner, Technical Assistant-Events; AS, Full Sail Real World Education
Matthew Waldron, Technical Assistant; Cayuga County Community College; SUNY College at Cortland; BA, SUNY College at Potsdam; MS, SUNY College at Oswego
Terry Walters, Mail Clerk. Award: 2012 Pride of the Hawk
Matthew Warchal, Upward Bound Tutor/Mentor; MA, SUNY University at Albany
David Warren, Assistant to Associate Dean of the Department for Athletics, Physical Education & Recreation; AAS, Herkimer County Community College; BS, SUNY College at Cortland
Patricia Washington, College in Prison Program Assistant; AAS, Herkimer County Community College; BS, SUNY Polytechnic Institute; MS, PsyD, Grand Canyon University
Susan Waters, Senior Office Specialist I
Thomas Welpé, Storekeeper; AAS, Herkimer County Community College
Bonnie Wetherbee, Housekeeper
Nadine White, College Services Associate
Nancy Will, College Services Associate; AAS, Utica School Commerce
Barbara Wilson, Technical Assistant; AS, SUNY Morrisville College of A&T; BS, SUNY College of Agriculture and Life Sciences at Cornell
Jacqueline Womack, Financial Aid Advisor; AAS, Mohawk Valley Community College
Richard Woolheater, Building Maintenance Helper
John Wosnjuk, Mail Courier
David Yahnke, Placement Testing Coordinator; AAS, Mohawk Valley Community College; BPS, SUNY Empire State College; MS, SUNY Polytechnic Institute
David Yevich, Building Maintenance Helper
Daniel Yoxall, Building Maintenance Supervisor. Awards: 2015 Pride of the Hawk, 2015 Pride of the Hawk
Jerad Zarnoch, Senior Building Maintenance Mechanic. Award: 2017 Excellence in Classified Services
Rosemary Zarnoch, Data Processing Clerk
Thomas Zenon, Veteran Education Coordinator; BA, Citadel Military College (SC)
Sharon Kane Zohne, Project Coordinator; AAS, Mohawk Valley Community College; BFA, Rochester Institute of Technology.

Awards: 2004 Excellence in Professional Service, 2005 SUNY Chancellor's Award for Excellence in Professional Service
Stephen Zuchowski, Building Maintenance Helper

Please report errors to the Human Resources Department.