



College Catalog

2020 - 2021

catalog.mvcc.edu

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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
Alumni Office	Utica 315-792-5555
Athletics	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 & 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 315-792-5500
Residence Life and Housing	Utica 315-792-5657
Records and Registration	Utica 315-792-5336
	Rome 315-334-7709
Testing Center	Utica 315-731-5802

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 2021-2022 programs and services at the time of printing. Information contained herein is accurate as of June 1, 2021 (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

- Mohawk Valley Community College is accredited by the [Middle States Commission on Higher Education](http://www.msche.org), 3624 Market St., Philadelphia, Penn. Phone: 267-284-5000. MVCC's accreditation status was reaffirmed in June 2018. For additional information on MVCC's MSCHE accreditation status, please visit the following link: <https://www.msche.org/institution/0351>.
- The Civil, Mechanical, and Electrical Engineering Technology curricula are accredited by the Engineering Technology Accreditation Commission of ABET (website: www.abet.org).
- The Associate in Applied Science (AAS) Nursing Program at Mohawk Valley Community College at the Utica Campus, located in Utica, New York, is accredited by: Accreditation Commission for Education in Nursing (ACEN) (3390 Peachtree Road, NE, Suite 1400, Atlanta, Georgia 30326. Telephone: 404-975-5000, fax: 404-975-5020, website: www.acenursing.org, email: info@acenursing.org). The most recent accreditation decision made by the ACEN Board of Commissioners for the Associate in Applied Science (A.A.S.) degree nursing program is Continuing Accreditation. The nursing program is registered by the [New York State Education Department, Office of the Professions](http://www.nysed.gov).
- The Health Information Technology AAS degree program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM) (200 East Randolph Street, Suite 5100, Chicago, IL 60601. Telephone: 312-235-3255, website: www.cahiim.org).
- The Radiologic Technology AAS degree 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.jrcert.org).
- The Respiratory Care AAS degree program is fully accredited by the Commission on Accreditation for Respiratory Care (CoARC) (Telephone: 817-283-2835, website: www.coarc.com). Outcomes Data for programs accredited by the CoARC are available on the [Programmatic Outcomes Data page](#) at the CoARC website (search for program #200446).
- The Surgical Technology AAS degree program is accredited by the [Accrediting Bureau of Health Education Schools \(ABHES\)](http://www.abhes.org) (7777 Leesburg Pike, Suite 314 North, Falls Church, VA 22043. Telephone: 571-282-0057, fax: 703-917-4109, website: www.abhes.org).
- The Dual Credit Program is accredited by the National Alliance of Concurrent Enrollment Partnerships (NACEP). (PO Box 578, Chapel Hill, NC 27514. Website: www.nacep.org).

A Message from the President

To our students:

Welcome 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 75 years, and we are perpetually looking forward. In a rapidly changing world, we recognize the importance of staying ahead of economic and societal trends, and keeping our programs current and our classes relevant to best prepare you for what the future holds.

Every day, we pursue our mission of providing accessible, high-quality educational pathways and enrichment opportunities with support services in an inclusive environment. 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 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. Best wishes for a productive year, and thank you for choosing Mohawk Valley Community College.

Randall J. VanWagoner, Ph.D.

President



Academic Calendar 2021-2022

Fall 2021

Aug. 23	Payment due and schedule cancellation
Aug. 26	New Student Convocation
Aug. 27	Last day for 100% refund (15-week term/Term A)
Aug. 30	First day of instruction (15-week term/Term A)
Sept. 3	Last day for 75% refund (15-week term)
	Last day for 25% refund (Term A)
Sept. 6	Labor Day (College closed)
Sept. 10	Last day for 50% refund (15-week term)
Sept. 17	Last day for 25% refund (15-week term)
Oct. 6	Last day to withdraw (Term A)
Oct. 12	Columbus Day (College open, classes in session)
Oct. 18	Midterm of semester (15-week term)
	Last day of instruction (Term A)
	Last day for 100% refund (Term B)
Oct. 19	First day of instruction (Term B)
Oct. 21	Midterm grades due by noon (15-week term)
Oct. 22	Final grades due by noon (Term A)
Oct. 25	Last day for 25% refund (Term B)
Nov. 8	Priority Registration Spring 2022 (SIRS) starts
Nov. 9	Last day to withdraw (15-week term)
Nov. 11	Spring 2022 Registration open to all students
Nov. 16	Advising Day
Nov. 23	Last day to withdraw (Term B)
Nov. 24	College is open, classes not in session
Nov. 25-26	Thanksgiving recess (College closed)
Dec. 10	Last day of instruction (15-week term/Term B)

Dec. 13-15	Final exams
Dec. 17	Fall Commencement
	Final grades due by noon (15-week term/Term B)
Dec. 24-Jan. 3	College closed

Intersession

Dec. 20	First day of instruction
Jan. 12	Last day of instruction

Spring 2022

Jan. 17	Martin Luther King Day (College open, no classes)
Jan. 18	New Student Convocation
Jan. 19	First day of instruction (15-week term)
March 8	Midterm of semester
March 14-18	Spring Break
April 20	Advising Day (No classes)
May 4	Last day of instruction (15-week term)
May 5-6	Study Days
May 9-11	Final exams
May 13	Spring Commencement
May 16	Final grades due at noon (15-week term/Term B)

Summer 2022

Term 1 (May 23-Aug. 16, 2022)	
May 23	First day of instruction
May 30	Memorial Day (College closed)
July 4	Independence Day (College closed)
Aug. 16	Last day of instruction
Aug. 18	Grades due at noon

Important information for MVCC applicants and students

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.

About Mohawk Valley Community College

General Information

Mohawk Valley Community College, a unit of the 64-campus State University of New York, is a publicly supported community college offering 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, healthcare, and many other fields, and for further college study. Shorter length certificate programs and micro-credentials also are offered. MVCC currently enrolls approximately 6,500 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. They 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.

The majority of this information is contained in this catalog or in the College's online [Student Handbook](#). 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.

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 next 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 a 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, 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:

Francis A. Wilcox Hall

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 an art gallery, a 120-seat lecture hall, “smart” classrooms, computer laboratories, Office of Accessibility Resources, College-Community Connection (C3), a food pantry, 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. The Center for Corporate & Community Education (CCED), offices for Public Safety, high school services, Human Resources, and Information Technology 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, Holistic Student Support Office (Advisement), high school services, Business Office, Foundation Scholarships, Financial Aid, Veterans Education Services, 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, Career Services, Counseling, and the Student Health and Wellness 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 and aerobic and strength 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 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 up to 450 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, and consists of the John D. Plumley Science and Technology Complex. MVCC also operates an Aviation Training Center located nearby Griffiss International Airport. 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 services including admissions, advisement, financial aid, counseling, disability accommodations, payments, student activities, and more.

John D. Plumley Science and Technology 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, campus cupboard, and College Store. Hospitality and Culinary Arts students prepare for their futures in the building’s instructional kitchens, baking lab, and 100-seat restaurant-style dining room. Surgical Technology students can experience hands-on learning in a fully equipped laboratory. 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

As the community’s college, MVCC is committed to equity and student success by providing accessible, high-quality educational pathways and enrichment opportunities with support services in an inclusive environment.

Vision Statement

Transforming lives through learning.

Values and Credo Statement

MVCC holds the values of civility, equity, and community in the highest regard. To that end, members of the MVCC community will:

- Model the Way
- Inspire Confidence
- Encourage Excellence
- Embrace Community

Each member of the MVCC community commits to:

1. Making every interaction an opportunity to engage in building trust and creating positive relationships.
2. Recognizing that everyone deserves the courtesy of their respect and undivided attention.
3. Fostering a culture of inclusion and excellence.
4. Making teamwork and clear communication essential to our success.

And strives to:

1. Be the best version of their self every day and assist anyone who needs help.
2. Listen to others and respond with truth and tactful candor.
3. Communicate effectively and give others the benefit of the doubt.
4. Foster an environment of shared responsibility by holding themselves and others accountable for our individual and collective work.

Student Retention

Retention rates vary from year to year. Typically between 75% and 80% 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 55% to 60% of that freshman class returns the following Fall.

Notice of Anti-Discrimination and Anti-Harassment Policy

Mohawk Valley Community College 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. Policy and procedure: www.mvcc.edu/title-ix/policies/anti-harassment-discrimination.php.

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.)

All College Statements

See all of the College's statements at this link: www.mvcc.edu/governance/statements.

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 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:

1. produce coherent texts meeting standards appropriate to academic programs.
2. demonstrate the ability to understand and use the language of their academic programs.
3. effectively use the oral discourse of the academic program.
4. 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:

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

III. Interact effectively within a diverse society.

Students will:

1. demonstrate an awareness of and respect for the differences among individuals and for other cultures in the global society.
2. demonstrate an understanding of how different cultures interact in the global society.
3. 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:

1. express mathematical information symbolically, visually, numerically, and verbally.
2. use mathematical processes to solve quantitative problems and draw reasonable conclusions.
3. 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:

1. use traditional and contemporary information technology.
2. 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 MVCC and/or 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 international.admissions@mvcc.edu.

Services:

We recommend that all potential applicants schedule 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, program information sessions
- 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. The open admissions format does not require that applicants compete for space based on past performance, superior grades, or standardized test scores. We provide educational services to all who demonstrate that they can benefit from them.

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 coursework 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 successful completion of an education “substantially equivalent” to a four-year high school program given to students graduating from the applicant’s respective home district high school in pursuant to the requirements of section 100.10 of the Regulations of the Commissioner of Education. If available, certification must be in the form of an original letter from the superintendent of the home district where the equivalent education has taken place. The letter must include the name of the applicant, name of the home school, and how the education was considered substantially 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, applicants will need to apply under the Special Admission 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 GED or TASC Test 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 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 student support advisors 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 Holistic Student Support Center (Advisement), the Rome Student Services 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, which will update the student record to a high school equivalent graduate status.

International Student Admission

Students who are not citizens of the U.S. and require a student non-immigrant visa (F1, M1, or J1) to attend college in the U.S., can apply as an international student. In order to be accepted, students must have completed the equivalent of a U.S. high school education. As part of the visa process, international students must show their intention to return to their home country after completing their U.S. studies and their ability to pay for a year of living and studying at MVCC.

Please contact the Coordinator of International Student Services at +1-315-792-5350 or international.admissions@mvcc.edu for additional information, and guidance through the immigration/visa process.

Non-High School Graduates, No high school equivalency, Home-Schooled students who do not possess a superintendent equivalent education letter or do not meet criteria to be considered a high school graduate, 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 immigration form for an academic degree program. Proof of English proficiency may be demonstrated with: MVCC's free online writing sample, a TOEFL, Duolingo, iTEP, 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, they will automatically be issued an I-20 for Language Training.

For admittance into an academic program with a standardized test, scores needed are TOEFL 500, TOEFL CBT 173, iBT 61, Duolingo 90, or IELTS 5.5. Students can 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 demonstrates their English level is appropriate for Associate level academic courses.

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.

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% of all credits completed through the opportunities described below to complete MVCC degree or certificate requirements for graduation. 25% of a student's graduation credits must be taken at MVCC. The 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](#))

AP Course Credits

Applicants completing Advanced Placement Course work in high school may be eligible for MVCC credit according to the chart below. 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.

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
Chemistry	3	CH141
	5	CH141, CH142
Chinese & Culture	3	FL111
	4	FL111, FL112
Comparative Government & Politics	3	PS202
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
Music Theory	4	HU183
	5	HU183, HU184
Physics 1	3	PH151
Physics 2	3	PH152
Physics B	3	PH151
	5	PH151, PH152
Physics Electricity & Magnetism	C: 3	PH261
Physics Mechanics	C: 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
Art: 3D Design	3	FA108
Studio Art: Drawing	3	FA103
U.S. History	3	HI111
	4	HI111, HI112
World History	3	HI101
	4	HI101, HI102

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 advanced 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 Academic 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. For information on CLEP testing at MVCC, please visit www.mvcc.edu/placement-testing.
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 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 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 Dean. Refer to the [Tuition and Fee Schedule](#) 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 Academic Dean or their designee. Students who are new to MVCC, and have attended other colleges, must request that an official transcript from those institutions be sent to the Admissions Office to complete their application. If a student attempts credit at another institution while enrolled at MVCC, they must send an official transcript from the other institution to the MVCC 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. Grades of "P" or "S" are acceptable only for Physical Education courses and for College Foundations 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 calculating 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% of required program credits must be completed at MVCC to fulfill the residency requirement. More information can be obtained in the Office of Records and Registration.

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 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 Dean or their designee following the recommendations by ACE.

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
Text: 315-888-5602

email: admissions@mvcc.edu
International Admissions
Mohawk Valley Community College
1101 Sherman Drive
Utica, NY 13501-5394
315-792-5350
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

Applications and Processing

How to apply to MVCC

To access any of the MVCC applications available from our website, both Domestic and International, applicants can go to www.mvcc.edu/apply.

Hard copy applications for Domestic (non-international) students are available from the Admissions Office, the Rome Campus Student Services Office, and Counseling/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/TASC 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/TASC completion date, as appropriate.

Formerly Matriculated MVCC Students

Contact the Utica Campus Holistic Student Support Office, 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 acceptance once the completed application is reviewed. Notifications begin on or around:

- Fall (September) semester — Nov. 1 prior to requested term
- Spring (January) semester — Oct. 1 prior to requested term
- Summer (May) semester — 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 acknowledgment 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.

Terminology Students Should Know

Important Academic Terminology

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 School Dean.

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 MVCC, applicants will begin to receive a number of communications from the College. Those that will be delivered in letter and/or email format will include notification of your MVCC Student Number (M 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.

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% 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 315-731-5719.

Advisement

Each matriculated student is assigned a student support advisor with expertise in the student's degree or certificate program. Student support advisors are MVCC staff members who work in the [Holistic Student Support Office](#); they can be contacted during their posted office hours or by telephone or email. Student support 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 student support advisor regularly, and especially before priority registration each term.

Adding a Class

Students can add classes to an existing schedule by using their Student Information and Registration System (SIRS) account prior to the start of classes in any semester. Adding a class after the first week must be done with the Office of Records and Registration.

Attendance

There is a direct correlation between student attendance and academic success. Students are expected to make all necessary arrangements to be in attendance and on time for all classes. Faculty will include attendance policies in the course syllabus. Please note that policies may vary from course to course, so it is critical to read the syllabus for each class. Also note that repeated absences may result in failing the course. The State University of New York requires evidence of attendance. Students who fail to satisfy state regulations may be withdrawn from the class and also risk losing financial aid.

Change of Major

Matriculated students wishing to change their program of study should contact their student support advisor. 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 your involvement in college life that does not appear on your academic transcript. Participation in 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 you stand out when you look for a job or transfer to a four-year college. For more information, contact 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. Students can drop classes using the Drop Form prior to the end of the third week of classes with no grade posted on the transcript. Students dropping classes after the third week of classes will have a grade of W assigned to the class. A grade of W will not affect the GPA but will be posted on the transcript. Students should consult the [Academic Calendar](#) for the last day to drop without penalty. Dropping classes may affect:

- Financial aid
- Academic progress
- Athletic eligibility
- Residence hall occupancy
- Veteran's benefits
- Unemployment benefits

Students are encouraged to speak with an appropriate staff member regarding the effect dropping a class may have. Students who "walk away" without officially withdrawing after the census date will not be granted a W grade. Those students will be graded based on the amount of work completed.

Full-Time Registered Student

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

Late Registration

MVCC is committed to the success of each student. All students (new and continuing/returning) are required to schedule and complete payment for all courses before the semester officially opens.

Matriculation and Re-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 summer and intersession.

As long as a student maintains continuous enrollment, the College 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 their student support advisor 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 College 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 under [The Admissions Process](#).

Part-Time Registered Student

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

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.

Release of Student Information

In releasing information about students, MVCC follows the provisions of the Family Educational Rights and Privacy Act (FERPA). A complete statement of the College's policy is contained in the [Student Handbook](#).

Schedule Cancellation

The process of deleting students' schedules from the database. Students who have not made payment by the due date may have their class schedules canceled. 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 canceled up 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 dates.](#)

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.

Senior Citizen Audit

Oneida County residents who are 60 years of age 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 the sciences or culinary classes, as well as fitness center courses.

Auditing students attend classes without participating in testing. There is a grade of AU given but no credit is granted for the course. 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.

Separation

When a student is not profiting from the education being provided by showing satisfactory progress in their chosen field of study or when the College considers a student to be detrimental to its mission, the student may not be permitted to continue enrollment. All students are expected to abide by the [Code of Conduct and Commitment to Civility](#). Failure to do so may result in dismissal. The College reserves the right to be the sole judge in such matters.

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, mailing address and telephone information, email address, and emergency contact information.

- **Academic Records:** Students can view or print an unofficial academic transcript, view midterm or final grades, view account holds, and check degree progress.
- **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 Office.
- **Financial Aid:** Students can read messages, check financial aid eligibility, check award information, or contact the Financial Aid Office.

All enrolled students are also given a Blackboard account. Blackboard is a course management software system that allows students and faculty to access course content and interact in a secure online environment asynchronously. Blackboard is not accessed through SIRS, but rather through the ID and password assigned for the MVCC email account.

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/records-registration/transcripts.php to get the link to request, or type the following URL to get directly into the site: www.credentials-inc.com/tplus/?ALUMTRO002871, where you will enter your order. If you are uncomfortable placing an order this way, you can call Credentials Inc. at 847-716-3005 to request your transcript, but please note there is an additional operator surcharge for placing orders over the phone. 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 their name on a Wait List through SIRS. 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 Office of Holistic Student Support. 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.](#) Students who do not officially withdraw from a course are not eligible for a grade of W. The instructor will grade such students on the basis of the student's fulfillment of course requirements. The Vice President for Learning and Academic Affairs may waive the above under special circumstances (discipline, illness, etc.). Academic and Financial Aid advice is strongly suggested prior to withdrawal from a course.

Assessment and Testing Center

Testing Center

The MVCC Testing Center provides examinations, outcome interpretation, and testing support.

Assessment and Placement Testing

MVCC wants every student to be successful at the College. To ensure appropriate course placement, the prior learning of admitted students will be assessed to determine their mathematics skills and English reading and writing proficiency. The assessment is not used for the purpose of determining an applicant's eligibility for admission to the College. Instead, it is used to determine whether the student has met required prerequisites and to identify if additional academic support is needed. The assessment will include a review of high school or college transcripts and, as needed, an assessment test. Additional academic support may include enrolling in an Integrated Learning Support section or remedial coursework. 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) may also be 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 sessions, dates, times, and locations for each semester is available on the [Testing Center webpage](#). All questions concerning placement testing should be directed to our Placement Testing Coordinator, Room 104A, Payne Hall, Utica Campus, telephone 315-792-5458.

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 with a cumulative high school GPA of 83 or higher is exempt from the math placement test within a 10-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.
- 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; Civil, Mechanical, and Electrical Technologies; Business Administration; selected Liberal Arts programs; and Nutrition and Dietetics. For the most up-to-date list, visit www.mvcc.edu/placement-testing/exemption-policy.php.
- For the Airframe and Powerplant Certificate program, a student is required to take a placement test unless they are passing a 100-level English/Math course with a C or better.
- 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. Students are automatically placed in EN101 or EN110 as prescribed by their program.
- A student with a cumulative high school GPA of 85 or higher is exempt from the Reading/Writing placement test if the student is going to enroll in EN101.
- 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.)
- Students who have any level of ESL on an academic transcript will be required to take the ACCUPLACER writing and reading portion of the placement test. Exemptions may be made for qualifying AP, ACT, or SAT scores, dual enrollment, or previous college credit. A high school GPA will not be a standard criteria for exemption from the reading and writing 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

TASC Test Assessing Secondary Completion™ 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. Students are able to take the TASC Test at the [MVCC Testing Center](#).

The College also offers classes at the [Education Outreach Center](#) to help students prepare for the TASC Test. There are four classes offered that are 90 hours each: science, social studies, English, and math. 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-Level Examination Program (CLEP)

MVCC offers College-Level Examination Program (CLEP) testing at its Utica Campus, providing individuals the opportunity to earn college credit by demonstrating prior knowledge of introductory-level college course content.

Prior learning of course material could have taken place through advanced high school courses, online courseware or textbooks, non-credit courses, or on-the-job training. There are 34 different CLEP exams covering introductory college course material.

CLEP exams are offered year-round at all official testing sites, including MVCC's Testing Center, located in the Student Service Center in Payne Hall at the College's Utica Campus. The exams take approximately 90 to 120 minutes, and scores are available immediately after exam completion with the exception of the College Composition exam. Please note that there is a non-refundable \$35 proctoring fee for anyone who is not a current MVCC student.

For more information on what CLEP exams and scores are accepted at MVCC, and for instructions on scheduling a CLEP exam at MVCC, visit www.mvcc.edu/placement-testing/clep-testing.php.

Accommodative Testing

Each semester, MVCC's Office of Accessibility Resources and Testing Center oversee several hundred hours of accommodative testing. This service is provided to eligible students with a wide variety of disabilities, including visual impairments, learning disabilities, and some types of emotional, orthopedic and health-related disabilities. Its purpose is to eliminate or diminish any negative impact a person's disability might have on the testing process by providing extended time, readers, scribes, or other assistance depending on the nature of the disability.

In order to receive testing accommodations, students must provide the [Office of Accessibility Resources](#) with written information that documents that the requested modification is necessary and must follow all established testing procedures. Procedures for scheduling the MVCC Placement Test with accommodations are included on the [Testing Center scheduling webpage](#).

College Resources

College Libraries

The MVCC Libraries on the Utica and Rome campuses provide students, faculty, and staff with resources and services which promote information literacy and support the teaching, learning, and recreational interests of the College community.

Librarians provide research assistance via online chat, text, phone, email, virtual conferencing software, and in-person consultations. Librarians also provide individual and group instruction designed to help students learn to conduct research effectively and develop information literacy skills.

Online resources for coursework and research through the Libraries webpage:

- Collection holdings of books, audiobooks, DVDs, periodicals, and course reserve materials can be viewed through the Libraries' online search (https://suny-mvc.primo.exlibrisgroup.com/discovery/search?vid=01SUNY_MVC:01SUNY_MVC&lang=en). Patrons can also view their library accounts to see items currently borrowed, requested, and overdue.
- Over 120 research databases are accessible to current students, staff, and faculty both on- and off-campus (<https://mvcc.libguides.com/az.php>). These databases provide access to 94,880 unique electronic periodical titles, more than 364,000 electronic books, and more than 45,000 audiovisual resources.

- Access to research guides, citation guides, video tutorials, and frequently asked questions:
 - Research guides (<https://mvcc.libguides.com/index.php?b=s>)
 - Citation guides (<https://www.mvcc.edu/student-success/writinghelp/citations.php>)
 - Video tutorials (<https://www.mvcc.edu/library/videos.php>)
 - Frequently asked questions (<https://askmvcclibrary.mvcc.edu>)
- Interlibrary loan, to request items not held by MVCC Libraries
- Services specifically for faculty, including library instruction, research assignment development, and materials requests (<https://mvcc.libguides.com/faculty>)

Available inside the Utica and Rome Campus Libraries:

- The Libraries on the Utica and Rome campuses have a combined collection of around 64,000 print volumes, 3,000 audiovisual items, and 350 print periodical titles
- Wi-Fi access
- Computers with internet access and Microsoft Office Suite
- Black-and-white printers (free)
- Copy machine (10 cents per page)
- Scanner (free)
- Study/Zoom rooms
- Classroom for library instruction
- Course reserves, where faculty may elect to place copies of required and supplementary course materials for students to use inside the library
- Book return boxes located outside of each library

Additionally available at Utica Campus Library:

- Microfilm/microfiche reader and printer

- Fax machine
- Study carrels

Hours:

The MVCC Libraries are open throughout the academic semesters and operate on an abbreviated schedule during vacation periods and summer months. Current hours are updated on the [Libraries webpage](#).

Contact the Libraries

Utica Campus Library

- Payne Hall, Room 200
- Circulation Desk: 315-792-5408
- Reference Desk: 315-792-5561
- Email: library@mvcc.edu
- Fax: 315-792-5666

Rome Campus Library

- Plumley Complex, Room 101
- Email: library@mvcc.edu
- Circulation and Reference Desk: 315-334-7728

Computer Labs

Utica Campus

The College maintains PC and Mac labs on its Utica Campus for specific course use and open-use computers in the Library and the Learning Commons.

Each lab has at least one laser printer. While all PC labs support the latest Microsoft Office Suite, there are many specialized applications, such as AutoCAD, Solidworks, Adobe Creative Suite, 3D Studio Max, and Microsoft Visual Basic, available for specific departmental programs in designated labs.

The College provides network connectivity in classrooms and many have been converted to “Smart Classrooms” where instructors can employ various multimedia presentations. MVCC 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.

Rome Campus

Similar to the Utica Campus, the Rome Campus maintains PC labs that include an open-use lab and labs that provide software for specific courses. Labs have at least one laser printer. Students on the Rome Campus have the same access to the internet as those at the Utica Campus.

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:

Website

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

Learning Commons

- **Utica Campus:** Francis A. Wilcox Hall 129, 315-792-5517
- **Rome Campus:** Plumley Complex, the Library Wing, 315-334-7733

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

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. Computer workstations, scanners, and printers add to the wealth of resources in the Learning Commons.

Visit www.mvcc.edu/learning-commons for a complete listing of support services.

Distance Learning

MVCC offers an array of online courses and is authorized to offer distance education in the following states:

- Alabama
- Arizona
- Colorado
- Connecticut
- Delaware
- Hawaii
- Idaho
- Indiana
- Maine
- Michigan
- Mississippi
- Montana
- Nebraska
- New Hampshire
- North Carolina
- South Dakota
- Texas
- Virginia
- Vermont
- Washington
- Wisconsin

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 AAS 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 AS degree program requires a minimum of one-half; and an AA program requires a minimum of three-quarters. Certificate and AOS 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 AAS, AS, and AA 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.](#))

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 toward 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 AA and AS 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 indicate all courses at MVCC that have General Education status. See the [General Education Quick Reference Guide.](#)

General Education Quick Reference Guide

**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	AL101	EN101
MA110	BI105	BM101	HI111	HI102	GE101	EN148	GC244	FL101	EN105
MA115	BI141	GE101	HI112	HI103	HI101	EN198	HU183	FL102	EN106
MA121	BI216	PS101		HI104	HU227	EN240	HU184	FL111	EN102
MA125	CH101	PY101		HU204	HU228	EN241	HU187	FL112	EN110
MA131	CH111	SO101		HU205	SO207	EN248	HU188	FL141	EN147
MA139	CH120	BM110		HU290		EN249	HU204	FL142	EN150
MA150	CH131	BM115		HU295		EN255	HU205	FL151	EN153
MA151	CH141	CI104				EN256	HU210	FL152	EN196
MA172	GL100	ED205				EN265	HU292	FL173	
MA122	GL101	IS100				EN271	MD161	FL174	
MA140	GL102	IS101				EN272	PT205	FL300	
MA152	PH106	PS202				EN280	TH193	FR101	
MA253	PH112	PS203				EN281	TH195	FR102	
MA260	PH131	PS204				GC244		FR191	
MA275	PH141	PS205				GC245		FR192	
MA280	PH145	PY201				HU186		FR201	
	PH151	PY202				HU187		FR202	
	PH261	PY203				HU188		FR301	
	WE101	PY204				HU204		FR302	
	BI110	PY205				HU205		GR101	
	BI142	PY206				HU210		GR102	
	BI201	PY207				HU289		GR201	
	BI202	PY208				HU290		GR202	
	BI217	PY212				HU291		GR301	
	CH112	SO202				HU292		GR302	
	CH115	SO203				HU295		IT101	
	CH142	SO204				HU296		IT102	
	CH247	SO205				PT205		IT191	
	CH248	SO206						IT192	
	GL203	SS218						IT201	
	PH113							IT202	
	PH142							IT301	
	PH152							IT302	
	PH262							SP101	
								SP102	
								SP191	
								SP192	
								SP201	
								SP202	
								SP301	
								SP302	

*See appropriate Academic Dean for SUNY Waiver procedure.

General Ed Quick Reference Guide (Continued)

General Education Course List

Course	SUNY Area	Course	SUNY Area	Course	SUNY Area	Course	SUNY Area
AC131	AH	EN280	HU	HU227	OW	PS203	SS
AL101	FL	EN281	HU	HU228	OW	PS204	SS
AN101	SS	FL101	FL	HU289	HU	PS205	SS
AN102	OW	FL102	FL	HU290	HU, WC	PT205	A, HU
BI103	NS	FL111	FL	HU291	HU	PY101	SS
BI105	NS	FL112	FL	HU292	A, HU	PY201	SS
BI141	NS	FL141	FL	HU295	HU, WC	PY202	SS
BI110	NS	FL142	FL	HU296	HU	PY203	SS
BI142	NS	FL151	FL	IS100	SS	PY204	SS
BI201	NS	FL152	FL	IS101	SS	PY205	SS
BI202	NS	FL173	FL	IT101	FL	PY206	SS
BI216	NS	FL174	FL	IT102	FL	PY207	SS
BI217	SS	FL300	FL	IT191	FL	PY208	SS
BM101	NS	FR101	FL	IT192	FL	PY212	SS
BM110	SS	FR102	FL	IT201	FL	SO101	SS
BM115	NS	FR191	FL	IT202	FL	SO202	SS
CH101	NS	FR192	FL	IT301	FL	SO203	SS
CH111	NS	FR201	FL	IT302	FL	SO204	SS
CH112	NS	FR202	FL	MA108	MA	SO205	SS
CH115	NS	FR301	FL	MA110	MA	SO206	SS
CH120	NS	FR302	FL	MA115	MA	SO207	OW
CH131	NS	GC244	A, HU	MA121	MA	SP101	FL
CH141	NS	GC245	HU	MA122	MA	SP102	FL
CH142	NS	GE101	OW, SS	MA125	MA	SP191	FL
CH247	NS	GL100	NS	MA131	MA	SP192	FL
CH248	SS	GL101	NS	MA139	MA	SP201	FL
CI104	SS	GL102	NS	MA140	MA	SP202	FL
ED205	BC	GL203	NS	MA150	MA	SP301	FL
EN101	BC, HU	GR101	FL	MA151	MA	SP302	FL
EN102	BC	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	HU	GR302	FL	MA275	MA		
EN148	BC	HI101	OW, WC	MA280	MA		
EN150	BC	HI102	WC	MD 161	A		
EN153	BC	HI103	WC	PH106*	NS		
EN196	A	HI104	WC	PH112	NS		
EN197	HU	HI111	AH	PH113	NS		
EN198	HU	HI112	AH	PH131	NS		
EN240	HU	HU183	A	PH141	NS		
EN241	HU	HU184	A	PH142	NS		
EN248	HU	HU186	HU	PH145	NS		
EN249	HU	HU187	A, HU	PH151	NS		
EN255	HU	HU188	A, HU	PH152	NS		
EN256	HU	HU204	A, HU, WC	PH261	NS		
EN265	HU	HU205	A, HU, WC	PH262	NS		
EN271	HU	HU210	A, HU	PS101	SS		
EN272	HU			PS202	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

Academic Credentials

MVCC offers two-year associate degree programs designed for career and transfer opportunities, and one-year certificate programs and shorter-term micro-credentials that are career-oriented.

Associate degrees (AA, AS, AAS, AOS)

Associate degrees are undergraduate degrees that can be completed in two years and generally require students to complete a minimum of 60 semester credit hours. Students interested in transferring to a four-year institution should confer with their Student Support Advisor or Faculty Advisor to determine which degree option is most appropriate.

1. **AA and AS degrees:** The two most common types of transfer associate degrees are the Associate of Arts (AA), a liberal arts degree, and the Associate of Science (AS), a liberal arts degree with a greater focus on math and sciences. Students who complete an AA or AS are guaranteed transfer of all credits upon transfer to a SUNY four-year transfer partner and there are many agreements with non-SUNY schools.
2. **AAS and AOS:** Occupational associate degrees are designed to help students acquire specific knowledge and skills in preparation for a particular career path. These associate degrees include the Associate of Applied Science (AAS), Associate of Occupational Studies (AOS). Unlike an AA or AS, the AAS and AOS are not transfer degrees and four-year transfer partners are not required to accept all credits from an AAS or AOS degree.

Certificates (Cert)

Certificates are designed for a student to complete a certain amount of training. Most certificate programs prepare students for technical or skills-based jobs or career advancement in one year or less.

Micro-credentials

Micro-credentials are groups of three to five courses that can be taken as a standalone program or can eventually be stacked to earn a degree or certificate. They are designed to help students quickly develop relevant skills to prepare them for entry-level employment or per-diem work, and can help those currently employed gain additional training to advance their career. See micro-credentials offered by MVCC at www.mvcc.edu/micro-credentials/index.php.

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” or “Withdrawal from a Course” under [Terminology Students Should Know](#).

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

A grade of AU is assigned for audited courses 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 a student support advisor soon after midterm grades are posted to discuss progress.

Final Grades

Final grades can be viewed using 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 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 appropriate documentation to support the request. For Academic Complaints, see the online [Student Handbook](#).

GPA Calculation

The overall GPA is calculated by dividing the total number of quality points earned by the total number of GPA hours. A = 4.00 quality points, B = 3.00 quality points, C = 2.00 quality points, D = 1.00 quality points, and F = 0.00 quality points. A grade of "A" (A = 4.00) earned in a three-credit course would be $4.00 \times 3 = 12.00$ quality points in all. MVCC GPA is calculated by truncating the numbers to two decimals and is NOT rounded up.

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 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 TASC/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.
- Residency Requirement: A minimum of 25% 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. A degree may be certified when all other program requirements are met, but no diploma or transcripts will be released until all financial holds are removed.
- 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 College Foundations Seminar (CF100); it is suggested this is completed within the first 15 hours of instruction. This requirement may be waived for transfer students with 30 hours or more of transfer credit.
- A student must have completed at least 70% of the total credits in their degree program or 50% of their certificate program to submit a Graduation Review Request making them an official graduation candidate. Any exceptions must be approved by the Dean.
- Commencement ceremonies are held at the end of the Spring and Fall semesters (May and December). Students planning to graduate in the Spring, Summer, or Fall semesters should submit a Graduation Review Request to the Registrar by the published deadlines. Graduation Review Requests are available at the Office of Records and Registration, or online in your SIRS account and at www.mvcc.edu/records-registration/pdf/graduation-review-request.pdf. Attending the Commencement ceremony does NOT guarantee that you will graduate. Check with your Dean to be sure you have completed the degree requirements. If you do not satisfy all degree requirements, you should complete a new Graduation Review Request for 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 2 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 2-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.

Degree Works

Together, students and their academic advisors track academic progress and requirements for graduation using Degree Works. 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 an MVCC 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, the International Honor Society for the Two-Year College, is the largest honor society in American higher education. The mission of Phi Theta Kappa is to recognize academic achievement of college students and to provide opportunities for them to grow as scholars and leaders. 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 a degree program. Chapter activities offer opportunities for personal and professional growth and development through participation in honors, leadership, service, and fellowship programming. More information at www.mvcc.edu/ptk.

Honors Program

The Honors Program at MVCC strives to motivate exceptional students in all fields of study to develop to their fullest potential. The program enriches 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 "Graduate with Distinction" title, 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;
- An SAT score of 1240 or higher (or comparable ACT score)
- Top 10% 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.

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 collaboration between The Arc, Oneida-Lewis Chapter, and MVCC offering a two-year, non-degree, non-credit vocational program at both Utica and Rome campuses for young adults with intellectual and developmental disabilities. The goal of the program is to provide the training necessary for students to obtain employment at the time of graduation while enjoying life on a college campus. For more information, call the CollegeWorks office at 315-792-5465.

Cross-Registration Opportunities

MVCC matriculated students may cross-register at another college. There are two agreements at MVCC:

Mohawk Valley College Consortium

The Mohawk Valley College Consortium allows full-time matriculated students to take one course for either Fall or Spring at Utica College or Hamilton College. Students must be full-time taking 12 credit hours at MVCC to take advantage of this consortium. Students must pass the course with a grade of C or better to get credit for the course. Forms are available from the Office of Records and Registration. The form to use is a multi-part form; the Dean needs to approve the course and the director of Records and Registration/Registrar (or designee) must verify enrollment and sign the form. In addition, students using financial aid can receive aid through the home institution, and cannot receive financial aid through the host institution. The form is then presented to the Registrar at the host institution prior to registering for the course. MVCC and other participating institutions reserve the right to deny approval to take a course under this agreement.

SUNY-wide Cross-Registration (64 campuses)

MVCC supports students who wish to cross-register for a course at another SUNY college. Please reference the Cross-Registration Policy at www.suny.edu or at www.mvcc.edu/records-registration/cross-registration.php.

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 regrading 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 offices 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 ..." Of course, 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;
- Paraphrasing another person's ideas, opinions, or theories from books, articles, web sites, etc., without identifying and crediting sources and/or "cutting & 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;
- Copying another student's essay test answers;
- 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 other 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, etc. 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, electronic mail 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 Integrity and Standards

Academic Computer Lab 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 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.

Academic Research Policy

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. As the review process may take some time, you should submit your proposal at least a semester ahead as stated in the requirements. For more details about timelines and requirements, visit www.mvcc.edu/institutional-effectiveness/research-review/index.php.

Academic Standards

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 grade point average (GPA) and total number of hours** according to the following table:

Total Attempted Hours	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

1. The first review will occur at the end of the matriculated student's first semester (Fall, Spring) or term (Summer).
2. After the first review, the student's grade point average (GPA) will be reviewed each semester or term that the student is enrolled.
3. The student will be assigned one of the following academic standings after each review:
 - a. Good academic standing
 - b. Intervention
 - c. Probation
 - d. Dismissal

4. A student who does not meet the "Minimum Progress" cumulative grade point average (as indicated on the table above) will be placed on academic intervention for the next semester.
5. 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 grade point average for the intervention semester or term.
6. 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).
7. A student is not excused from academic intervention, probation or dismissal by changing the program of study.
8. A student placed on academic dismissal loses her/his matriculated status.
9. 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 9 hours. (Student is not eligible for Financial Aid.)
10. If a student is re-matriculated after an academic dismissal, she/he will be placed automatically on academic probation.
11. 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 School or Advisement Center's recommendation.
12. 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.

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 be 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 to participate in any examination, study or work requirements 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 from 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 registration, classes, examinations, study 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 such institution of higher education is located for the enforcement of his or her rights under this section.
 - a. 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 such equivalent opportunity.

7. 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 a 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

Expenses

These figures are accurate as of May 17, 2021, and may have changed since that date.

Full-Time Expenses

Full-time tuition is \$4,594 per year for New York State residents with a valid Certificate of Residence, at the rate of \$2,297 for each regular semester. Tuition rates are subject to final approval by SUNY. Annual tuition for out-of-state residents, and students unable to provide a valid Certificate of Residence from their home county, is \$6,892.

Expenses for Part-time Study

Tuition is \$191 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 \$286.50 per credit hour. Part-time students pay an activity fee of \$27 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 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 [Business Office webpage](#) 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](#), which can be downloaded from the [Business Office webpage](#) 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 their application for a Certificate of Residence pursuant to Education Law, Section 6305, the student will be required to submit a [Certificate of Residence Form](#) from each of the two or more counties to the MVCC Business Office in accordance with the above instructions.

Room and Board 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.

Room Costs (All costs are per semester)*	
Double	\$3,590
Single	\$3,590 (all students pay double room rate for single room during COVID-19)
Room cost includes all utilities.	
Meal Plan: \$1,988	
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.	
* Subject to modification based on COVID-19-related State and County Guidelines and minimal annual increase.	

Payment

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 has teamed with Nelnet Campus Commerce to enable students to budget educational expenses and use their checking account, savings account, or credit card to set up an automatic semester payment plan. Nelnet Payment Plans are only available for Fall and Spring semester tuition, fees, residence hall, and meal plan costs. Payments are due on the 5th of each month, and there is a \$35 nonrefundable enrollment fee due with the initial payment. Enrollment information is available on the [Business Office webpage](#).
- **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.](#)

Tuition and Fee Schedule

Approximate Costs Per Semester
(as of May 17, 2021)

For Full-Time Students – Subject to Change

(Does not include room, board, travel, or personal expenses)	
Tuition (full-time, NY residents – per semester)	\$2,297
Tuition (out-of-state, student with no certificate of residence)	\$3,445.50
Books, Supplies, and Equipment	\$750
Student Activity fee (full-time, required)	\$155
Student Activity fee (part-time, required)	\$27

Administrative

Credit By Examination/Life Experience per Credit Hour	\$127
Replacement Diploma Fee	\$25
Parking Fines – First Violation	\$5 - \$50
Parking Fine – Handicapped Areas	\$50
Protested/Returned Checks	\$25
Payment Plan Fee (per semester)	\$35
Student Support Fee (part-time/full-time)	\$23/\$45
Transcript Fee	First Copy FREE
Others Paid in Advance	\$10

Instructional

Technology Fee (full-time)	\$232/semester
Technology Fee (part-time)	\$23/per credit hour

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
E-Book Fee for IS101 course	\$110
NCLEX Prep and Curriculum Support 1st Year	\$663
NCLEX Prep and Curriculum Support 2nd Year	\$595
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
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Other Student Fees

AHIMA VLab Coder Fee (HM121)	\$75
EPA Certification Fee (ET123)	\$40
Field Geology Fee	\$300 - \$2,000
Recreation Fee – RE106 only	\$85
Respiratory Lab Fee (RC111, RC112, RC213, RC215)	\$80

Respiratory Lab Fee (RC232) licensing software	\$195
Respiratory Lab Fee (RC234) licensing software	\$110
Respiratory Clinical Practicum (RC233)	\$325
Science Lab Fee	\$25 per course (\$50 cap)
Studio Lab Supply Fee	\$20 - \$60
Study Abroad Fee	\$1,500 - \$5,000
Welding Fee	\$35 per course

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% of the debt plus attorney and court costs. Students have one year from the 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)

Student Services

ID Card Replacement	\$5
ID Proximity Card Replacement	\$10
Health Services Fee — Full-time per semester	\$21
Health Services Fee — Part-time per semester	\$16
International Student Health Insurance (annual)	\$1,966
International Student Health Insurance (annual-Fall only/mandatory)	\$823
International Student Health Insurance (annual-Spring only/mandatory)	\$814
International Student Health Insurance (Spring/Summer/mandatory)	\$1,142
International Student Health Insurance (Summer/mandatory)	\$495
Study Abroad Trip Health Insurance (16-day rate)	\$86

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, and Direct Loans. Title IV Aid is based on student attendance. Not until week 10 (60% 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% 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% of the debt, plus attorney and court fees.

Part-Time Students Only

Tuition with NYS Certificate of Residence	\$191/credit hour
Tuition for non-Oneida County residents	
without Certificate of Residence	\$286.50/credit hour
Student Activity fee (required)	\$27 per credit hour

Military Student Return of Tuition Assistance Policy and Schedule

Military Tuition Assistance (TA) is awarded to a student under the assumption that the student will attend school for the entire period for which the assistance is awarded. When a student withdraws, the student may no longer be eligible for the full amount of TA funds originally awarded. To comply with the Department of Defense (DoD) policy, MVCC will return any unearned TA funds on a prorated basis through at least 60% portion of the period for which the funds were provided. TA funds are earned proportionally during an enrollment period, with unearned funds returned based upon when a student stops attending. If you officially withdraw from the course(s), the amount of unearned TA funds is calculated from the day you withdrew. If you receive a grade of W (administrative withdrawal), you unofficially withdrew and the amount of unearned TA funds is calculated from the date of your last participation in the course(s). In cases where some or all of the Tuition Assistance must be returned to the DoD, the service member will be responsible for all balances on their MVCC student account.

Any unearned Military TA funds will be returned directly to the military service, not to the service member. The calculation of the return may result in the service member owing a balance to MVCC. If the service member withdraws due to military service obligation, MVCC will work with the service member to identify a solution that will not result in a student debt for the returned TA portion.

Withdrawal Liability Chart

Note: The first day of the term is day one.

For Standard 15-Week Terms:

Effective Withdrawal Date	Return of TA %
Prior to start of the term	100%
Week 1-2	100%
Week 3-4	75%
Week 5-8	50%
Week 9	40% (60% of course is completed)
Week 10-15	0%

For Eight-Week Terms:

Effective Withdrawal Date	Return of TA %
Prior to start of the term	100%
Week 1	100%
Week 2	75%
Week 3-4	50%
Week 5	40% (60% of course is completed)
Week 6-8	0%

Veterans Benefits and Transition Act of 2018

In compliance with Section 103 of the Veterans Benefits and Transition Act of 2018, Mohawk Valley Community College will not impose the following penalties to covered individuals* due to the delayed disbursement of funding from the Department of Veteran Affairs:

- Preventing nor delaying the student's enrollment;
- The assessment of late fees;
- The denial of access to any resources available to other students who have satisfied their tuition and fees bills to the institution, including but not limited to classes, libraries, or other institutional facilities;
- Or require the student to secure alternative or additional funding.

To qualify for this provision, such students are required to:

- Produce a Certificate of Eligibility**,
- Provide written request to be certified,
- Provide additional information needed to properly certify the enrollment as required by the Primary School Certifying Official.

This provision ends on the earlier of the following dates:

- The date on which payment from the VA is made to the institution.
- 90 days after the date the institution certified tuition and fees following the receipt of the Certificate of Eligibility.

* Covered individual is defined as any individual who is entitled to educational assistance under Chapter 31, Vocational Rehabilitation and Employment, or Chapter 33, Post 9/11 G.I. Bill®

** Certificate of Eligibility is defined as a Certificate of Eligibility, a Statement of Benefits, a VAF 28-1905, or a Tungsten Network Purchase Order.

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 federal 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 able to choose your own FSA ID username and password. Your FSA ID is confidential and should not be shared. It does not expire.

Step 2: Complete the FAFSA form

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 (<https://studentaid.gov/h/apply-for-aid/afsa>). 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 \(HESC\)](https://www.hesc.ny.gov). 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 on how to establish a HESC PIN and how to complete the online application. The online application can be found on www.tapweb.org. The MVCC New York State school code is 2105.

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

Students with fewer 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, 2021, the current rate on subsidized and unsubsidized loans is 3.734%. Interest rates may change on July 1 of each year. No interest is charged on the subsidized 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 on either loan 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, 2021, is 6.284%. 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.

Total Combined Loan Limits:

Dependent Undergraduate Students:

- **Subsidized Loans:** \$23,000
- **Total Subsidized & Unsubsidized:** \$31,000

Independent Undergraduate Students:

- **Subsidized Loans:** \$23,000
- **Total Subsidized & Unsubsidized:** \$57,500

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

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 at www.studentaid.gov.

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.studentaid.gov

Information on Repaying Your Loan:

Borrower Services: Direct Loan Servicing Center

- 1-800-848-0979
- www.studentaid.gov

Direct Loan Consolidation Center

- 1-800-557-7392
- www.studentaid.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).

Applying for a Parent PLUS Loan

1. Parents, go to www.studentaid.gov.
2. Click on "Apply for a Parent Plus Loan."
3. Complete the application, and at the end see if you are approved or denied.
4. If approved, the parent needs to complete a Master Promissory Note for the Parent Plus Loan. After that is done, the loan will be put on the student's account and the parent will receive a letter in the mail.
 - a. If the parent is denied through the credit check, the student will be offered an additional unsubsidized student loan in the amount of \$4,000 for the year (\$2,000 per semester).

We strongly urge students 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. Students must complete the MPN only once while at MVCC; it will be used for any additional borrowing while they are students at the College.

The MPN can be accessed at www.studentaid.gov, click on "Complete a Loan Agreement (Master Promissory Note)," select the "Subsidized/Unsubsidized" option. Students will need their FSA ID to sign electronically (this is the same FSA ID used to sign the FAFSA electronically). If the student has forgotten their FSA ID, they can go to fsaid.ed.gov and retrieve it.

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 tips and tools regarding loan responsibilities, interest rates, and payment options. Students can access the session at www.studentaid.gov, click "Complete Loan Entrance Counseling," and choose "Entrance Counseling." 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 a student has completed their studies or leaves MVCC, they will be required to receive exit counseling. This gives students an overview of their rights and responsibilities as borrowers, as well as information regarding payment options. After leaving school (or studying less than part-time), students will be notified by the loan servicer. The notification will include payment options, where to send payments, and contact information. For further information, contact the [MVCC Financial Aid Office](#).

New York State Programs

NYS Tuition Assistance Program (TAP)

The New York State 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 a student does not complete the TAP application online, they will be sent a reminder postcard from HESC with instructions. To complete the application online, go to www.tapweb.org. 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 a student will receive the grant; the school must certify the student's eligibility for the award.
- To be eligible for the payment of the award, a student must be in attendance of all classes. In other words, if the student has one late-starting class, the award cannot be paid until the class has started.
- If a student has 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 planning to continue their education at a four-year institution, students should plan carefully so they do not exhaust their TAP eligibility. Check with the Financial Aid Office for additional information.

Part-time TAP: A part-time TAP award may be available if a student has 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 a student is taking fewer than 12 credit hours, but at least six credit hours in a semester. The student 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, along with a copy of a NYS Tax Return. MVCC will determine the student's 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:

- Excelsior Scholarship
- 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.

- **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, or talk to an academic advisor. Federal regulations 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.
- **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% 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)

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

- 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. You can file your appeal online at www.mvcc.edu/financial-aid/SAP.

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 State Financial Aid:

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 during a student’s academic career is allowed for New York State aid.

Federal Standards of Progress

If you have attempted this many credit/remedial hours	Your 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
64	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

New York State Standards of Progress

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	.05	.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 425 scholarships at a value of \$300,000 each year. Awards range from \$100 to full-tuition. All scholarships may be used toward tuition, while others may be used for books, fees, and other costs. Each of the more than 125 scholarships has a unique set of criteria which determines a student's eligibility. With the range of criteria, nearly every student will find one or more scholarships for which they qualify. Scholarships are available to incoming freshmen, second-year students, returning adults, and part-time students.

Students who graduate in the top 10% of their Oneida County high school class qualify for the full-tuition Francis A. Wilcox Memorial Presidential Scholarship (less TAP and up to \$500 of PELL). Additionally, a limited number of students graduating in the top 10% of their class from accredited New York State public or private high schools outside Oneida County may qualify for the Francis A. Wilcox Memorial full-tuition Exceptional Student Scholarship (less TAP and up to \$500 of PELL). Several other scholarships offer full-tuition, less aid, and many offer awards of \$1,000 or more. All prospective students are encouraged to inquire at the Institutional Advancement Office at 315-792-5555, or by visiting 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 the [Tuition and Fee Refund Policies](#) chart 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 Room and Board related costs will appear on the College bill and are due by the official payment date prior to each semester. Residence Hall Room and Board 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.

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 Thomas R. Proctor High School in Utica (grades 9, 10, or 11) or eighth-grade graduates attending Proctor High School in the upcoming September, who are from low-income families, first-generation college students, or at risk of academic failure. Upward Bound provides participants with the tools, fundamental supports, and opportunities to succeed academically, socially, financially, and mentally in today's educational and occupational world. The goal of the program is to increase the rate at which participants complete secondary education and enroll in and graduate from institutions of postsecondary education.

Upward Bound offers extensive services and opportunities, including tutoring and mentoring, cultural enrichment, college and career planning, college campus visits and educational field trips, community service events, financial aid assistance, and academic advising. The program also provides participants with a performance-based quarterly stipend and a work-study stipend during the required six-week Summer College Program. [Learn more about Upward Bound.](#)

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. [Learn more about STEP.](#)

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 regional county school districts. Since dual credit course offerings vary by high school, interested students should consult their school counselors to help select appropriate courses. [Learn more about Dual Credit.](#)

Corporate and Community Education

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. Please contact 315-792-5300 for more information.

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). High school students in Oneida, Madison, and the bordering counties who have maintained a minimum of 80 or higher high school average and who have their School Counselor's recommendation may take courses on either MVCC campus. High School Counselors work closely with an Admissions Specialist to select courses that are transferable to the student's college of choice while fulfilling high school requirements. The program covers tuition and mandatory fees, but students are responsible for other fees and book purchases. [Learn more about College Connection.](#)

High School-College Bridge

(part-time or full-time)

High school students, usually juniors and 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 MVCC Admissions Office. [Learn more about Magnet Bridge.](#)

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 Healthcare;
- Consulting Services for Manufacturing, Healthcare, 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
- Drones/UAS
- Grant Writing
- Insurance Pre-Licensing and Continuing Education
- 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

Healthcare

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

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 Compliance, 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.

Center for Leadership Excellence (CLE)

The [Center for Leadership Excellence \(CLE\)](#) is a partnership between MVCC and Leadership Mohawk Valley — creating an innovative and high-impact center to address the region's need for effective, equipped, and engaged leaders and supervisors. CLE includes five distinct programs: Leadership Mohawk Valley, Leadership Academy, Disruption Dialogues, Neighborhoods Rising, and Supervisors Institute.

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. Classes are held on the Utica and Rome campuses and at off-site locations. TASC testing is available in the [Testing Center on the Utica Campus](#) and at the [Education Outreach Center](#). Please call 315-731-5870 for additional information.

College for Kids and Teens

Through the College for Kids and Teens, youth of all ages can enrich their education, explore a career, and experience a college setting through a variety of programs, including summer and school break career camps, parent and child classes, literacy and STEM courses, and exam prep classes. CCED also co-hosts the [Young Entrepreneurs Academy \(YEA!\)](#), an intensive 25-week program for grades 7-12. CCED is also the home of the [FIRST® Tech Program](#), which advances STEM education opportunities for youth.

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, in-person or remote.

Mohawk Valley Institute for Learning in Retirement (MVILR)

CCED has partnered with the Mohawk Valley Institute for Learning in Retirement to help the non-profit organization continue providing learning opportunities to retirees in the community, an endeavor MVILR has been undertaking for more than 20 years. MVILR will offer its programs, speakers, and courses on MVCC's Rome Campus five days per week either in-person or virtually. Facilitated by volunteers, members, and guest professionals, this programming promotes personal development and lifelong learning in a variety of subjects, including art, music, literature, philosophy, technology, computer applications, and physical and social sciences.

All Courses

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AN Anthropology.....	49	HT Hotel Technology.....	80
AS Alcoholism & Substance Abuse.....	49	HU Humanities.....	80
AT Athletic Training.....	49	IL Illustration.....	82
AV Aviation.....	50	IS Information Systems.....	82
BI Biology.....	50	IT Italian.....	83
BM Business Management.....	52	LE Law Enforcement.....	84
CB Construction & Building.....	53	LI Learning Resources.....	84
CF College Foundations.....	54	MA Mathematics.....	84
CG Computer Graphics.....	54	MD Media Marketing & Management.....	86
CH Chemistry.....	55	MR Medical Records.....	87
CI Computer & Information Science.....	56	MT Mechanical Engineering Technology.....	87
CJ Criminal Justice.....	57	NU Nursing.....	90
CO Coaching.....	59	OP Photonics.....	91
CT Civil Engineering Technology.....	59	PE Physical Education.....	91
DS Developmental Studies.....	61	PH Physics.....	93
ED Education.....	61	PM Physical Education Emphasis.....	94
EI Educational Interpretation.....	62	PS Political Science.....	95
EM Emergency Medical.....	63	PT Photography.....	95
EN English.....	63	PY Psychology.....	96
ES Engineering Science.....	65	RC Respiratory Care.....	97
ET Electrical Technology.....	66	RE Recreation & Leisure Services.....	99
EV Environmental Analysis.....	70	RT Radiologic Technology.....	99
FA Fine Arts.....	70	SA Study Abroad.....	101
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FL Foreign Language.....	71	SM Sports Management.....	102
FM Facilities Management.....	72	SO Sociology.....	102
FP Fire Protection.....	72	SP Spanish.....	103
FR French.....	73	SS Social Sciences.....	103
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FT Fitness Training.....	75	TC Telecommunications.....	104
GC Graphic Communication.....	75	TH Theater.....	104
GD Graphic Design.....	75	TM Transportation Management.....	105
GE Geography.....	76	UA Remotely Piloted (Unmanned Aerial).....	105
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GR German.....	77	WE Weather Studies.....	106
GT Graphic Technology.....	77	WS Workplace Success.....	106
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AA Administrative Assistant

AA106 Business Communications **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 **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 **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 **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 **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.

AC Accounting

AC110 Principles of Accounting **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 **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 **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 **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 **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 **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 **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 Government and Not-for-Profit Accounting **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 if 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 **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

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.

Cr-3**AH217 Professional Practice Experience -****Medical Claims Management**

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)

Cr-4

AH Allied Health

AH104 Professional Standards in Health Care

The course introduces ethical and trans-cultural issues encountered in healthcare. Examples of topics include value development, ethical theories and controversies, principles of confidentiality, critical thinking, and ethical decision-making.

Cr-3**AH120 Surgical Technician Clinical Seminar**

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 set ups, and instrument identification as well as packaging and sterilization processes are covered. Corequisites: AH130 Fundamentals for Surgical Technicians, AH140 Surgical Technician Skills/Surgical Procedures, and BI216 Human Anatomy & Physiology 1.

Cr-1**AH130 Fundamentals for Surgical Technicians**

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

Cr-3**AH140 Surgical Technician Skills / Surgical Procedures**

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, draping, 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 and Physiology 1.

Cr-3**AH207 Medical Claims Management**

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)

Cr-4**AH230 Surgical Technician Clinical Practice****1**

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, 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, HM100 Medical Terminology for Health Professionals, AH120 Surgical Technician Clinical Seminar, AH130 Fundamentals for Surgical Technicians and AH140 Surgical Technician Skills/Surgical Procedures. Corequisites: BI217 Human Anatomy & Physiology 2.

Cr-6**AH240 Surgical Technician Clinical Practice****2**

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.

Cr-6

AL American Sign Language

AL101 American Sign Language 1

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, and conversational skills as well as 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.

Cr-3**AL102 American Sign Language 2**

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.

Cr-3

AL201 American Sign Language 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 twenty-five 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

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 forty 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.

AN Anthropology

AN101 Biological Anthropology

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

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

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

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.

AS Alcoholism & Substance Abuse

AS201 Introduction to Alcoholism/Substance Abuse Counseling

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

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 and Substance Abuse Treatment Programs

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, 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 and Other Drug Problems

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 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 HS241 Chemical Dependencies.

AS207 Prevention Practice for Alcohol, Tobacco and Other Drug Problems

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.

AS208 Treatment of Pathological Gambling

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.

AT Athletic Training

AT101 Introduction to Sports Medicine

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, and eating disorders as well as 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

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

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.

AV Aviation

AV170 General Maintenance Practices

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

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

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

Cr-5

This course introduces methods and procedures needed to maintain, service and repair airframe electrical and electronic systems.

AV174 Airframe Systems 2

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

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

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

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, and operation of aircraft fuel systems, as well as perform airframe conformity and airworthiness inspections.

AV178 Introduction to Powerplant

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

Cr-2

The course introduces the basic skills necessary to overhaul a reciprocating engine.

AV180 Turbine Engines & Powerplant Systems

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

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

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

BI103 Human Life Science 1

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**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 Survey of Human Anatomy & Physiology**Cr-3**

This course is a systems overview of human anatomy and physiology. Topics include structure and function of integumentary, skeletal, muscular, nervous/endocrine, immune, digestive, cardiovascular, urogenital, and respiratory systems. This course presents development and integration of these systems as a basis for understanding the anatomical and physiological aspects of humans. This course will not count for credit in the science or clinical health profession programs (Nursing, Radiologic Technologies, Respiratory Care, Surgical Technician).

BI141 General Biology 1**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 Dean of Life and Health Sciences.

BI142 General Biology 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 Dean of Life and Health Sciences.

BI151 Nutrition & Dietetics 1**Cr-3**

This course provides a general understanding of the science of nutrition. Topics include nutrients, nutrient requirements, food sources, food safety dietary assessments, 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**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. Prerequisites: BI141 General Biology 1, or BI217 Human Anatomy & Physiology 2.

BI202 Ecology**Cr-4**

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, population dynamics, community structure, ecosystem diversity, energy flow, biogeochemical cycling of nutrients, and relevant environmental issues. Fieldtrips may be taken during laboratory exercises. Prerequisite: BI141 General Biology 1. - Spring Semester Only

BI209 Basic Pathophysiology**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. Prerequisites: BI216 Human Anatomy & Physiology 1 or permission from the Dean of Life and Health Sciences. Corequisite: BI217 Human Anatomy & Physiology 2. (Online Only)

BI216 Human Anatomy & Physiology 1**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. High School Biology or its equivalent is 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**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 Dean of Life and Health Sciences.. Students enrolled in Life and Health Sciences Center programs are recommended to complete this course before beginning their specialized program coursework. Students with transfer credit for BI216 Anatomy and Physiology 1 must complete a three-hour orientation to the use of prosected human cadavers before participating in the BI217 Human Anatomy and Physiology 2 laboratory. Transfer students must meet with the Associate Dean of Mathematics and Natural Sciences.

BI251 Nutrition Across the Lifespan**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: BI151 Nutrition & Dietetics and BI216 Human Anatomy & Physiology 1.

BI270 Practicum in Human Dissection**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 (BI106 and BI107) 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: BI106 Human Anatomy & Physiology 1 or BI107 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. This essay will be considered carefully by the instructor before any course enrollment decision is made.

BM Business Management

BM100 Introduction to Business **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 **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 **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 of and management of credit is covered.

BM110 Principles of Microeconomics **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 **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 are: 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, and monetary policy applications, and international trade and finance.

BM120 Principles of Marketing **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 **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 **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 **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 **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 the U.S. roles in global relations. Prerequisite: BM120 Principles of Marketing.

BM213 Business Logistics **Cr-3**

This course investigates the seven R's 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 **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 **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 **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 **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 **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 **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. Prerequisites: BM251 Organizational Behavior.

BM253 Global Perspectives in International Business **Cr-3**

The 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 includes goods, services, technology, and capital, in addition to managerial knowledge and how it must transcend borders.

BM254 Human Resources Management **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.

BM262 Marketing Management **Cr-3**

This course presents the marketing management process and the marketing managers' role. Topics include marketing decision-making process, marketing concept, the process of strategic planning, and marketing planning. Prerequisite: BM120 Principles of Marketing.

BM264 Professional Selling **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 **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 **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 student, the college and the

business community, and may lead to employment opportunities. A work experience journal is required along with supervisor evaluation.

BM294 Business Internship **Cr-6**

This internship provides realistic training in a student-chosen field of study to prepare for entrance into a competitive work environment. 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.

CB Construction & Building

CB101 Carpentry 1 **Cr-4**

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 **Cr-4**

This course covers the design and construction of residential roofs, including rafters, trusses, hands-on experience and safety procedures are emphasized. Prerequisite: CB101 Carpentry 1.

CB103 Carpentry 3 **Cr-4**

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 **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 **Cr-4**

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 **Cr-4**

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 **Cr-4**

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)

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.

Cr-3

CB131 Construction Estimating

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.

Cr-3

CB301 Industrial Practicum

This course allows for the enhancement of academic skills by gaining work-related experience. Students arrange for the practicum, which must conform to Center guidelines.

Cr-3

CF College Foundations

CF100 College Foundations Seminar

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.

Cr-1

CF112 Critical Thinking & Reasoning

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.

Cr-3

CG Computer Graphics

CG133 Introduction to Animation

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.

Cr-3

CG134 Digital Applications for the Animator

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).

Cr-3

CG144 Digital Animation 1

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. Prerequisites: CG133 Introduction to Animation.

Cr-3

CG145 Digital Animation 2

This course further develops digital animation skills and techniques. Topics include character modeling, mapping, materials, animation, and production techniques. Prerequisites: CG144 Digital Animation 1

Cr-3

CG146 Storyboarding

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

Cr-3

CG147 Sculptural Procedures for the Animator

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. Prerequisites: FA101 General Drawing.

Cr-3

CG213 Graphic Design for the World Wide Web

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.

Cr-3

CG214 Motion Graphics

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 2-D, 3-D, and 4-D design.

Cr-3

CG231 Advanced Animation Techniques

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.

Cr-3

CG233 Animation Production Workshop

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.

Cr-3

CG234 Professional Practices for the Animator

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.

Cr-3

or Engineering majors. Co-requisite MA110 Elementary Statistics or higher.

CH Chemistry

CH101 Physical Science

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

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

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

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

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 issues including atmospheric ozone, ozone as a pollutant, transportation fuels, medicinal chemistry, nuclear energy, climate change, and water resources and pollutants.

CH131 College Chemistry

Cr-5

This is a one-semester introductory chemistry course for students in health professions. The course examines the history of chemistry, its impact on society and its connection to other disciplines. Topics include scientific method, atomic theory, bonding and reactions, introduction to oxidation-reduction, acid-base concepts, equilibrium, properties of solutions, and introduction to organic chemistry and its biochemical applications. The laboratory sequence supports the above topics and emphasizes careful observation and analysis of data to develop both qualitative and quantitative reasoning ability. This course does not meet graduation requirements for Chemistry, Biology, Computer Science,

CH135 Introduction to Organic Chemistry

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

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; and an appropriate Mathematics Placement test result, or MA121 Fundamentals of College Mathematics 1, or MA139 College Algebra or a corequisite of MA125 College Algebra and Trigonometry.

CH142 General Chemistry 2

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

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

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

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. Prerequisite: CH141 General Chemistry 1 and CH142 General Chemistry 2.

CH247 Organic Chemistry 1

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 **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-4**
Prerequisite: Permission of instructor.

CI Computer & Information Science

CI104 Introduction to Cybersecurity **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 **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.

CI112 Networking Fundamentals **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, or IS100 Introduction to Computers and Society, or CI104 Introduction to Cybersecurity or CI121 Microcomputer Techniques for Science.

CI121 Microcomputer Techniques for Science **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 **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 Computer Applications and Concepts 1 or IS100 Introduction to Computer Applications & Concepts, or CI121 Microcomputer Techniques for Science.

CI130 Programming in C++ **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 or ES151 Introduction to Engineering.

CI132 UNIX Operating System and Security **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 or CI104 Introduction to Cybersecurity.

CI140 Computer Programming for Engineers and Scientists **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 **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, or IS100 Introduction to Computers and Society, or CI104 Introduction to Cybersecurity or CI121 Microcomputer Techniques for Science.

CI204 Software Support Strategies **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: CI 112 Networking Fundamentals

CI212 Internet Security **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 or CI112 Networking Fundamentals or CI130 Programming in C++.

CI224 Windows Systems Security II **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. Prerequisite: CI124 Windows Systems Security I, and IS101 Computers & Society IS100 Introduction to Computers & Society, or CI121 Microcomputer Techniques for Science.

CI230 Data Structures**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**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.

CI233 UNIX Administration & Security**Cr-3**

This course provides students with an understanding of installation, management, and security of the UNIX operating system in a server-based environment. System automation, shell scripting, and disaster recovery are also covered. Prerequisite: CI132 UNIX Operating System and Security.

CI242 CISCO Networking**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**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. Prerequisites: CI130 Programming in C++, or permission of the Instructor.

CI246 Critical Infrastructure Security**Cr-3**

This course provides students with an understanding of the basics of critical infrastructure and its relationship to cybersecurity. Topics include what critical infrastructures are, where they are likely to be found, and their vulnerabilities. Students explore historical trends and known breaches as well as current security challenges facing the industry. Prerequisites: CI132 UNIX OS & Security and CI112 Networking Fundamentals

CI256 Introduction to Programming for the Internet**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**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**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**Cr-3**

This course introduces object-oriented programming 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**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**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.

CJ Criminal Justice

CJ101 Introduction to Criminal Justice**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**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**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 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 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 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 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 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 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 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 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 Cr-3

This courses 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 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 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 and Corrections 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 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

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

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

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 Dean of Social Sciences, Business, and Information Sciences for specific offerings.

CJ217 Restorative Justice

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

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 Criminal Justice Internship

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 Dean are required. Prerequisites: CJ101 Introduction to Criminal Justice and CJ106 Ethics in Criminal Justice.

CO Coaching

CO231 Philosophy, Principles and Organization of Athletics in Education

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

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

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

CT102 Engineering Drawing and Microstation CAD

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

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 semester)

CT141 Introduction to Civil Engineering Technology

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 program. The use of personal computers is introduced as engineering tools 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

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

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 and Foundations

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

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

Cr-3

This course explores reinforced concrete beams, slabs, columns, footings, and walls. Prerequisite: CT221 Strength of Materials: Civil. (Spring semester)

CT231 Transportation Engineering

Cr-3

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 Foundations of College Mathematics 1.

CT232 Environmental Engineering

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

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

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

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

Cr-3

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

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. (Fall semester)

CT266 Capstone Geographic Information Systems

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 (GIS). (Spring semester)

CT267 Advanced Geographic Information Systems

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

Cr-3

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 I, CT222 Soil Mechanics and Foundations, and CT231 Transportation Engineering. Corequisite: CT232 Environmental Engineering.

CT300 Independent Study in Civil Engineering Technology

Cr-1

This course allows for the definition of a new product or service; the development of the design and prototype, a marketing plan and strategy, and a production/implementation system to provide a successful technology business. Start-up community/business

resources are identified to help provide the needs of the new business. Additional fees may be assessed to reflect additional costs associated with the usage of equipment and materials. Prerequisite: Program Committee approval for the project. (Students must provide the Committee with project description.)

DS Developmental Studies

DS051 Essential Reading & Study Skills **Cr-NaN**

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 **Cr-NaN**

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 **Cr-NaN**

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

ED110 Speed Reading for College **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.

ED150 Social & Philosophical Foundations of Education **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 **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 **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 and Materials **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 & Toddler Development **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 fifteen 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 **Cr-3**

This course examines children's physical, social, emotional, language, and cognitive development from pre-natal to age twelve. 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 **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 **Cr-3**

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 **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 **Cr-3**

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 and Assessment in Early Childhood Environments.

EI Educational Interpretation

EI101 Introduction to Education and Educational Interpreting **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 **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 and Educational Interpreting with a grade of "C" or better. Corequisite: AL202 American Sign Language 4.

EI201 Introduction to Interpreting 1 **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 **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 and Ethical Applications of Interpretation **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 **Cr-3**

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 and Ethical Applications of Interpretation; SO210 Deaf Culture and Community. Corequisite: EI205 Transliteration.

Prerequisite: Appropriate placement test result. Corequisite: CF 112: Critical Thinking and Reasoning

EM Emergency Medical

EM200 Emergency Medical Services/ Paramedic 1 **Cr-12**

Paramedic students will participate in classroom lecture, skills lab(s), 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. Prerequisite: Current NYS Emergency Medicine Technician-Basic Certification.

EM201 Emergency Medical Services/ Paramedic Clinical & Field Internship 1 **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 **Cr-12**

Paramedic students will participate in classroom lecture, skills lab(s), 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 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 **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

EN001 EN101: ILS **Cr-NaN**

Recitation supplements English: Composition lecture by reinforcing content in reading and writing, provides practical experiences, and introduces learning strategies.

EN002 CF112: ILS **Cr-NaN**

This integrated learning support course stresses improvement of reading comprehension and vocabulary for college-level coursework.

EN090 Basic Writing Skills **Cr-NaN**

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 **Cr-NaN**

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 **Cr-3**

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 ESL4: Advanced Reading), and/or writing courses (EN099 Introduction to College English or SL116 ESL4: Advanced Composition) or permission of the instructor or designee.

EN102 English 2: Ideas and Values in Literature **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.

EN105 English Composition for Speakers of Other Languages **Cr-4**

This course is equivalent to 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.

EN106 English 1: Composition & Reading **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, or successful completion of EN099 Introduction to College English, or successful completion of SL116 ESL 4: Advanced Composition. This course satisfies EN101 requirement.

EN110 Oral and Written Communication **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 A.O.S. degree programs. Prerequisite: An appropriate placement test

result; or successful completion of DS051 Essential Reading & Study Skills, or SL115 ESL4: Advanced Reading, and successful completion of either EN099 Introduction to College English or SL116 ESL4: Advanced Composition.

EN111 Public Speaking: A Mini-Course **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 **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 **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 **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 **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 **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 **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 **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 **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 **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.

EN195 Mass Communications **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 **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 **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 **Cr-3**
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 **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 Nineteenth-Century American Women's Fiction **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**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**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**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**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, Rousseau, 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**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**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**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**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. Prerequisite: EN102 English 2: Ideas & Values in Literature.

EN280 Dramatic Literature: The Classic Theatre**Cr-3**

This course covers the classic period of drama from the ancient Greek theater of 400 B.C.E. 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**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**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**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.

ES Engineering Science

ES151 Introduction to Engineering**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**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**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. Required for Engineering Science students after completing the equivalent of one full-time semester. Prerequisite: ES161 Introduction to Engineering & Science.

ES261 Mechanics of Materials**Cr-3**

This calculus-based course covers normal and shear stress, materials properties and testing, torsional stress, normal and shear strains, stress concentration, bending 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**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**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**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**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**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.

ET Electrical Technology

ET101 Technical Electricity 1**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**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.

ET103 Technical Electronics**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**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. Corequisite: ET102 Technical Electricity 2.

ET105 Computer Control Fundamentals**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**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**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. Co-requisite: MA105 Technical Mathematics 1

ET112 Electronics of Remotely Piloted Aircraft Systems**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 vehicles.

ET115 Basic Electricity 1**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**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**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**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 **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. Corequisite: ET102 Technical Electricity 2.

ET137 Sustainable Energy in the Developing World **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 **Cr-3**

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 ET104 Systems Diagrams.

ET151 Circuits 1 **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 or MA122 Fundamentals of College Mathematics 2, or MA125 College Algebra & Trigonometry, or MA150 Pre-calculus, or MA151 Calculus 1.

ET152 Circuits 2 **Cr-4**

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, or ET153 Introduction to Electronics, or ET154 Computer Programming. Corequisite: MA122 Fundamentals of College Mathematics 2, or MA150 Pre-calculus, or MA151 Calculus 1.

ET153 Introduction to Electronics **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. (Fall semester) Corequisites: ET151 Circuits or ET101 Technical Electricity 1.

ET154 Computer Programming **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 EET 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 or ET101 Technical Electricity 1.

ET161 Linear Electronics **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. Corequisites: ET152 Circuits 2.

ET163 Audio Technology **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 **Cr-3**

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 **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. Corequisite: ET152 Circuits 2.

ET209 Refrigeration 2 **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 **Cr-4**

ET220 Heating and Air Conditioning 1 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 **Cr-5**

ET221 Heating and Air Conditioning 2 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 **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 Heating and Air Conditioning 1. (Spring semester)

ET223 Transport Refrigeration **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 **Cr-3**

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 Heating and Air Conditioning 1.

ET226 HVAC Diagnostics **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 **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 **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. Prerequisite: ET131 Electrical Machinery and Controls 1.

ET233 Industrial Electronics **Cr-5**

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.

ET234 Electrical Wiring and Codes 1 **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 **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. Corequisite: ET102 Technical Electricity 2.

ET236 Commercial - Industrial Wiring and Codes **Cr-4**

This course provides an introduction to electrical wiring techniques with emphasis on design and layout of single and polyphase systems. Topics include diagnosis and repair of equipment malfunctions, interpretation of the National Electrical Code (NEC), estimation of project costs and progress, and installation techniques. Electrical systems studied include lighting, heating, ventilation, interior and exterior power distribution, and emergency energy conservation. Activities are focused on commercial and industrial electrical systems. Prerequisite: ET102 Technical Electricity 2.

ET244 Electrical Wiring and Codes 2 **Cr-4**

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. Prerequisite: ET111 Electrical Systems and ET234 Electrical Wiring and Codes 1.

ET245 Microprocessor Technology **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**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 Mechatronics Systems**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**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. Prerequisites: ET154 Computer Programming or equivalent. Corequisite: ET181 Digital Electronics 1.

ET262 Operational Amplifiers**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**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**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**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**Cr-4**

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. Corequisite: ET282 Digital Electronics 2.

ET284 Design & Layout**Cr-3**

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: ET283 Microprocessor Fundamentals.

ET285 Motors and Controls**Cr-4**

This course introduces the theory, operation, applications, adjustment, and control of AC/DC motors using single & 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**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**Cr-3**

Course description: 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**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.

EV Environmental Analysis

EV100 General Industrial Safety **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 **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

FA100 Creativity in Art **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 **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 **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 **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 **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 **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 **Cr-3**

This course incorporates an examination of design principles and organization of willd 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 **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 **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 **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 **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 **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 **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**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**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**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 and Design**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**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**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 1940-60s**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: Prerequisites: EN101 English 1: Composition or EN106 English 1: Composition and Reading.

FB Fabrication**FB101 Introduction to Modeling and Fabrication****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**FL101 Elementary Arabic 1****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.

FL102 Elementary Arabic 2**Cr-3**

These courses teach the fundamentals of the language, including the essentials of reading, writing, speaking, and listening within a cultural context. Prerequisites: FL 101 or its equivalent, or permission from instructor

FL111 Elementary Chinese 1**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.

FL112 Elementary Chinese 2**Cr-3**

These courses teach the fundamentals of the language, including the essentials of reading, writing, speaking, and listening within a cultural context. Prerequisites: FL111 or its equivalent, or permission from instructor

FL141 Elementary Japanese 1**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.

FL142 Elementary Japanese 2**Cr-3**

These courses teach the fundamentals of the language, including the essentials of reading, writing, speaking, and listening within a cultural context. Prerequisites: FL141 or its equivalent, or permission from instructor

FL151 Elementary Latin 1**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.

FL152 Elementary Latin 2**Cr-3**

These courses teach the fundamentals of the language, including the essentials of reading, writing, speaking, and listening within a cultural context. Prerequisites: FL 151 or its equivalent, or permission from instructor

FL173 Elementary Russian 1**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.

FL174 Elementary Russian 2**Cr-3**

These courses teach the fundamentals of the language, including the essentials of reading, writing, speaking, and listening within a cultural context. Prerequisites: FL173 or its equivalent, or permission from instructor

FL211 Intermediate Chinese 1**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.

FL212 Intermediate Chinese 2**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. Prerequisites: FL211 or its equivalent, or permission from instructor

FL300 Advanced Study in Language**Cr-1**

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

FM101 New York State Public School**Cr-3****Budgeting & Accounting**

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**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**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**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**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**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**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**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.

FP Fire Protection

FP101 Firefighter 1**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**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**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**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**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 **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 **Cr-0.5**

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 **Cr-0.5**

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 **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 **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 - Regulations, Administration, Enforcement **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 & Safety **Cr-3**

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 **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 **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 Fourth in NFPA 1403 and all applicable NYS standards.

FP125 Basic Exterior Firefighting **Cr-3**

This course provides initial entry level training for basic exterior firefighting operations. Topics include fire department organization, firefighter safety and health, firefighting 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

FR101 Elementary French 1 **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.

FR102 Elementary French 2 **Cr-3**

This sequence teaches the fundamentals of French, including the essentials of reading, writing, speaking, and listening within a cultural context. Prerequisites: FR 101 or its equivalent, or permission from instructor.

FR181 French for Business Personnel **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 Review French 1 **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.

FR192 Review French 2 **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 Intermediate French 1 **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.

FR202 Intermediate French 2

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.

Cr-3**FR301 Advanced French 1**

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.

Cr-3**FR302 Advanced French 2**

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.

Cr-3**FS Food Service****FS105 Computer Applications: Food Service**

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.

Cr-2**FS111 Food Preparation 1**

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.

Cr-4**FS112 Food Preparation 2**

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.

Cr-3**FS121 Baking 1**

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.

Cr-4**FS131 Food, Beverage and Labor Cost Control**

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,

Cr-3

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. - Spring Semester Only.

FS141 Purchasing for the Hospitality Industry

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.

Cr-3**FS150 Safety & Sanitation**

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.

Cr-3**FS160 Dining Room Service**

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.

Cr-3**FS202 Menu & Facilities Planning**

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.

Cr-3**FS204 Banquet & Catering Management**

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.

Cr-4**FS205 Baking 2**

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.

Cr-4**FS210 Food Preparation 3**

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.

Cr-4**FS213 Cake Decorating**

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.

Cr-3

FS214 Food Presentation**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**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**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 6 hours a week of field experience, participation in a weekly seminar is required as a forum to discuss work-

FS233 Principles of Food Marketing**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**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**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**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.

FT Fitness Training**FT101 Personal Training 1****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**Cr-3**

Students learn techniques in motivation, communication, and behavioral modification related to the varying demographics in fitness training. Also students are profession abilities, 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**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 Communication**GC244 Topics in Art History****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**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 Arts and Humanities.

GD Graphic Design**GD110 Digital Design****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**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**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**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: GD 145 Digital Applications 1.

GD198 Graphic Design 1: Fundamentals**Cr-3**

This course covers the fundamentals of combining typography and image. It includes a study in the development of methods and practices that leads to solid visual solutions. Problem solving methodologies

are implemented to explore the marriage of typography and image. Terminology and creative standards are discussed and put into practice. Several creative methods, both traditional and digital, are explored to develop a strong understanding of the creative process and its impact on effective communication.

GD199 Graphic Design 2: Advanced Design Studio **Cr-3**

This course expands on the practices and theories of the creative design practice. Students build on the topics discussed and implemented in GD198. Understanding and application of current software is expected in this intermediate course to achieve professional results. Traditional and digital problem-solving techniques will be explored within the creative studio environment. Prerequisite: GD198

GD218 Graphic Design Seminar **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 **Cr-3**

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. Prerequisites: GD121 Digital Typography.

GD221 Typography 1 **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.

GD222 Typography 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.

GD297 Graphic Design 3: Design Systems **Cr-3**

This is an advanced course in the use of digital software to generate professional-level and advanced graphic designs. Research and critical thinking are applied to various subject matter to help the student establish a uniform problem-solving method for creative success. Students are expected to apply knowledge and skills from Fundamental and Advanced Design Studio. Prerequisite: GD199

GD298 Graphic Design 4: Social Media and Web **Cr-3**

This course is an introduction to visual communication within today's digital platforms. Students are introduced to the application of graphic design principles in a variety of web and social media platforms. Prerequisite: GD297

GD299 Graphic Design Portfolio Workshop **Cr-3**

This course prepares students for entry into the graphic design profession utilizing the breadth of work created within the Graphic Design curriculum. Emphasis is placed on the preparation of multiple portfolios (traditional and digital) for academic advancement or a lifelong career as a Graphic Designer. Prerequisite: GD298

GE Geography

GE101 Essentials of World Geography **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

GL100 Introduction to Earth Science **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 **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 **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 **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. (Spring only offering).

GL203 Topics in Geology: A Tectonic History of North America **Cr-4**

This course explores the orogenic history of the earth and the tectonic events that shaped the planet, North America, and a selected focus locality in the United States. The laboratory portion of this course includes an embedded, post-semester 18 day field work experience at selected sites. The laboratory portion of this course involves rigorous physical activity. Please see the "course policies" for further discussion of this activity and accessibility. Topics include orogenic uplift, subduction mechanics, island arc formation, tectonism, primary sedimentary features, deformation processes, erosional features, and depositional environments. This course has a lab fee to cover the costs associated with travel. Prerequisite: GL 101 Physical Geology Corequisite: PE 151 Personal Fitness.

GR German

GR101 Elementary German 1 **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.

GR102 Elementary German 2 **Cr-3**

This sequence teaches the fundamentals of German, including the essentials of reading, writing, speaking, and listening within a cultural context. Prerequisites: GR 101 or its equivalent, or permission from instruction

GR201 Intermediate German 1 **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.

GR202 Intermediate German 2 **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 Advanced German 1 **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.

GR302 Advanced German 2 **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

GT122 Digital Prepress **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 **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 **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 **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 **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 **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.

HC Health Care

HC100 Introduction to Health Care **Cr-3**

This course introduces the field of healthcare for people interested in the field. Topics include an introduction to the healthcare delivery system, a brief historical overview of U.S. healthcare, healthcare settings and programs, members of the healthcare delivery team, roles of healthcare professionals, legal and professional ethics, healthcare organizations and agencies, medical record content, risk management, continuous quality improvement, epidemiology (morbidity and mortality), and interpersonal communication skills.

HI History

HI101 History of Civilization 1 **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 **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 **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 **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 **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 **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 **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 and Technology **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 **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)

HM Health Information Management

HM100 Medical Terminology for Health Professionals **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 **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 healthcare information, including the health information exchange. (Online Only)

HM120 Pathophysiology and Pharmacology **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 **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 **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 **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 **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

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

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

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

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

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.

HM231 Health Informatics & Data Analytics

Cr-3

This course provides a comprehensive understanding of how informatics and data management relate to the healthcare industry. (Online Only)

HP Honors Program

HP101 Introduction to Honors

Cr-1

This course is the first step in completing the Honors Program and earning Honors distinction. Through a series of readings and exercises, students gain a whole-brain approach to learning – the foundation for making original discoveries. They also develop personal, academic, and professional goals. Students draft a formal proposal for their

independent research project by the end of the course. In the process of completing these tasks, students develop an Honors community. The ED100 program requirement is waived for students who complete this course

HP200 Honors Seminar

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 G.P.A. of 3.25 and completion of HP101 Introduction to Honors with a grade of "B" or higher.

HS Human Services

HS101 Introduction to Human Services

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 NY State certification as a mandated reporter.

HS216 Introduction to Disabilities

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

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. Prerequisite: PY101 Introduction to General Psychology, and a grade of "C" or better in HS101 Introduction to Human Services.

HS231 Ethics, Policy and Law

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

Cr-3

This course focuses on the acquisition and refinement of social work and counseling skills appropriate for the A.A.S. 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

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**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**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**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. Prerequisite: Matriculation in Human Services or Chemical Dependency Practitioner program, 25 credits completed towards the degree, G.P.A. 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**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.

HT Hotel Technology

HT101 Introduction to the Hospitality Industry**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**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**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 fifteen weeks, or a total of 90 hours is required for successful completion.

HT205 Housekeeping/Property Management**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**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**Cr-3**

This course introduces convention sales and marketing techniques. Topics include convention promotion, planning, and post convention evaluation.

HT215 Supervisory Leadership in Hospitality**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.

HU Humanities

HU183 Fundamentals of Music Theory 1**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**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**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**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**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**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

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

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

This course introduces the history of art from prehistoric times through the Sixteenth 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

This course introduces the history of art from the Seventeenth Century to the present. Topics include Baroque, Rococo, Neoclassicisms, Romanticism, Impressionism, Post-Impressionism, Twentieth-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 and the Human Condition

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 and Culture

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

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

This course provides an historical survey of modern art from the late Nineteenth 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

This course provides an introduction to the arts of North America from the Sixteenth 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.

Cr-3 HU227 World Art

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

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. Prerequisites: EN101 English 1: Composition or EN105 English Composition for Speakers of Other Languages or EN106 English 1: Composition and Reading.

HU280 An Introduction to Ethics

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

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 and Early Renaissance

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

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

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 Dean for Humanities for the current offerings. Prerequisite: EN102 English 2: Ideas & Values in Literature.

HU295 Survey of Western Philosophy

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

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.

Cr-3

IL Illustration

IL105 Illustration Methods and Materials

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

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

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

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

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

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 and Painting

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

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

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

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.

IS Information Systems

IS100 Introduction to Computer Applications and Concepts

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

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

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 and Environments

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 or CI104 Introduction to Cybersecurity; 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

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.

Cr-3 Spreadsheet Concepts & Applications, and IS210 Database Design & Management.**IS130 Desktop Publishing for Business**

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.

Cr-3**IS200 Spreadsheet Concepts and Applications**

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.

Cr-3**IS201 Principles of Computer Security**

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.

Cr-3**IS208 Practical Computing for the Twenty-First Century Professional**

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.

Cr-3**IS210 Database Design and Management**

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.

Cr-3**IS220 Visual Basic with Business Applications**

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

Cr-3**IS240 Networking Essentials**

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.

Cr-3**IS250 Web Development 1**

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.

Cr-3**IS280 Web Development 2**

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.

Cr-3

IT Italian

IT101 Elementary Italian 1

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.

Cr-3**IT102 Elementary Italian 2**

This sequence teaches the fundamentals of Italian, including the essentials of reading, writing, speaking, and listening within a cultural context. Prerequisites: IT 101 or its equivalent, or permission from instructor

Cr-3**IT191 Review Italian 1**

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.

Cr-3**IT192 Review Italian 2**

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.

Cr-3

IT201 Intermediate Italian 1**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.

IT202 Intermediate Italian 2**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 Advanced Italian 1**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.

IT302 Advanced Italian 2**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

LE118 Police Procedures - Basic**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**Cr-4**

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**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**Cr-6**

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**Cr-7**

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**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 Learning Resources

LI103 Information Literacy**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.

LI171 Intro to Algebra**Cr-NaN**

This course is for students who need to take MA171 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.

MA Mathematics

MA001 MA121: ILS**Cr-NaN**

This course includes intermediate and college algebra and trigonometry. Algebraic manipulations, graphing skills and problem solving are emphasized. Topics include variables, equations, graphs, systems of linear equations including Cramer's Rule, quadratic equations, radicals, variation, factoring and rational expressions, vectors and oblique triangles, and an introduction to trigonometry and applications.

MA071 MA171: ILS**Cr-NaN**

Learning Support for Foundations of Mathematics 1 is a corequisite for students needing MA 171 who do not meet the prerequisite of MA 171. This course will include mathematical skills necessary to succeed in MA 171.

MA089 Arithmetic**Cr-NaN**

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**Cr-NaN**

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. An appropriate placement test result or MA089 Arithmetic.

MA091 Introductory Algebra**Cr-NaN**

This course is for students enrolled in STEM programs or for students who need to take either MA115 or MA171 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. An appropriate placement test score or MA089 Arithmetic.

MA096 Mathematical Literacy**Cr-NaN**

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 communication qualitative 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**Cr-NaN**

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**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**Cr-3**

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**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 or MA090 Essential Math Skills or MA091 Introductory Algebra, or MA096 Mathematical Literacy.

MA110 Elementary Statistics**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 or MA090 Essential Math Skills or MA091 Introductory Algebra, or MA096 Mathematical Literacy.

MA111 Intermediate Statistics**Cr-3**

This course is a continuation of Elementary Statistics (MA110) 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 on 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**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 or MA091 Introductory Algebra, or equivalent.

MA121 Fundamentals of College Mathematics 1**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**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 and Trigonometry**Cr-4**

This course prepares students for MA150 Precalculus. 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**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**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**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 Precalculus **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 **Cr-4**
This is the first in a sequence of three courses 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 Precalculus.

MA152 Calculus 2 **Cr-4**
This is the second in a sequence of three courses in calculus. Topics include the integration of trigonometric functions, the differentiation and integration of the 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 **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 **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 **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 Foundations of Mathematics 3 **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 **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 **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 **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 **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)

MD Media Marketing & Management

MD140 Principles of Advertising **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 and Copywriting **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 **Cr-3**
This course covers the theory, role, scope, and practice of modern advertising and introduces the types and characteristics of vehicles that carry advertisements. Topics include advertising media, such as newspaper, magazines, television, radio, and their advantages and limitations.

MD152 Print Media and Production **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 **Cr-3**
This course introduces students to the fundamental principles of visual communication and 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. Emphasis is placed on formulating basic design and layout principles, with particular stress on application. Students are introduced to the

masters, practices, and careers of painting, sculpture, graphic design, animation, film, digital media, illustration, and photography.

MD240 Advertising Management **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 **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 **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 **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 **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 & Copywriting.

MR Medical Records

MR104 CPT Procedural Coding **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 **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.

MT Mechanical Engineering Technology

MT107 Basic Machine Shop Practice **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 **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 **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 **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 **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 or a higher level mathematics course which includes trigonometry.

MT129 Statistical Quality Control **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 **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 **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 2-D and 3-D CAD generated drawings and system operations.

MT141 Machining Fundamentals **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

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

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

Cr-4

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

Cr-4

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

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

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

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

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. Prerequisite: MA121 Fundamentals of College Mathematics 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

Cr-4

This course integrates previous and current course work 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 and Drafting Design

Cr-4

This course introduces the fundamentals of tool design. Topics include break-even charts, tool materials, workholding 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 and Assembly Drafting. (Spring Semester)

MT223 Electrical-Electronic Drafting

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 and Strength of Materials

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. Prerequisites: MA106 Technical Mathematics 2 or higher level mathematics course which includes trigonometry.

MT226 Industrial Materials

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

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. Both residential and commercial applications are emphasized, along with CAD drawing methods. Prerequisite: MT112 Architectural Drafting.

MT230 Strength of Materials: Mechanical

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 Civil, or ES271 Engineering Science.

MT231 Lean Six Sigma

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. Prerequisites:

MT114 Manufacturing Processes or MA121 Fundamentals of College Mathematics 1.

MT242 Advanced MicroStation CAD 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 Dean for Mathematics, Engineering, Physical Sciences, and Applied Technology.

MT247 Introduction to Robotics 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 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 Dean for Mathematics, Engineering, Physical Sciences, and Applied Technology..

MT252 Fluid Mechanics 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 Dean for Mathematics, Engineering, Physical Sciences, and Applied Technology.

MT256 Advanced Solid Modeling 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. Prerequisites: MT155 Introduction to Solid Modeling or permission of the Associate Dean for Physical Sciences, Engineering & Applied Technologies.

MT270 Welding Procedures for MIG and TIG Cr-4

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 Cr-3

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 Cr-4

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 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 and Blacksmithing 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 and Metal Fabrication Cr-4

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 and Quality Control Testing 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.

MT279 Sheet Metal Fabrication Cr-3

This course introduces students to the knowledge and skills required for the fabrication of sheet metal products, with special attention paid to the needs of regional industry. Gas metal arc welding (GMAW) or "MIG" and gas tungsten arc welding (GTAW) or "TIG" welding processes will be used as well as specialized sheet metal fabrication equipment, to include shear, brake, English wheel, and pin roller. Welding supply fee required.

MT291 Introduction to Machining Cr-4

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 Cr-4

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.

MT294 Introduction to CNC Turning Centers Cr-4

This course introduces fundamental concepts of CNC Turning centers. Topics include safety, blueprint reading, Geometric Dimensioning and Tolerancing (GD&T), 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

Cr-4

This course introduces advanced concepts of CNC Turning centers. Topics include safety, blueprint reading, live tools, C & Y 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

Cr-4

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

Cr-4

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.

NU Nursing

NU001 Introduction to Nursing 1

Cr-NaN

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 healthcare team member, introduction to the Nursing Process, Maslow's Hierarchy of Human 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 enrollments in an AAS nursing curriculum.

NU101 Nursing 1 (Fundamentals of Nursing)

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)

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, Maslows 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; NU111 Nursing Pharmacotherapeutics 1 with a minimum grade of 75 or advanced standing; Corequisite: BI217 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)

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, Maslows 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; 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

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)

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, Maslows 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: NU101 Nursing 1, NU111 Nursing Pharmacotherapeutics 1, 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)

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, Maslows 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 healthcare. 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)

OP Photonics

OP161 Introduction to Photonics **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 **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 **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

PE101 Bowling **Cr-0.5**

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-0.5**

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-0.5**

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-0.5**

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 as well as fitness benefits.

PE110 Racquet Sports **Cr-0.5**

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 the leisure and fitness benefits.

PE111 Strength Training 1 **Cr-0.5**

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 **Cr-0.5**

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-0.5**

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-0.5**

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-0.5**

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 students to the basic concepts of safe SCUBA diving. Students learn elementary SCUBA techniques and safety practices. Instructional classes will be in the MVCC swimming pool.. Upon completion of this course, students will have an option to pursue certification by participating in open water dives. (Additional fees charged.)

PE140 Introduction to Sports Officiating **Cr-2**

This course provides students with an in-depth study of sports officiating and allows students to learn and develop the skills necessary to become a certified sports official. Topics include proper fitness and health; professional communication; creating a positive rapport with coaches, players, and game personnel; handling conflicts that arise; proper game management and safety/health protocols; rules and application of the sport games; and how to connect/join with local community agencies to become a certified official. The following sports will be included: soccer, basketball, baseball/softball, men's lacrosse and women's lacrosse.

PE143 Basketball **Cr-0.5**

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-0.5**

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-0.5**

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-0.5**

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**Cr-0.5**

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**Cr-0.5**

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-0.5**

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**Cr-0.5**

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**Cr-0.5**

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**Cr-0.5**

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-0.5**

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 healthcare providers.

PE172 Health and Wellness**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.

PE178 Varsity Lacrosse - Women**Cr-1**

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.

PE179 Varsity Soccer-Women**Cr-1**

These courses are designed for competition at the intercollegiate athletic level. Organization, conditioning, and practice sessions prepare 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. Varsity courses each carry 1.0 credit for completion of one season of participation on a varsity team.

PE182 Varsity Lacrosse - Men**Cr-1**

These courses are designed for competition at the intercollegiate athletic level. Organization, conditioning, and practice sessions prepare 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. Varsity courses each carry 1.0 credit for completion of one season of participation on a varsity team.

PE184 Varsity Bowling**Cr-1**

These courses are designed for competition at the intercollegiate athletic level. Organization, conditioning, and practice sessions prepare 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. Varsity courses each carry 1.0 credit for completion of one season of participation on a varsity team.

PE185 Varsity Soccer-Men**Cr-1**

These courses are designed for competition at the intercollegiate athletic level. Organization, conditioning, and practice sessions prepare 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. Varsity courses each carry 1.0 credit for completion of one season of participation on a varsity team.

PE186 Varsity Basketball - Men**Cr-1**

These courses are designed for competition at the intercollegiate athletic level. Organization, conditioning, and practice sessions prepare 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. Varsity courses each carry 1.0 credit for completion of one season of participation on a varsity team.

PE188 Varsity Baseball**Cr-1**

These courses are designed for competition at the intercollegiate athletic level. Organization, conditioning, and practice sessions prepare 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. Varsity courses each carry 1.0 credit for completion of one season of participation on a varsity team.

PE189 Varsity Tennis-Men**Cr-1**

These courses are designed for competition at the intercollegiate athletic level. Organization, conditioning, and practice sessions prepare 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. Varsity courses each carry 1.0 credit for completion of one season of participation on a varsity team.

PE191 Varsity Volleyball**Cr-1**

These courses are designed for competition at the intercollegiate athletic level. Organization, conditioning, and practice sessions prepare 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. Varsity courses each carry 1.0 credit for completion of one season of participation on a varsity team.

PE192 Varsity Tennis-Women**Cr-1**

These courses are designed for competition at the intercollegiate athletic level. Organization, conditioning, and practice sessions prepare 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. Varsity courses each carry 1.0 credit for completion of one season of participation on a varsity team.

PE193 Varsity Basketball-Women**Cr-1**

These courses are designed for competition at the intercollegiate athletic level. Organization, conditioning, and practice sessions prepare 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. Varsity courses each carry 1.0 credit for completion of one season of participation on a varsity team.

PE194 Varsity Softball**Cr-1**

These courses are designed for competition at the intercollegiate athletic level. Organization, conditioning, and practice sessions prepare 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. Varsity courses each carry 1.0 credit for completion of one season of participation on a varsity team.

PE195 Varsity Cross Country**Cr-1**

These courses are designed for competition at the intercollegiate athletic level. Organization, conditioning, and practice sessions prepare 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. Varsity courses each carry 1.0 credit for completion of one season of participation on a varsity team.

PE197 Varsity Golf**Cr-1**

These courses are designed for competition at the intercollegiate athletic level. Organization, conditioning, and practice sessions prepare 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. Varsity courses each carry 1.0 credit for completion of one season of participation on a varsity team.

PE198 Varsity Track and Field**Cr-1**

These courses are designed for competition at the intercollegiate athletic level. Organization, conditioning, and practice sessions prepare 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. Varsity courses each carry 1.0 credit for completion of one season of participation on a varsity team.

PE211 Strength Training 2**Cr-0.5**

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**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**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.

PH Physics

PH106 Science of Sound**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**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, or MA90 Essential Math Skills, or MA091 Introductory Algebra.

PH113 Science of Light 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**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 3-D 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, or MA90 Essential Math Skills, or MA091 Introductory Algebra.

PH115 Science of Multimedia**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**Cr-4**

This course extends the scientific and computer concepts developed in PH115 to 3-D multimedia. It provides hands-on experience using a professional 3-D graphics engine. Topics include vectors and vector operations, transformation theory, design of 3-D Graphical User Interfaces, 3-D lighting, 3-D cameras, multi-texturing, 3-D optimization techniques, mesh generation, third-party model generation, 3-D node hierarchy, using a 2-D mouse in a 3-D world, generation of physically accurate simulations, and 3-D 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, or MA121 Fundamentals of College Mathematics 1, or MA125 College Algebra and Trigonometry.

PH131 Physics Fundamentals**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**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, or MA90 Essential Math Skills, or MA091 Introductory Algebra.

PH142 Astronomy: Stars, Galaxies, & the Universe**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 Essentials Math Skills, or MA091 Introductory Algebra.

PH151 General Physics 1**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, or MA121 Fundamentals of College Mathematics 1, or MA125 College Algebra & Trigonometry.

PH152 General Physics 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**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**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; PH261 Engineering Physics 1.

PH265 Modern Physics and Thermodynamics**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. Prerequisite: MA253 Calculus 3 and PH262 Engineering Physics 2.

PH270 Waves and Oscillations**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.

PM Physical Education Emphasis

PM101 Soccer-PE Majors**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 Majors**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 Majors**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 Majors**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 Majors**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 Majors**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 Sports-PE Majors **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 Majors **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.

PS Political Science

PS101 American National Government **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 **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, healthcare, social welfare, education, and the environment.

PS202 Comparative Politics **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 **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 **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 **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 **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 **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.

PT Photography

PT101 Traditional Black and White Photography **Cr-3**

This course provides an understanding of principles as applied to all phases of traditional wet-process darkroom photography. Primary instruction will be in the utilization of a manual 35mm film camera. 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 **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 **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 course work. 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. Prerequisites PT106: Multimedia Photography.

PT104 Studio Techniques **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**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**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**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**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.

PT201 Photojournalism**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**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. Prerequisites: PT101 Photography 1 or PT126 Basic Photography or PT214 Fine Art Photography 1.

PT203 Topics in Photography**Cr-3**

This course provides 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 Digital Color Photography

PT204 Photography Seminar**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 Advanced Darkroom Techniques.

PT205 History of Photography 1**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**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 1: Camera and Editing**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 Digital Photography 2: Compositing**Cr-3**

This course covers the theory, role, scope, and practice of compositing digital photographic images and introduces the ways and means to utilize image editing software to communicate effectively with an audience. Emphasis is placed on masking, blending modes, painting techniques, and advanced compositing. It investigates approaches to manipulate raster-based graphics and utilizes design to communicate conceptual elements to an audience. Prerequisite: PT207

PT210 Portrait and Fashion Photography**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**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**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

PY Psychology

PY101 Introduction to General Psychology**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 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 and Adolescence 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 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 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 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 individual's 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 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 Development Psychology 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 and Bereavement 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 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 and Measurement in Behavioral Science 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 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 and CO231 Philosophy, Principles, and Organization of Athletics in Education or, ED150 Social & Philosophical Foundations of Education. .

PY213 Human Sexuality Cr-3

This course provides an overview of the biopsychosocial 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 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.

RC Respiratory Care

RC101 Basic Science for Respiratory Care 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 on-line/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 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, or MA090 Essential Math Skills or MA091 Introductory Algebra, or equivalent. A minimum grade of "C" is required. (Fall semester)

RC111 Principles of Respiratory Care 1**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, or 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**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, monitor, and wean patients from mechanical ventilation is provided. Prerequisites: A full year of high school general chemistry with laboratory (with a minimum grade of 70) within ten 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(a) or Program Coordinator consent. (a) Minimum grade of "C" required. (Spring semester)

RC115 Cardiopulmonary Diseases**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**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 ten years or equivalent course with a minimum grade of C, RC101 Basic Science for Respiratory Care, RC103 Cardiopulmonary Pharmacology, RC111 Principles of Respiratory Care 1(a). Corequisites: BI216 Human Anatomy & Physiology 1 (a) and RC115 Cardiopulmonary Diseases, or Program Coordinator consent.(a) Minimum grade of "C" required. (Spring semester)

RC213 Principles of Respiratory Care 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, RC131

Clinical Practicum 1. Corequisites: RC232 Clinical Practicum 2, or Program Coordinator consent. Minimum grade of C required.

RC214 Acid Base Physiology**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 (a) or instructor consent. (a) Minimum grade of "C" required. (Spring semester)

RC215 Principles of Respiratory Care 4**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**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 and 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**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**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)

RE Recreation & Leisure Services

RE100 Introduction to Recreation **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 and Liability **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 **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 **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 and Management **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 **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 **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 Athletics, Physical Education & Recreation.

RE210 Recreation Program and Facility Management **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 Activity and Leadership Development and RE106 Outdoor Recreation and Leisure Activities, or permission of the Associate Dean Athletics, Physical Education & Recreation.

RE214 Therapeutic Recreation **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.

RT Radiologic Technology

RT100 Patient Care I / Ethics **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, or MA 045 Basic Math Skills, or MA 050 Introductory Mathematics. Corequisites: RT101 Fundamentals of Radiography, RT 102 Radiographic Procedures/Pathology 1, RT 103 Clinical Education Fundamentals, BI 216 Human Anatomy & Physiology 1.

RT101 Fundamentals of Radiology **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 or MA045 Basic Math Skills or MA050 Introductory Mathematics. 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 **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 or MA045 Basic Math Skills or MA050 Introductory Mathematics. Corequisites: RT100 Patient Care I/Ethics, RT101 Fundamentals of Radiography, MR103 Medical Terminology, and BI216 Human Anatomy & Physiology 1.

RT103 Clinical Education Fundamentals **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**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 fluids, fluid administration, anatomy and physiology, venipuncture, infection prevention, and complications. Prerequisite: RT 100 Patient Care 1/Ethics. Corequisites: RT 105 Image Production & Evaluation 1, RT 106 Radiographic Procedure / Pathology 2, RT 107 Clinical Education Intermediate I, BI 217 Human Anatomy & Physiology 2.

RT105 Image Production & Evaluation I**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. Prerequisite: RT100 Patient Care 1/Ethics, RT101 Fundamentals of Radiography, RT102 Radiographic Procedures/Pathology, RT103 Clinical Education Fundamentals. Corequisites: RT104 Patient Care II/Pharmacology & IV Therapy, RT106 Radiographic Procedures/Pathology 2, RT107 Clinical Education Intermediate.

RT106 Radiographic Procedures / Pathology II**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, RT107 Clinical Education Intermediate I.

RT107 Clinical Education Intermediate I**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 2/Pharmacology & IV Therapy, RT105 Image Production & Evaluation I, RT106 Radiographic Procedures/Pathology II.

RT108 Clinical Education Intermediate II**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 practiced. Students develop clinical skills which complement the clinical competencies learned. Prerequisite: RT107 Clinical Education Intermediate I and MR103 Medical Terminology.

RT109 Radiation Biology I**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**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, RT202 Clinical Education Advanced.

RT201 Image Production & Evaluation II**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**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, RT201 Image Production & Evaluation II.

RT203 Radiographic Physics**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**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**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 **Cr-7**

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 skill 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

SA300 Study Abroad **Cr-1**

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

SL055 ESL Skills Workshop 1 **Cr-NaN**

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 **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 **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 **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 **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 ESL2: Beginning English Skills 2, or an appropriate placement test result.

SL107 ESL 3: Intermediate Grammar **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 SL 102 ESL 2: Beginning English Skills 2, or an appropriate placement test result.

SL108 ESL 3: Intermediate Listening and Speaking **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 **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 **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 **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 and Speaking **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" SL108 ESL 3: Intermediate Listening and Speaking, or an appropriate placement test result.

SL120 Pronunciation in Practice

Cr-4

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.

SL124 Applied Grammar

Cr-4

This course provides non-native English speakers instruction and practice in the use of advanced academic English grammar structures. Coursework helps students to assess their own knowledge of English grammar, improve accuracy, and acquire editing and refining skills. Emphasis is placed on methods needed to identify and apply complex grammar structures and write fluid, cohesive ideas on academic topics using advanced grammar.

SM Sports Management

SM101 Foundations of Sport Management

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

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

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, crosscountry, basketball). 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.

SM112 Sport Event Practicum 2

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

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

SO101 Introduction to Sociology

Cr-3

This course gives an understanding of and a feeling for the society in which we live. The 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 those forces that contribute to conflict and social problems. Topics include culture, socialization, stratification, population, and patterns of social organization.

SO202 Marriage and Family Living

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

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

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

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

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

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

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 and Community

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.

SP Spanish

SP101 Elementary Spanish 1

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.

SP102 Elementary Spanish 2

Cr-3

This sequence teaches the fundamentals of Spanish, including the essentials of reading, writing, speaking, and listening within a cultural context. Prerequisites: SP 101 or its equivalent, or permission from instructor.

SP191 Review Spanish 1

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.

SP192 Review Spanish 2

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 Intermediate Spanish 1

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.

SP202 Intermediate Spanish 2

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 Advanced Spanish 1

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.

SP302 Advanced Spanish 2

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

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 literacy 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

SS218 Methods of Research

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 or CJ101 Introduction to Criminal Justice or PS102 Introduction to Public Policy.

ST Surgical Technology

ST109 Pharmacology for the Surgical Technologist

Cr-2

This course covers general principles of pharmacology related to the surgical technologist in the perioperative environment. Topics include drug sources, classifications, and regulatory issues, indications for use, complications, adverse reactions, and routes of administration, calculation, and medication handling. Emphasis on the relationship of drugs to the surgical patient. Anesthesia and emergency situations are stressed. Prerequisite: HM100 Medical Terminology for Health Professionals

ST120 Surgical Instrumentation

Cr-2

This course introduces students to common surgical instrumentation. Topics include instrument identification, function and grades, and proper instrumentation handling and usage in various surgical services. Suture material and needles by type and function are also covered.

ST130 Sterile Processing and Surgical Technology

Cr-3

This course introduces students to the functions and responsibilities of surgical technologists and sterile processing technicians. Topics include supply and equipment preparation for surgery and the safe usage, care, decontamination and sterilization of surgical instruments. Students are familiarized with the structure and design of the operating room as well as operating room safety precautions, infection control

standards, healthcare law, and professional ethics. Corequisite: ST131 Fundamentals of Surgical Technology

ST131 Fundamentals of Surgical Technology **Cr-3**
This course introduces students to the procedures used to prepare patients for surgery. Topics include preparation of the surgical site, draping, wound management, vacuums, catheters, drains, and hemostatic agents. Students gain hands-on experience with the various machines and equipment used for surgery and are introduced to the precautions taken during electro-surgery and laser surgery. Corequisite: ST130 Sterile Processing and Surgical Technology

ST140 Surgical Technology Skills & Procedures 1 **Cr-3**
This course provides an introduction to general, laparoscopic, and robotic surgical procedures. Course emphasizes proper surgical procedures for various anatomical regions. Students are provided hands-on experiences preparing surgical trays and performing the steps taken by surgical technologists during surgery. Prerequisite: ST131 Fundamentals of Surgical Technology

ST141 Surgical Technology Skills & Procedures 2 **Cr-3**
This course provides the student with basic knowledge of surgical procedures. Topics include orthopedic, neurosurgery, plastic surgery, ophthalmic, cardiac, pediatric, thoracic, and vascular surgery. Previously learned and mastered skills will be integrated in this course. The student will be provided with hand-on experience in preparing the necessary surgical trays for these procedures and then practice following the steps involved in the surgical procedures from beginning to end. Prerequisite: ST140 Surgical Technology Skills & Procedures 1

ST220 Sterile Processing Clinical Practice **Cr-6**
This course partners students with experienced sterile processing technicians. As students transition to a more active role, they will concentrate in the cleaning and sterilization of surgical instruments and other medical equipment. Students are expected to interact with personnel from all areas of the hospital and be involved in distribution of medical supplies throughout the healthcare facility. Prerequisite: ST120 Surgical Instrumentation

ST230 Surgical Technology Clinical Practice 1 **Cr-6**
This course partners students with Surgical Technicians in a clinical setting. Primary surgical specialties are general surgery, OB/GYN, orthopedic, otorhinolaryngology, and genitourinary. As students transition to a more active role, surgical interventions include special patient care considerations, room set ups, anesthesia, positioning, skin prep, draping, incision and approach, supplies, equipment instrumentation, procedural steps, counts, dressing materials, specimen care, and postoperative destination and care. Prerequisite: ST220 Sterile Processing Clinical Practice

ST240 Surgical Technology Clinical Practice 2 **Cr-7**
This course is the continuation of ST230 Surgical Technician Clinical Practice 1. This course partners students with experienced Surgical Technicians. Primary surgical specialties are general surgery, OB/GYN, orthopedic, otorhinolaryngologic, and genitourinary. As students transition to a more active role, surgical interventions include special patient care considerations, room set ups, anesthesia, positioning, skin prep, draping, incision and approach, supplies, equipment instrumentation, procedural steps, counts, dressing materials, specimen care, and postoperative destination and care. Prerequisite: ST230 Surgical Technology Clinical Practice 1

TC Telecommunications

TC110 Introduction to Public Safety Telecommunications **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 APCO institutes public safety telecommunicator course which meets industry accepted national basic training standards for public safety telecommunicator's.

TC112 Customer Service in Public Safety Telecommunications **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. **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(s) 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

TH193 Introduction to Theater **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 **Cr-3**
This course provides an introduction to the theory and practice of stage craft. Topics include construction, costumes, scene painting, and the mounting and rigging of scenery. Other learning opportunities are incorporated depending on individual production requirements.

TH195 Musical Theater **Cr-3**
This course is a survey of the musical theater from the late Nineteenth Century to the present. Emphasis is placed on the American musical, its historical antecedents, and recent production trends.

TH196 Theater Practicum **Cr-1**
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

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.

Cr-3**TH198 Introduction to Theatrical Design**

The course introduces the theory and practice of theater production design. Emphasis is placed on lighting, set, and sound design.

Cr-3**TH283 Topics in Theater**

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.

Cr-3

TM Transportation Management

TM101 Supervisor Operations 1

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.

Cr-3**TM102 Supervisor Operations 2**

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.

Cr-3

UA Remotely Piloted (Unmanned Aerial)

UA101 Introduction to Remotely Piloted Aircraft Systems

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.

Cr-3**UA102 Introduction to Remote Sensing**

This course introduces students to the concepts and interdisciplinary applications of remote sensing. The basic principles of theory and practice are presented using photographic and non-photographic imagery acquired utilizing remotely piloted platforms. Visual and digital image analysis techniques, including feature extraction, are practiced using industry standard imaging analysis software. Prerequisite: None

Cr-3**UA120 Remotely Piloted Aircraft Systems Operational and Industrial Operations**

This course explores the core technologies of Remotely Piloted Aircraft Systems (RPAS) 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.

Cr-3**UA121 Mechanics of Remotely Piloted Aircraft Systems**

This course will provide the student an understanding of the component systems common to most Remotely Piloted Aircraft Systems with an emphasis on effective integration and operations. The course focuses on the core technologies and includes examinations of the control systems, autopilots, data links, power plants (motors), servos/

Cr-3

actuators, power sources, sensors and communication technologies utilized in remotely piloted aircraft systems. Students will design, build, test, program and fly a remotely piloted aircraft vehicle. Prerequisite: ET112 Electronics of Remotely Piloted Aircraft Systems.

UA215 Remotely Piloted Aircraft Systems Mission Planning and Operations

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.

Cr-3**UA217 Remotely Piloted Aircraft Systems Operations 1**

This course provides a systems approach to piloting multi-rotor Remotely Piloted Aircraft Systems (RPAS). Payload and sensor operations will be covered along with datalinks and autonomous systems. Students develop operational skillsets to determine which RPAS to utilize and the appropriate role. This course also introduces RPAS Crew Resource Management (CRM) concepts, mission planning, and pertinent RPAS regulations. Prerequisite: UA215 Remotely Piloted Aircraft Systems Mission Planning and Operations.

Cr-3**UA218 Remotely Piloted Aircraft Systems Operations 2**

This course provides a systems approach to piloting fixed-wing Remotely Piloted Aircraft Systems (RPAS). Payload and sensor operations will be covered along with datalinks and autonomous systems. Students develop operational skillsets to determine which RPAS to utilize and the appropriate role. This course also introduces RPAS Crew Resource Management (CRM) concepts, mission planning, and pertinent RPAS regulations. Prerequisite: UA215 Remotely Piloted Aircraft Systems Mission Planning and Operations.

Cr-3**UA221 Special Topics in Remotely Piloted Aircraft Systems Operations**

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. Corequisite: UA218 Remotely Piloted Aircraft Systems Operations 2.

Cr-3

VP

VP101 Introduction to Video Production

This course covers the theory, role, scope, and practice of video editing and introduces the ways and means to edit video to communicate effectively with an audience. Emphasis is placed on formulating basic editing procedures with particular stress on understanding software abilities and limitations. It investigates approaches to shaping and formatting video content and communicating conceptual elements to an audience.

Cr-3**VP102 Audio Production**

This course covers the theory, role, scope, and practice of audio production techniques and operations. It investigates the use of sound as a means to effectively communicate with an audience through sound creation and design. In addition, sound editing and capture, along with interviewing, will be demonstrated.

Cr-3**VP201 Visual and Special Effects**

This course introduces the use of visual and special effects for video production. Emphasis is placed on utilizing industry software to create dynamic effects that communicate effectively with an audience. It

Cr-3

investigates the use of visual and special effects as a means of expression.

VP202 Video Production Seminar

Cr-3

This course prepares students for entry into the field of video production as practicing professionals through the creation of capstone projects that encompass the skills inherent in the curriculum. Emphasis will be placed upon the completion of a professional portfolio that will be screened to the entire class and possible guests.

WE Weather Studies

WE101 Introduction to Weather Studies

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

WS101 Gateway to Business Success

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

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

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.

Credit Degree Programs

Program	HEGIS (a)	Degree
Administrative Assistant	5005	AAS
Advertising: Photography	5012	AAS
Air Conditioning Technology-Refrigeration	5317	AOS
Business: Accounting	5002	AAS
Business Administration	5004	AS
Business Administration	5004	AAS
Chemical Dependency Practitioner	5506	AAS
Chemical Technology	5305	AAS
Civil Engineering Technology	5309	AAS
Computer Aided Drafting (CAD)	5303	AOS
Computer Applications Programming	5103	AAS
Computer Information Systems	5103	AAS
Computer Science	5101	AS
Computer Science: Cybersecurity	5199	AS
Criminal Justice	5505	AAS
Criminal Justice	5505	AS
Criminal Justice: Law Enforcement	5505	AAS
Culinary Arts Management (Rome Campus)	5404	AOS
Digital Animation	5012	AAS
Digital Media & Marketing	5004	AS
Electrical Engineering Technology	5310	AAS
Electrical Service Technician	5317	AOS
Emergency Medical Services/Paramedic (b)	5299	AAS
Engineering Science	5609	AS
Fine Arts	5610	AS
Fire Protection Technology	5507	AAS
Food Service Administration: Restaurant Management (Rome Campus)	5010	AAS
Geospatial Technology	5399	AAS
Graphic Communication: Graphic Design	5012	AAS
Graphic Communication: Illustration	5012	AAS
Health Information Technology	5213	AAS
Health Sciences	5299	AS
Health Studies: Radiologic Technology	5207	AAS
Hotel Technology: Meeting Services Management (Rome Campus) (b)	5010	AAS

Human Services	5501	AAS
Individual Studies	5699	AA,AS,AAS,AOS
Interpreter Education (Rome Campus)	5599	AAS
Liberal Arts & Sciences: Adolescence Education	5649	AS
Liberal Arts & Sciences: Childhood Education - Teacher Education Transfer	5649	AS
Liberal Arts & Sciences: General Studies - Childhood Education (Oneonta Transfer)	5649	AS
Liberal Arts & Sciences: General Studies	5649	AS
Liberal Arts & Sciences: Humanities & Social Science	5649	AA
Liberal Arts & Sciences: International Studies	5622	AA
Liberal Arts & Sciences: Mathematics & Science	5649	AS
Liberal Arts & Sciences: Psychology	5620	AS
Liberal Arts & Sciences: Public Policy	5508	AS
Liberal Arts & Sciences: Theater	5610	AA
Mechanical Engineering Technology	5315	AAS
Mechanical Technology: Aircraft Maintenance	5302	AAS
Metal Fabrication	5312	AOS
Nursing	5208.10	AAS
Nutrition & Dietetics	5613	AS
Recreation & Leisure Services	5506.10	AAS
Remotely Piloted Aircraft Systems	5302	AAS
Respiratory Care	5215	AAS
School Facilities Management	5317	AAS
Semiconductor Manufacturing Technology	5311	AAS
Sports Management	5099	AS
Surgical Technology (Rome Campus)	5211	AAS
Welding Technology	5308	AOS

(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.

Certificate Programs

Certificate Programs	HEGIS (a)	Credit Hours
Administrative Assistant	5005	30-31
Airframe and Powerplant Technician (Rome Campus)	5302	42

Carpentry and Masonry (Catherine Street Facility)	5317	39-41
Chef Training (Rome Campus)	5404	30
Coaching	5506	26
Computer-Aided Drafting	5304	30-32
Computer Numeric Controlled (CNC) Machinist Technology	5104	35
Criminal Justice: Law Enforcement	5505	33
Cybersecurity	5199	24
English as a Second Language	5611	29-30
Entrepreneurship	5001	30
Finance	5003	31
Heating and Air Conditioning	5317	34
Mechatronics	5311	32
School Facilities Management	5317	30
Small Business Management	5004	30
Welding	5308	34

(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.

Surgical Technology

Associate in Applied Science Degree

This program prepares individuals for work as entry level Surgical Technician / Technologist. Graduates will work in operating room suites assisting in the preparation of supplies and in the delivery of care to the surgical patient. Just prior to graduation, student will take a national test through The National Board of Surgical Technology and Surgical Assisting (NBSTSA). Students will also have the opportunity to become certified as a Sterilization Processing Technician.

Total Credit Hours: 61

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
HM100 Medical Terminology for Health Professionals	3.0
MA108 Concepts in Mathematics	3.0
PY101 Introduction to General Psychology	3.0
ST120 Surgical Instrumentation	2.0

Second Semester

BI216 Human Anatomy & Physiology 1	4.0
ST130 Sterile Processing and Surgical Technology	3.0
ST131 Fundamentals of Surgical Technology	3.0
ST220 Sterile Processing Clinical Practice	6.0

Third Semester

BI217 Human Anatomy & Physiology 2	4.0
EN102 English 2: Ideas and Values in Literature	3.0
ST140 Surgical Technology Skills & Procedures 1	3.0
ST230 Surgical Technology Clinical Practice 1	6.0

Fourth Semester

BI209 Basic Pathophysiology	3.0
ST109 Pharmacology for the Surgical Technologist	2.0
ST141 Surgical Technology Skills & Procedures 2	3.0
ST240 Surgical Technology Clinical Practice 2	7.0

Note: HM100, HM120, and BI209 are online only

Recommendation:

- 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.)
- High school biology or its equivalent is recommended.

Prerequisites:

The following requirements must be met before acceptance into the program:

- High school diploma or its equivalent.
- An appropriate MVCC Mathematics Placement test result.
- Proof of current Health Care Provider CPR certification must be on file from the American Heart Association.
- The Health Physical Assessment form must be completed and on file by August 1 for Fall admission.
- Prerequisites taken at MVCC or at other institutions must have a minimum grade of "C" (70) within the last 7 years.
- Schedule an appointment with the School of Health Sciences. 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, "sturdy" shoes and support hose) are required before entering AH120 Surgical Technician Clinical Seminar. Students are required to purchase "scrubs."
- Minimum grade of "C" (70) 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.
- Students unable to complete Surgical Technician certificate coursework at MVCC may face barriers to completion, credentialing or employment; therefore, it is highly recommended for these students to meet with the Dean of Health Sciences to discuss implications.
- If a student relocates to a state in which the institution does not have approval to operate prior to program completion it may adversely impact the student's ability to complete the program or gain in-field employment.

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.

Total Credit Hours: 30 - 31

First Semester

AA111 Keyboarding - Basic	3.0
AA208 Office Administration	3.0
BM108 Personal Finance	3.0
EN101 English 1: Composition	3.0
IS101 Computers and Society	3.0

Second Semester

AA106 Business Communications	3.0
AA112 Keyboarding - Intermediate	3.0
IS130 Desktop Publishing for Business	3.0
Program Elective (a)	3.0
EN150 Effective Speech	3.0

(a) Students interested in Accounting should take either AC110 Principles of Accounting or AC115 Financial Accounting.

Students interested in Business Management should take either BM100 Intro to Business or BM290 Business Internship or BM254 Human Resources Management.

Students interested in Healthcare should take either HM100 Medical Terminology for Health Professionals or HM101 Health Information Management Introductory Concepts.

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.

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
AA111 Keyboarding - Basic	3.0
BM108 Personal Finance	3.0
EN101 English 1: Composition	3.0
IS101 Computers and Society	3.0
SO101 Introduction to Sociology	3.0
Physical Education Elective	0.5

Second Semester

AA106 Business Communications	3.0
AA112 Keyboarding - Intermediate	3.0
EN102 English 2: Ideas and Values in Literature	3.0
Mathematics Elective (a)	3.0
IS130 Desktop Publishing for Business	3.0
Physical Education Elective	0.5

Third Semester

AA208 Office Administration	3.0
AA214 Keyboarding-Advanced	3.0
IS200 Spreadsheet Concepts and Applications	3.0
IS210 Database Design and Management	3.0
Any GE Natural Science Course	4.0
Physical Education Elective	0.5

Fourth Semester

AA203 Machine Transcription	3.0
BM254 Human Resources Management	3.0
Restricted Elective (b)	3.0
EN150 Effective Speech	3.0
PY101 Introduction to General Psychology	3.0
Physical Education Elective	0.5

(a) MA108 Concepts in Mathematics OR MA110 Elementary Statistics

(b) Students have options when working as an Administrative Assistant. Below are some suggestions on program electives that will better prepare students in the workforce depending on career interests.

Students Interested in Accounting:

AC110 Principles of Accounting
AC115 Financial Accounting
AC131 Business Law 1

Students Interested in Business Management:

BM100 Introduction to Business
BM290 Business Internship
AC131 Business Law 1

Students Interested in Healthcare:

HM100 Medical Terminology for Health Professionals (online only)
HM101 Health Information Management Introductory Concepts (online only)
AC131 Business Law 1

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

CF100 College Foundations Seminar	1.0
PT101 Traditional Black and White Photography	3.0
EN101 English 1: Composition	3.0
MD161 Visual Communication	3.0
PT205 History of Photography 1	3.0
PT207 Digital Photography 1: Camera and Editing	3.0
Physical Education Elective	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
MA110 Elementary Statistics	3.0
PT208 Digital Photography 2: Compositing	3.0
PT106 Multimedia Photography	3.0
PT206 History of Photography 2	3.0
Physical Education Elective	0.5

Third Semester

PT103 Video and Narrative	3.0
PT104 Studio Techniques	3.0
PT201 Photojournalism	3.0
PT209	3.0
PY101 Introduction to General Psychology	3.0
Physical Education Elective	0.5

Fourth Semester

PT204 Photography Seminar	3.0
PT210 Portrait and Fashion Photography	3.0
PT105 Publishing Techniques for Photography	3.0
PH112 Science of Light 1	4.0
PT202 Alternative Processes	3.0
Physical Education Elective	0.5

Air Conditioning Technology: Refrigeration

Associate in Occupational Studies Degree

The Air Conditioning Technology 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.

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
ET105 Computer Control Fundamentals	2.0
ET108 Refrigeration 1	4.0
ET101 Technical Electricity 1	3.0
MA105 Technical Mathematics 1	4.0
PE Physical Education	0.5

Second Semester

ET102 Technical Electricity 2	3.0
ET209 Refrigeration 2	5.0
ET220 Air Conditioning Principles	4.0
ET123 Proper Refrigerant Usage	3.0
PE Physical Education	0.5

Third Semester

ET104 Systems Diagrams	3.0
ET221 Air Conditioning Systems	5.0
ET223 Transport Refrigeration	4.0
ET236 Commercial - Industrial Wiring and Codes	4.0
PE Physical Education	0.5

Fourth Semester

EN110 Oral and Written Communication	3.0
ET222 Systems Design	3.0
ET224 Modern Hydronic Systems	3.0
ET226 HVAC Diagnostics	3.0
ET230 AC Motors & Controls	5.0
PE Physical Education	0.5

Airframe and Powerplant Technician

Certificate

This 42-credit-hour 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 Power plant Certificate.

Total Credit Hours: 42

First Semester

AV170 General Maintenance Practices	5.0
AV171 Materials and Processes	2.0
AV172 Basic Electricity	2.0
AV173 Airframe Systems 1	5.0

Second Semester

AV174 Airframe Systems 2	3.0
AV175 Aircraft Structures 1	3.0
AV176 Aircraft Structures 2	3.5
AV177 Airframe Inspection & Welding	2.0
AV178 Introduction to Powerplant	2.5

Third Semester

AV179 Reciprocating Engines	2.0
AV180 Turbine Engines & Powerplant Systems	4.0
AV181 Powerplant Systems	6.0
AV182 Powerplant Inspection & Electrical Systems	2.0

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 required.

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
BM100 Introduction to Business	3.0
BM110 Principles of Microeconomics	3.0
AC115 Financial Accounting	3.0
EN101 English 1: Composition	3.0
PY101 Introduction to General Psychology	3.0
Physical Education Elective	0.5

Second Semester

AC116 Managerial Accounting	3.0
BM115 Principles of Macroeconomics	3.0
EN102 English 2: Ideas and Values in Literature	3.0
MA110 Elementary Statistics	3.0
IS101 Computers and Society	3.0
Physical Education Elective	0.5

Third Semester

MA139 College Algebra	4.0
Natural Science Elective (c)	4.0
BM120 Principles of Marketing	3.0
HU187 Art Appreciation	3.0
Physical Education Elective	0.5

Fourth Semester

MA140 Calculus for Business and Social Science	4.0
AC131 Business Law 1	3.0
SO101 Introduction to Sociology	3.0
SP101 Elementary Spanish 1	3.0
HI101 History of Civilization 1	3.0
Physical Education Elective	0.5

(a) Students are encouraged to take either PY101 OR SO101 as their Social Science Elective. PS101, AN101, OR GE101 are also acceptable.

(b) Students are encouraged to take the MA139 and MA140 sequence. Students can also take the MA140 and MA150 OR MA150 and MA151 sequences.

(c) Natural Science elective options (choose one): BI103, BI105, CH101, CH111, CH120, CH131, GL100, GL101, PH112, PH141, PH151, PH106, OR WE101

(d) Course is a suggested general education elective, other acceptable options should be discussed with your faculty mentor

Business Administration

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 concentrate in one or more areas of study. One High School Mathematics Course or its equivalent is required.

(a) Students are encouraged to take either PY101 OR SO101 as their Social Science Elective. PS101, AN101, OR GE101 are also acceptable.

(b) Natural Science elective options (choose one): BI103, BI105, CH101, CH111, CH120, CH131, GL100, GL101, PH112, PH141, PH151, PH106, OR WE101

(c) Course is a suggested business elective, other acceptable options should be discussed with your faculty mentor.

Total Credit Hours: 61 - 62

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
GE Social Science Elective (a)	3.0
AC115 Financial Accounting	3.0
BM100 Introduction to Business	3.0
BM110 Principles of Microeconomics	3.0
Physical Education Elective	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
MA110 Elementary Statistics	3.0
AC116 Managerial Accounting	3.0
IS101 Computers and Society	3.0
BM115 Principles of Macroeconomics	3.0
Physical Education Elective	0.5

Third Semester

BM120 Principles of Marketing	3.0
AC131 Business Law 1	3.0
BM251 Organizational Behavior	3.0
Natural Science Elective (b)	4.0
BM254 Human Resources Management	3.0
Physical Education Elective	0.5

Fourth Semester

EN150 Effective Speech	3.0
BM108 Personal Finance	3.0
BM290 Business Internship	3.0
BM150 Principles of Entrepreneurship	3.0
IS200 Spreadsheet Concepts and Applications	3.0
Physical Education Elective	0.5

Academic career paths include:

- Marketing
- International Business
- Human Resources Management
- Computer Applications
- Recreation Management

Advising is recommended for proper course selection for program electives.

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.

(c) Course is a suggested elective, other acceptable options should be discussed with your faculty mentor.

Total Credit Hours: 62

First Semester

CF100 College Foundations Seminar	1.0
AC115 Financial Accounting	3.0
BM100 Introduction to Business	3.0
EN101 English 1: Composition	3.0
BM110 Principles of Microeconomics	3.0
PY101 Introduction to General Psychology	3.0
Physical Education Elective	0.5

Second Semester

AC116 Managerial Accounting	3.0
BM115 Principles of Macroeconomics	3.0
EN102 English 2: Ideas and Values in Literature	3.0
MA110 Elementary Statistics	3.0
IS101 Computers and Society	3.0
Physical Education Elective	0.5

Third Semester

AC127 Computerized Accounting Systems	3.0
AC131 Business Law 1	3.0
AC243 Cost Accounting	3.0
Natural Science Elective (b)	4.0
BM254 Human Resources Management	3.0
Physical Education Elective	0.5

Fourth Semester

AC201 Intermediate Accounting 1	3.0
IS200 Spreadsheet Concepts and Applications	3.0
AC230 Financial Management	3.0
BM108 Personal Finance	3.0
BM290 Business Internship	3.0
Physical Education Elective	1

(a) Students are encouraged to take either PY101 OR SO101 as their Social Science Elective. PS101, AN101, OR GE101 are also acceptable.

(b) Natural Science electives include: BI101, BI103, CH101, CH111, CH120, CH131, GL10, GL101, PH112, PH141, PH151, PH106, OR, WE101

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.

Total Credit Hours: 39 - 41

First Semester

CB121 Masonry 1	4.0
CB122 Masonry 2	4.0
CB123 Masonry 3	4.0
CB126 Blueprint Reading (Construction Trades)	3.0

Second semester

CB101 Carpentry 1	4.0
CB102 Carpentry 2	4.0
CB103 Carpentry 3	4.0
CB131 Construction Estimating	3.0

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.

Total Credit Hours: 30

First Semester

CF100 College Foundations Seminar	1.0
FS111 Food Preparation 1	4.0
FS121 Baking 1	4.0
FS150 Safety & Sanitation	3.0
IS101 Computers and Society	3.0

Second Semester

FS112 Food Preparation 2	3.0
FS131 Food, Beverage and Labor Cost Control	3.0
FS141 Purchasing for the Hospitality Industry	3.0
FS230 Food Service Practicum	3.0
FS233 Principles of Food Marketing	3.0

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. Beard guard required.

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 degree fulfill all the 350 hour education and training requirements for a Credentialed Alcohol and Substance Abuse Counselor, Trainee (CASAC-T). There are additional requirements for work experience prior to fulfilling Office of Alcohol and Substance Abuse Services (OASAS) requirements for CASAC credentialing. Additional information about CASAC requirements can be found at <https://oasas.ny.gov/sqa/credentialing/casacprocess.cfm>.

After successful completion of HS241 Chemical Dependencies, other specific courses are required to complete this program. They include:

- AS201 Introduction to Alcoholism/Substance Abuse Counseling
- HS233 Group Counseling Skills
- AS202 Alcoholism/Addiction and Family Systems
- AS204 Special Topics in Alcoholism and Substance Abuse Treatment Programs

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
BI103 Human Life Science 1	4.0
EN101 English 1: Composition	3.0
HS101 Introduction to Human Services	3.0
PY101 Introduction to General Psychology	3.0
SO101 Introduction to Sociology	3.0
Physical Education Elective	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
HS241 Chemical Dependencies	3.0
PY203 Abnormal Psychology	3.0
Mathematics Elective (a)	3.0
PY210 Evaluation, Research and Measurement in Behavioral Science	3.0
Physical Education Elective	0.5

Third Semester

AS201 Introduction to Alcoholism/ Substance Abuse Counseling	3.0
AS202 Alcoholism/Addictions and Family Systems	3.0
AS206 Prevention Principles for Alcohol, Tobacco and Other Drug Problems	3.0
HS231 Ethics, Policy and Law	3.0
HS251 Internship 1	3.0
PE Physical Education	0.5

Fourth Semester

AS204 Special Topics in Alcoholism and Substance Abuse Treatment Programs	3.0
HS233 Group Counseling Skills	3.0
HS252 Internship 2	3.0
Program Elective (b)	3.0
Psychology Elective (c)	3.0
PE Physical Education	0.5

* AS201, AS206 & AS204 students need to receive a grade C or better in HS241 Chemical Dependencies.

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.

(a) MA108 Concepts in Mathematics OR MA110 Elementary Statistics

(b) Program Electives:

AS207 Prevention Practice for ATOD* (c) 3

AS208 Pathological Gambling* (b) 3
HS232 Counseling Techniques* 3

(c) 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

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.

Total Credit Hours: 60 - 61

First Semester

CF100 College Foundations Seminar	1.0
CH141 General Chemistry 1	4.0
CI121 Microcomputer Techniques for Science	3.0
EN101 English 1: Composition	3.0
MA125 College Algebra and Trigonometry	4.0
Physical Education Elective	0.5

Second Semester

CH142 General Chemistry 2	4.0
EN102 English 2: Ideas and Values in Literature	3.0
Laboratory Science Elective (a)	4.0
PH151 General Physics 1	4.0
Physical Education Elective	0.5

Third Semester

CH247 Organic Chemistry 1	5.0
Laboratory Science Elective (a)	4.0
Social Science Elective (b)	3.0
Restricted Elective (c)	4.0
Physical Education Elective	0.5

Fourth Semester

CH246 Quantitative Analysis	5.0
CH248 Organic Chemistry 2	5.0
Restricted Elective (c)	4.0
Physical Education Elective	0.5

(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 from the following: BI141, BI142, BI202, CT151, CT232, GL101, PH112, PH113, PH114, PH152.

Restricted Electives that need Department Advisor Approval

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.

Civil Engineering Technology

Associate in Applied Science Degree

This program prepares students to enter the workforce as civil engineering technicians (or related positions) or transfer to a higher education institution. Coursework addresses the planning, design, and construction phase of civil engineering projects including aspects such as highway design, soil mechanics, material strength, steel & reinforced concrete design, hydraulics, hydrology, and construction management. Instruction occurs in the classroom, field, and laboratory settings. The program includes the use of MicroStation and Civil3D, the CAD platforms most widely used in the civil engineering field. A Capstone project with a service-learning component is completed using knowledge gained in the program. This program is accredited by the Engineering Technology Accreditation Commission of ABET, <http://www.abet.org>.

PY101 Introduction to General Psychology, or SO101 Introduction to Sociology.

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
CT102 Engineering Drawing and Microstation CAD	3.0
CT141 Introduction to Civil Engineering Technology	2.0
CT265 Introduction to Geographic Information Systems	3.0
MA121 Fundamentals of College Mathematics 1	4.0
Physical Education Elective	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
CT121 Statics	3.0
MA122 Fundamentals of College Mathematics 2	4.0
PH151 General Physics 1	4.0
Social Science Elective (a)	3.0
Physical Education Elective	0.5

Third Semester

CT151 Surveying 1	4.0
CT221 Strength of Materials: Civil	4.0
CT222 Soil Mechanics and Foundations	4.0
CT231 Transportation Engineering	3.0
Physical Education Elective	0.5

Fourth Semester

CT225 Structural Steel Design	3.0
CT226 Reinforced Concrete Design	3.0
CT232 Environmental Engineering	3.0
CT243 Construction Management	2.0
CT299 Capstone Design Project - Civil	3.0
Physical Education Elective	0.5

(a) Restricted Social Science Electives: AN101 Biological Anthropology, BM101 Survey of Economics, PS101 American National Government,

Coaching

Certificate

This certificate provides individuals wishing to coach high school athletic teams with the background important for working in a physical education setting. Central to it are the three coaching courses required by the New York State Education Department for Coaching Licensure.

Total Credit Hours: 26

First Semester

EN101 English 1: Composition	3.0
CO231 Philosophy, Principles and Organization of Athletics in Education	3.0
PY101 Introduction to General Psychology	3.0
Natural Science Elective (a)	4.0

Second Semester

CO232 Health Science Applied to Coaching	3.0
CO233 Theory & Techniques of Coaching	2.0
PY212 Adolescent Psychology	3.0
ED151 Prevention & Safety Issues for the Classroom Teacher	1.0
EN150 Effective Speech	3.0
PE111 Strength Training 1	0.5
PE112 Speed Training	0.5

(a) Natural Science Electives include: BI141 General Biology 1 OR BI103 Human Life Science 1.

Computer Aided Drafting

Certificate

This program of study prepares the students to be a drafting technician capable of working with engineers in the many facets of the technical drawing and solid modeling design fields. Emphasis is placed on the 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 may also be used as preparation for the Mechanical or Civil Engineering Technology degree programs. At least one year of high school or equivalent, including algebra, is recommended.

Total Credit Hours: 30 - 32

First Semester

CT265 Introduction to Geographic Information Systems	3.0
Mathematics Elective (a)	3.0 - 4.0
English Elective (b)	3.0
MT140 Drafting and Design Using AutoCAD	3.0
MT155 Introduction to Solid Modeling	3.0
CT102 Engineering Drawing and Microstation CAD	3.0

Second Semester

CT266 Capstone Geographic Information Systems	3.0
MT112 Architectural Drafting	3.0
MT251 Advanced AutoCAD	3.0
Program Elective (c)	3.0 - 4.0

(a) Math Electives include: MA105, MA106, MA115, MA121, MA122, MA125, MA150, MA151, MA152, MA253, MA260, MA275, or MA280.

(b) English Electives include: EN101 English 1: Composition OR EN110 Oral and Written Communications.

(c) Program Electives include: Students interested in mechanical design should plan on taking MT256 Advanced Solid Modeling. Students interested in civil/architecture/construction should take MT242 Advanced MicroStation.

(d) 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.

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

CF100 College Foundations Seminar	1.0
English Elective (a)	3.0
CT265 Introduction to Geographic Information Systems	3.0
MA105 Technical Mathematics 1	4.0
MT140 Drafting and Design Using AutoCAD	3.0
Physical Education Elective	0.5

Second Semester

English Elective (b)	3.0
MA106 Technical Mathematics 2	3.0
MT112 Architectural Drafting	3.0
CT266 Capstone Geographic Information Systems	3.0
MT251 Advanced AutoCAD	3.0
Physical Education Elective	0.5

Third Semester

CT102 Engineering Drawing and Microstation CAD	3.0
MT114 Manufacturing Processes	3.0
MT155 Introduction to Solid Modeling	3.0
MT221 Tolerance Assembly Drafting	4.0
MT229 Building Systems Drafting	3.0
Physical Education Elective	0.5

Fourth Semester

CT243 Construction Management	2.0
MT222 Tool and Drafting Design	4.0
MT223 Electrical-Electronic Drafting	3.0
MT242 Advanced MicroStation CAD	3.0
MT256 Advanced Solid Modeling	3.0
Physical Education Elective	0.5

(a) English Elective options include: EN101 English 1: Composition OR EN110 Oral & Written Communication

(b) English Elective options include: EN102 English 2: Ideas & Values in Literature OR EN147 Report Writing

Computer Applications Programming

Ready to Apply?

[Start the application process now!](#)

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.

Total Credit Hours: 63 - 64

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
CI110 Principles of Programming	3.0
CI121 Microcomputer Techniques for Science	3.0
Any GE Mathematics Course	3.0 - 4.0
Any GE Social Science Course	3.0
Physical Education Elective	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
CI130 Programming in C++	3.0
PH115 Science of Multimedia	4.0
Any GE Mathematics Course	3.0
Any GE Social Science Course	3.0
Physical Education Elective	0.5

Third Semester

CI230 Data Structures	3.0
CI285 Systems Operations & Management	3.0
PH114 Science of Digital Imaging	4.0
Any GE Natural Science Course	4.0
Computer Language Elective (a)	3.0
Physical Education Elective	0.5

Fourth Semester

CI256 Introduction to Programming for the Internet	3.0
CI271 Database Design & Implementation	3.0
CI272 Visual Basic	3.0
Computer Science Elective (b)	3.0
Physical Education Elective	0.5

(a) Computer Language Elective must be selected from the following:
CI245 JAVA Programming or CI260 Microcomputer Programming.

(b) Computer Science Elective must be selected from the following:
CI212 Internet Security, CI232 Security Policies, or CI242 CISCO Networking

Computer Information Systems

Associate in Applied Science Degree

Information technology (IT) professionals take on many roles in business and academia from internet communications and hardware support to software development and maintenance. The CIS degree prepares students for these many roles by providing both theoretical and hands on work in established and emerging technologies. Program work includes application support, computer programming and operating systems, web design, cybersecurity, business fundamentals, data analytics, and networking. One high school mathematics course or its equivalent is required.

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
Business Management Elective (a)	3.0
AC110 Principles of Accounting	3.0
IS101 Computers and Society	3.0
MA110 Elementary Statistics	3.0
Physical Education Elective	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
CI104 Introduction to Cybersecurity	3.0
IS120 Computer Operating Systems and Environments	3.0
IS210 Database Design and Management	3.0
CI110 Principles of Programming	3.0
Physical Education Elective	0.5

Third Semester

IS125 Introduction to Multimedia Applications for Business	3.0
IS200 Spreadsheet Concepts and Applications	3.0
Any GE Natural Science Course	4.0
Program Elective (b)	3.0
Physical Education Elective	0.5
Program Elective (b)	3.0

Fourth Semester

EN153 Practical and Professional Written Communications	3.0
Any GE Social Science Course	3.0
IS250 Web Development 1	3.0
IS201 Principles of Computer Security	3.0
IS240 Networking Essentials	3.0
Physical Education Elective	0.5

Business Internship substitutes for one program elective. Students interested in data analytics should choose CI271.

Information Technology Support - Microcredential:

The IT Support Professional microcredential is designed to prepare students for an entry-level role in IT support. A job in IT can mean in-person or remote help desk work in a small business or at a global company. The microcredential will introduce IT troubleshooting and customer service, networking, operating systems, system administration and security. This microcredential, with integration into the Computer Information Systems program, is designed to prepare for employment in this continuously growing field as well as provide a foundation for further education. Courses included:

- IS101 Computer and Society 3 cr.
- IS120 Computer Operating Systems and Environments 3 cr.
- IS201 Principles of Computer Security 3 cr.
- IS240 Networking Essentials 3 cr.

(a) Business Management Electives include: BM120 Principles of Marketing OR BM150 Small Business Management.

(b) Any AC, BM, CI or IS course not already required in the program except AC115, BM100, BM101, IS100, CI112, or CI212. BM290

Computer Numeric Controlled (CNC) Machinist Technology

Certificate

This major prepares students for gainful employment in general machine shops and CNC manufacturing. 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, Geometric Dimensioning and Tolerancing (GD&T), 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, using G-Code and CAM, 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.

Total Credit Hours: 35

First Semester

MT291 Introduction to Machining	4.0
MT292 Introduction to CNC Milling	4.0
MT294 Introduction to CNC Turning Centers	4.0
MT114 Manufacturing Processes	3.0

Second Semester

MT295 Advanced CNC Turning Centers	4.0
MT296 Multi-Axis CNC Machining	4.0
MT297 CNC Capstone	4.0
MT279 Sheet Metal Fabrication	3.0

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.

Total Credit Hours: 63

First Semester

CF100 College Foundations Seminar	1.0
CI110 Principles of Programming	3.0
CI130 Programming in C++	3.0
EN101 English 1: Composition	3.0
MA151 Calculus 1	4.0
HI101 History of Civilization 1	3.0
Physical Education Elective	0.5

Second Semester

CI230 Data Structures	3.0
EN102 English 2: Ideas and Values in Literature	3.0
MA152 Calculus 2	4.0
PH115 Science of Multimedia	4.0
SO101 Introduction to Sociology	3.0
Physical Education Elective	0.5

Third Semester

Physics Elective (a)	4.0
CI245 JAVA Programming	3.0
CI285 Systems Operations & Management	3.0
MA275 Discrete Algebraic Structures	4.0
Physical Education Elective	0.5

Fourth Semester

CI260 Microcomputer Programming	3.0
CI271 Database Design & Implementation	3.0
Physics (a)	4.0
Program Elective (b)	3.0
Physical Education Elective	0.5

(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.

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.

Programming. Appropriate elective should be selected in consultation with your advisor.

(c) Students will take two college level math courses in the STEM programs track which includes MA115, MA125, MA150, MA151 or MA152. Course selection will be dependent on placement scores.

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
MA110 Elementary Statistics	3.0
EN101 English 1: Composition	3.0
CI104 Introduction to Cybersecurity	3.0
HI101 History of Civilization 1	3.0
IS120 Computer Operating Systems and Environments	3.0
Physical Education Elective	0.0

Second Semester

IS240 Networking Essentials	3.0
Math Elective (c)	4.0
EN102 English 2: Ideas and Values in Literature	3.0
CI132 UNIX Operating System and Security	3.0
CI110 Principles of Programming	3.0
Physical Education Elective	1.0

Third Semester

CI130 Programming in C++	3.0
SO101 Introduction to Sociology	3.0
CI112 Networking Fundamentals	3.0
Math Elective (c)	4.0
Physical Education Elective	0.0
CI 233 UNIX Administration & Security (b)	3.0

Fourth Semester

CI212 Internet Security	3.0
CI232 Security Policies	3.0
CI246 Critical Infrastructure Security	3.0
Physical Education Elective	1.0
PH 151 General Physics 1 (a)	4.0

(a) Students take one of the following courses: CH141 General Chemistry 1 or PH151 General Physics 1. A Natural Science course 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 track: CI233 Unix Administration and Security, CJ101 Introduction to Criminal Justice, and CI245 JAVA

Criminal Justice

Associate in Science Degree

This program provides students who plan to transfer to a bachelor's 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 a good way to begin exploring the field while meeting the majority of their general education requirements.

(c) Any of the following SUNY General Education Category 3, Area 5 "Western Civilizations" courses may be chosen: HI101, HI102, HI103, or HI104.

(d) Any of the following SUNY General Education Category 3, Area 6 "Other World Civilizations" courses may be chosen: AN102, GE101, or SO207.

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
CJ101 Introduction to Criminal Justice	3.0
IS101 Computers and Society	3.0
EN101 English 1: Composition	3.0
SO101 Introduction to Sociology	3.0
PY101 Introduction to General Psychology	3.0

Second Semester

MA110 Elementary Statistics	3.0
CJ108 Criminal Law	3.0
EN102 English 2: Ideas and Values in Literature	3.0
SS218 Methods of Research	3.0
Any GE Natural Science Course	4.0

Third Semester

CJ106 Ethics in Criminal Justice	3.0
PS101 American National Government	3.0
CJ204 Criminology	3.0
Criminal Justice Elective (a)	3.0
EN150 Effective Speech	3.0
PE Elective	1.0

Fourth Semester

Criminal Justice Elective (a)	
CJ202 American Constitutional Law	3.0
Program Elective (b)	3.0
Program Elective (c)	3.0
Program Elective (d)	3.0
PE Elective	1.0

(a) Any Criminal Justice course not already required in the program, CJ110 and CJ112 have prerequisite requiring CJ107. CJ107 can be taken as the first CJ elective.

(b) Any of the following SUNY General Education Category 3, Area 4 "American History" courses may be chosen: AC131, HI111, or HI112.

Criminal Justice

Associate in Applied Science Degree

PS101, PS102, PS203, PY203, PY204, PY206, PY209, SO204, SO205, SO207, any foreign language.

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 provides a link to criminal justice practice. One High School Mathematics Course or its equivalent is required.

Total Credit Hours: 61

First Semester

CF100 College Foundations Seminar	1.0
CJ101 Introduction to Criminal Justice	3.0
IS101 Computers and Society	3.0
EN101 English 1: Composition	3.0
SO101 Introduction to Sociology	3.0
PY101 Introduction to General Psychology	3.0

Second Semester

MA110 Elementary Statistics	3.0
CJ108 Criminal Law	3.0
EN102 English 2: Ideas and Values in Literature	3.0
SS218 Methods of Research	3.0
Any GE Natural Science Course	4.0

Third Semester

CJ106 Ethics in Criminal Justice	3.0
CJ214 Criminal Justice Communications	3.0
Criminal Justice Elective (a)	3.0
Criminal Justice Elective (a)	3.0
Program Elective (b)	3.0
PE Elective	1.0

Fourth Semester

CJ290 Criminal Justice Internship	3.0
Criminal Justice Elective (a)	3.0
Criminal Justice Elective (a)	3.0
Program Elective (b)	3.0
PE Elective	1.0

(a) Any Criminal Justice course not already required in the program CJ202, CJ210 and CJ212 have prerequisites not offered in the program. CJ202 requires PS101 and can be taken as the restricted elective, CJ210 and CJ212 requires CJ107 and can be taken as the first CJ elective.

(b) Students must choose among the following courses (some courses have prerequisites): AC131, AN205, CI104, CI142, EN150, HI101, HI102, HI111, HI112, HI214, HP100/HP200, HS101, HS216, HS241,

Criminal Justice: Law Enforcement

Associate in Applied Science Degree

This degree is designed to prepare students for careers in law enforcement. The program follows standards prescribed by the New York State Municipal Police Training Council. Graduates are eligible to receive more advanced police training, which can lead to New York State Certification. The program provides the associate level credentials required by many law enforcement agencies for hiring and promotion.

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
CJ101 Introduction to Criminal Justice	3.0
IS101 Computers and Society	3.0
EN101 English 1: Composition	3.0
SO101 Introduction to Sociology	3.0
PY101 Introduction to General Psychology	3.0

Second Semester

MA110 Elementary Statistics	3.0
CJ108 Criminal Law	3.0
EN102 English 2: Ideas and Values in Literature	3.0
SS218 Methods of Research	3.0
Any GE Natural Science Course	4.0

Third Semester

LE121 Principles of Law for Police Officers	6.0
LE122 Techniques of Investigation	7.0
LE123 Policing in the Community	3.0
PE Elective	1.0

Fourth Semester

LE118 Police Procedures - Basic	5.0
LE119 Police Procedures - Intermediate	4.0
LE120 Police Procedures - Advanced	5.0
PE155 Police Fitness Training	0.5
PE162 Self Defense	0.5

Criminal Justice: Law Enforcement

Certificate

The Certificate in 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 certificate program is designed to prepare students for careers in law enforcement. The 33 credit-hour 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.

Total Credit Hours: 33

First Semester

CF100 College Foundations Seminar	1.0
LE121 Principles of Law for Police Officers	6.0
LE122 Techniques of Investigation	7.0
LE123 Policing in the Community	3.0
PE154 Fitness Center	1.0

Second Semester

LE118 Police Procedures - Basic	5.0
LE119 Police Procedures - Intermediate	4.0
LE120 Police Procedures - Advanced	5.0
PE155 Police Fitness Training	0.5
PE162 Self Defense	0.5

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.

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
FS111 Food Preparation 1	4.0
FS121 Baking 1	4.0
FS150 Safety & Sanitation	3.0
FS160 Dining Room Service	3.0
Physical Education Elective	0.5

Second Semester

EN101 English 1: Composition	3.0
FS112 Food Preparation 2	3.0
FS131 Food, Beverage and Labor Cost Control	3.0
FS141 Purchasing for the Hospitality Industry	3.0
HT101 Introduction to the Hospitality Industry	3.0
Physical Education Elective	0.5

Third Semester

BI151 Nutrition & Dietetics 1	3.0
FS210 Food Preparation 3	4.0
FS230 Food Service Practicum	3.0
HT215 Supervisory Leadership in Hospitality	3.0
IS101 Computers and Society	3.0
Physical Education Elective	0.5

Fourth Semester

BM129 Business Mathematics	3.0
FS204 Banquet & Catering Management	4.0
FS233 Principles of Food Marketing	3.0
Mathematics Elective (a)	3.0
Physical Education Elective	0.5
Program Elective (b)	3.0

(a) Mathematics options include: MA108 Concepts in Mathematics or MA110 Elementary Statistics.

(b) Program elective options include: AC131 Business Law 1, FS202 Menu & Facilities Planning, FS242 Beverage & Bartending Management, OR HT211 Convention Services Management.

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. Beard guard required.

*Baking & Pastry Arts courses:

- Take FS205 Baking 2 - 4 cr. for FS112 Food Preparation 2 - 3 cr.
- Take FS202 Menu & Facilities Planning - 3 cr. for FS210 Food Preparation 3 - 4 cr.
- Take FS213 Cake Decorating - 3 cr. for BI151 Nutrition & Dietetics 1 - 3 cr.
- Take FS225 Advanced Bread Baking - 3 cr. for Restricted Program Elective - 3-4 cr.
- Take FS245 Pastry Techniques & Practices - 4 cr. for FS204 Banquet & Catering Management - 4 cr.

Micro-credential Options

Kitchen Competencies:

This micro-credential will provide a early milestone for our Culinary Arts students as well as a credential for workforce development based on meetings with area employers looking for a specific skill set for their operation. Courses include:

- FS111 Food Preparation 1 - 3 cr.
- FS150 Safety and Sanitation - 3 cr.
- FS112 Food Preparation 2 - 4 cr.

Introduction to Baking:

This micro-credential will provide an early milestone for our pastry arts students as well as a credential for workforce development based on meetings with area employers looking for a specific skill set for their operations. This the first of two micro credentials in baking. Courses include:

- FS121 Baking 1 - 4 cr.
- FS213 Cake Decorating - 3 cr.
- FS205 Baking 2 - 4 cr.

Advanced Baking:

This micro-credential will provide a mid-program milestone for our Pastry Arts students as well as a credential for workforce development based on meetings with area employers looking for a specific skill set for their operations. This is the second of two micro-credentials in baking. Courses include:

- FS225 Advanced Bread Baking - 3 cr.
- FS245 Pastry Techniques & Practices - 4 cr.

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

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 wide variety of security analysis/defensive tools, students implement these tools, and then attempt to circumvent them.

Total Credit Hours: 24

First Semester

CI104 Introduction to Cybersecurity	3.0
CI110 Principles of Programming	3.0
CJ101 Introduction to Criminal Justice	3.0
IS120 Computer Operating Systems and Environments	3.0

Second Semester

CI112 Networking Fundamentals	3.0
CI142 Computer Forensics	3.0
CI212 Internet Security	3.0
CI232 Security Policies	3.0

Digital Animation

Associate in Applied Science Degree

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 prepare students for the digital workplace. One High School Mathematics Course or its equivalent is required.

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
MD161 Visual Communication	3.0
FA101 General Drawing	3.0
CG133 Introduction to Animation	3.0
GD145 Digital Applications 1	3.0
Physical Education Elective	0.5

Second Semester

MA110 Elementary Statistics	3.0
FA103 Figure Drawing 1	3.0
CG134 Digital Applications for the Animator	3.0
CG144 Digital Animation 1	3.0
CG147 Sculptural Procedures for the Animator	3.0
Physical Education Elective	0.5

Third Semester

CG145 Digital Animation 2	3.0
CG146 Storyboarding	3.0
CG231 Advanced Animation Techniques	3.0
EN102 English 2: Ideas and Values in Literature	3.0
HU188 Film Appreciation	3.0
Physical Education Elective	0.5

Fourth Semester

NS1xx GE Natural Science	4.0
CG233 Animation Production Workshop	3.0
CG235	3.0
SO101 Introduction to Sociology	3.0
CG234 Professional Practices for the Animator	3.0
Physical Education Elective	0.5

Digital Media and Marketing

Associate in Science Degree

This program provides the skills and knowledge required to analyze and plan media strategies, assess media costs and budgets, communicate visually, and evaluate the uses of media. Graduates will be prepared to enter the fields of social media marketing, public relations, media design and planning, and social media strategies. This program allows students through the SUNY Communication: Media transfer pathway.

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
HI101 History of Civilization 1	3.0
MD161 Visual Communication	3.0
GD145 Digital Applications 1	3.0
PT207 Digital Photography 1: Camera and Editing	3.0
Physical Education Elective	0.5

Second Semester

MA110 Elementary Statistics	3.0
EN102 English 2: Ideas and Values in Literature	3.0
BM120 Principles of Marketing	3.0
PT106 Multimedia Photography	3.0
GD146 Digital Applications 2	3.0
Physical Education Elective	0.5

Third Semester

EN150 Effective Speech	3.0
PT103 Video and Narrative	3.0
EN196 Journalism	3.0
SO101 Introduction to Sociology	3.0
MD151 Fundamentals of Media	3.0
Physical Education Elective	0.5

Fourth Semester

HI102 History of Civilization 2	3.0
CG214 Motion Graphics	3.0
PY101 Introduction to General Psychology	3.0
Any GE Natural Science Course	4.0
MD254 Media Planning	3.0
Physical Education Elective	0.5

For successful completion of this program, it is strongly recommended students complete two years of high school mathematics, or the equivalent, and one year of a chemistry (lab included).

(a) Natural Science Elective should be selected from the following: CH142 General Chemistry 2 or BI201 Microbiology.

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, <http://www.abet.org>. Purchase of a scientific calculator, digital multi-meter, basic hand tools, and electronic breadboard is required for this program. Recommended student preparation prior to entry into this program includes two high school mathematics courses and one laboratory science course (physics and chemistry are recommended). Students well-prepared in mathematics may substitute a higher level mathematics sequence upon approval of the Dean. Elective courses may be included in this program to match students' interests and to focus on career or continuing education goals.

- Students well prepared in mathematics may substitute a higher mathematics sequence with the approval of the academic school Dean.

(a) Social Science Restricted Electives: AN101 Biological Anthropology, BM101 Survey of Economics, PS101 American National Government, PY101 Introduction to General Psychology, GE101 Essentials of World Geography, or SO101 Introduction to Sociology.

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
ET151 Circuits 1	4.0
ET153 Introduction to Electronics	2.0
ET154 Computer Programming	2.0
MA121 Fundamentals of College Mathematics 1	4.0
Physical Education Elective	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
ET152 Circuits 2	4.0
ET161 Linear Electronics	3.0
ET181 Digital Electronics 1	3.0
MA122 Fundamentals of College Mathematics 2	4.0
Physical Education Elective	0.5

Third Semester

ET262 Operational Amplifiers	4.0
ET282 Digital Electronics 2	3.0
Social Science Elective (a)	3.0
ET283 Microprocessor Fundamentals	4.0
Physical Education Elective	0.5

Fourth Semester

ET274 Telecommunications Concepts	4.0
ET284 Design & Layout	3.0
ET285 Motors and Controls	4.0
PH151 General Physics 1	4.0
Physical Education Elective	0.5

Preparation for this program should include:

- Two high school mathematics courses, or the equivalent.
- One laboratory science (physics and chemistry are recommended).

Electrical Service Technician

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.

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
ET105 Computer Control Fundamentals	2.0
ET127 Modern Industrial Practice	3.0
ET101 Technical Electricity 1	3.0
MA105 Technical Mathematics 1	4.0
MT149 Pneumatic and Hydraulic Systems	3.0
Physical Education Elective	0.5

Second Semester

ET102 Technical Electricity 2	3.0
ET104 Systems Diagrams	3.0
ET131 Electrical Machinery and Controls 1	4.0
ET251 Mechatronics Systems	3.0
MT139 Mechanical Systems	4.0
Physical Education Elective	0.5

Third Semester

ET141 Programmable Logic Controllers	3.0
ET233 Industrial Electronics	5.0
ET236 Commercial - Industrial Wiring and Codes	4.0
EN110 Oral and Written Communication	3.0
Physical Education Elective	0.5

Fourth Semester

ET235 Digital Logic	4.0
ET246 Industrial Computer Applications	5.0
ET232 Electrical Machinery and Controls 2	5.0
Physical Education Elective	0.5

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.

Total Credit Hours: 66 - 67

First Semester

CF100 College Foundations Seminar	1.0
CH141 General Chemistry 1	4.0
CI130 Programming in C++	3.0
EN101 English 1: Composition	3.0
ES151 Introduction to Engineering	2.0
MA151 Calculus 1	4.0
Physical Education Elective	0.5

Second Semester

Social Science Elective (a)	3.0
EN102 English 2: Ideas and Values in Literature	3.0
ES175 Engineering Science Design	3.0
MA152 Calculus 2	4.0
PH261 Engineering Physics 1	4.0
Physical Education Elective	0.5

Third Semester

ES271 Engineering Statics	3.0
Restricted Elective (b)	4.0
MA253 Calculus 3	4.0
PH262 Engineering Physics 2	4.0
Physical Education Elective	0.5

Fourth Semester

MA260 Differential Equations	3.0
ES272 Engineering Dynamics	3.0
Social Science Elective (a)	3.0
Restricted Elective (c)	3.0 - 4.0
Restricted Elective (c)	3.0 - 4.0
Physical Education Elective	0.5

(a) AN101 Biological Anthropology, BM101 Survey of Economics, HI101 History of Civilization 1, PS101 American National Government, GE101 Essentials of World Geography or SO101 Introduction to Sociology.

(b) CT151 Surveying 1, ES291-Electrical Circuits 1, BI141 General Biology 1, CH142 General Chemistry 2 (4.0 Cr)

(c) ES292 Electrical Circuits 2, ES261 Mechanics of Materials, ES281 Thermodynamics, BI142 General Biology 2, MA280 Linear Algebra, PH265--Modern Physics & Thermodynamics, CH142 General Chemistry 2

Student transfer options:

Mechanical Engineering student option (66 Credits)	<ul style="list-style-type: none"> Students should take ES291 for Restricted elective (b). Students should take ES261 and ES281 or MA280 for Restricted electives (c).
Civil Engineering student option (66 Credits)	<ul style="list-style-type: none"> Students should take CT151 for Restricted elective (b). Students should take ES261 and ES281 or MA280 for Restricted electives (c).
Electrical Engineering student option (66-67 Credits)	<ul style="list-style-type: none"> Students should take ES291 for Restricted elective (b). Students should take MA280, and PH265 or CH142 for Restricted electives (c).
Environmental Engineering student option (66 Credits)	<ul style="list-style-type: none"> Students should take CH142 for Restricted elective (b). Students should take ES261, and one of (BI141, ES281, or PH265 for Restricted electives (c)).

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. Students who wish additional study 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.

Total Credit Hours: 29 - 30

Plan of Study:

SL115 ESL 4: Advanced Reading	4.0
SL116 ESL 4: Advanced Composition	4.0
SL117 ESL 4: Advanced Grammar	4.0
SL118 ESL 4: Advanced Listening and Speaking	4.0
English Elective (a)	3.0
Language Elective (b)	4.0
Program Elective (c)	3.0
Program Elective (c)	3.0

For students intending to complete an A.O.S degree program

SL115 ESL 4: Advanced Reading	4.0
SL116 ESL 4: Advanced Composition	4.0
SL117 ESL 4: Advanced Grammar	4.0
SL118 ESL 4: Advanced Listening and Speaking	4.0
SL120 Pronunciation in Practice	4.0
EN110 Oral and Written Communication	3.0
Program Elective (c)	3.0
Program Elective (c)	3.0

(a) English Electives include: EN105 English Composition for Speakers of Other Languages OR EN101 English 1: Composition

(b) Language Electives include: SL120 Pronunciation in Practice OR SL124 Applied Grammar.

(c) Upon completion of the level 4 ESL components of the Certificate, students should take AA111 Keyboarding - Basic or 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.

Total Credit Hours: 30

First Semester

BM150 Principles of Entrepreneurship	3.0
AA106 Business Communications	3.0
AC110 Principles of Accounting	3.0
AC131 Business Law 1	3.0
IS101 Computers and Society	3.0

Second Semester

BM120 Principles of Marketing	3.0
BM251 Organizational Behavior	3.0
BM254 Human Resources Management	3.0
BM264 Professional Selling	3.0
BM275 Capstone in Entrepreneurship	3.0

Finance

Certificate

This certificate comprises a concentration of ten 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 Business Administration (AAS) or to the Individual Studies degree.

Total Credit Hours: 31

First Semester

AC115 Financial Accounting	3.0
BM110 Principles of Microeconomics	3.0
BM115 Principles of Macroeconomics	3.0
IS101 Computers and Society	3.0
MA115 Intermediate Mathematics	4.0

Second semester

AC116 Managerial Accounting	3.0
BM230 Money and Banking	3.0
BM129 Business Mathematics	3.0
IS200 Spreadsheet Concepts and Applications	3.0
Certificate Elective (a)	3.0

(a) Certificate Electives include: AC230 Financial Management OR BM108 Personal Finance.

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 Art electives are also offered to allow students to further their artistic experience.

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
MD161 Visual Communication	3.0
FA101 General Drawing	3.0
FA105 Foundation Design	3.0
FA108 Three-Dimensional Design	3.0
Physical Education Elective	0.5

Second Semester

MA110 Elementary Statistics	3.0
FA103 Figure Drawing 1	3.0
FA106 Color Theory	3.0
FA113 Figure Sculpture 1	3.0
HU205 History of Art 2	3.0
Physical Education Elective	0.5

Third Semester

FA104 Figure Drawing 2	3.0
FA209 Painting 1	3.0
HU204 History of Art 1	3.0
EN102 English 2: Ideas and Values in Literature	3.0
FA201 Figure Sculpture 2	3.0
Physical Education Elective	0.5

Fourth Semester

NS1xx	4.0
PY101 Introduction to General Psychology	3.0
FA218 Painting 2	3.0
SO101 Introduction to Sociology	3.0
FL1xx or HU227	3.0
Physical Education Elective	0.5

Fire Protection Technology

Associate in Applied Science Degree

The Fire Protection Technology program is an Associate in Applied Science degree, and is a collaborative effort between MVCC and the Utica Fire Academy. The program is for individuals that 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 course work at MVCC and successfully complete a rigorous 500 plus 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 Street, 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.

(b) PY207 Life-Span Development Psychology OR GE Social Science Elective

(c) MA108 Concepts in Mathematics OR MA110 Elementary Statistics

Total Credit Hours: 63

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
HC100 Introduction to Health Care	3.0
Social Science Elective (a)	3.0
SO101 Introduction to Sociology	3.0
PY101 Introduction to General Psychology	3.0

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
Any GE Natural Science Course	4.0
IS101 Computers and Society	3.0
Program Elective (b)	3.0
Mathematics Elective (c)	3.0

Third Semester

Utica Fire Academy	15.0
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Fourth Semester

Utica Fire Academy	16.0
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Note:

Students must contact the Utica Fire Academy Director at 315-223-7227 prior to applying for this program. MVCC has an agreement with the Utica Fire Academy and can not guarantee admissions into the Academy. To complete the degree requirements a student must successfully complete course work at the Utica Fire Academy.

(a) PS203 State & Local Government OR PS101 American National Government

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. Beard guard required.

Students in the Food Service Administration: Restaurant 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. Beard guard required.

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
FS111 Food Preparation 1	4.0
FS150 Safety & Sanitation	3.0
HT101 Introduction to the Hospitality Industry	3.0
Physical Education Elective	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
FS112 Food Preparation 2	3.0
FS131 Food, Beverage and Labor Cost Control	3.0
FS141 Purchasing for the Hospitality Industry	3.0
GE Mathematics Elective (a)	3.0
Physical Education Elective	0.5

Third Semester

AC110 Principles of Accounting	3.0
FS210 Food Preparation 3	4.0
IS101 Computers and Society	3.0
Any GE Natural Science Course	4.0
Any GE Social Science Course	3.0
Physical Education Elective	0.5

Fourth Semester

EN150 Effective Speech	3.0
FS202 Menu & Facilities Planning	3.0
FS204 Banquet & Catering Management	4.0
FS242 Beverage & Bartending Management	3.0
HT215 Supervisory Leadership in Hospitality	3.0
Physical Education Elective	0.5

(a) MA108 Concepts in Mathematics, MA110 Elementary Statistics, MA115 Intermediate Mathematics, OR MA139 College Algebra.

Geospatial Technology

Associate in Applied Science Degree

This program is for persons 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

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
CT151 Surveying 1	4.0
CT265 Introduction to Geographic Information Systems	3.0
IS101 Computers and Society	3.0
MA121 Fundamentals of College Mathematics 1	4.0
Physical Education Elective	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
CT263 Digital Mapping	3.0
GE101 Essentials of World Geography	3.0
IS200 Spreadsheet Concepts and Applications	3.0
MA110 Elementary Statistics	3.0
Physical Education Elective	0.5

Third Semester

CT253 Global Positioning and High Order Controls	4.0
CT267 Advanced Geographic Information Systems	3.0
IS210 Database Design and Management	3.0
CT102 Engineering Drawing and Microstation CAD	3.0
MT140 Drafting and Design Using AutoCAD	3.0
Physical Education Elective	0.5

Fourth Semester

CT232 Environmental Engineering	3.0
CT266 Capstone Geographic Information Systems	3.0
GL101 Physical Geology	4.0
IS220 Visual Basic with Business Applications	3.0
Physical Education Elective	0.5

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 — webpage 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

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
FA100 Creativity in Art	3.0
FA101 General Drawing	3.0
FA105 Foundation Design	3.0
GD121 Digital Typography	3.0
Physical Education Elective	0.5

Second Semester

FA103 Figure Drawing 1	3.0
GD145 Digital Applications 1	3.0
GD221 Typography 1	3.0
FA106 Color Theory	3.0
HU205 History of Art 2	3.0
Physical Education Elective	0.5

Third Semester

EN102 English 2: Ideas and Values in Literature	3.0
GT122 Digital Prepress	3.0
GD146 Digital Applications 2	3.0
MA108 Concepts in Mathematics	3.0
GE Humanities Elective (a)	3.0
Physical Education Elective	0.5

Fourth Semester

CG214 Motion Graphics	3.0
GD218 Graphic Design Seminar	3.0
GD222 Typography 2	3.0
Any GE Social Science Course	3.0
Any GE Natural Science Course	4.0
Physical Education Elective	0.5

(a) Acceptable Electives include HU186 Music Appreciation, HU187 Art Appreciation, 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 Dean of the School of Art.

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 their 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

CF100 College Foundations Seminar	1.0
MD161 Visual Communication	3.0
FA101 General Drawing	3.0
FA105 Foundation Design	3.0
FA103 Figure Drawing 1	3.0
EN101 English 1: Composition	3.0
PE Physical Education	0.5

Second Semester

FA104 Figure Drawing 2	3.0
GD145 Digital Applications 1	3.0
FA210 Digital Painting	3.0
IL106 Sequential Art 1: Figure Illustration	3.0
MA110 Elementary Statistics	3.0
PE Physical Education	0.5

Third Semester

EN102 English 2: Ideas and Values in Literature	3.0
FA209 Painting 1	3.0
GD146 Digital Applications 2	3.0
IL208 Sequential Art 2: Book Illustration	3.0
HU204 History of Art 1	3.0
PE Physical Education	0.5

Fourth Semester

HU205 History of Art 2	3.0
IL209 Sequential Art 3: Graphic Novel	3.0
Any GE Natural Science Course	4.0
Any GE Social Science Course	3.0
IL201 Conceptual Illustration	3.0
PE Physical Education	0.5

Health Information Technology

Associate in Applied Science Degree

Health Information Technology (HIT) is the profession that focuses on healthcare data and validity and the organization and management of health information in electronic, paper-based, or hybrid formats in a variety of healthcare settings. The HIT program prepares students to enter the profession as health information management professionals who are responsible for maintaining accessibility, accuracy, and quality of health information by using knowledge and skills from areas such as accreditation and regulation, coding and reimbursement, data collection and analytics, information management and computer technology, and legal and ethical aspects, which include privacy and security. During their last semester of academic study, students complete a nonpaid professional practice experience in the health information management department of a hospital or other appropriate healthcare facility to gain work experience prior to graduation. The Health Information Technology program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM), 200 East Randolph Street, Suite 5100, Chicago, IL, 60601, 312-235-3255, www.cahim.org. Upon completion of this CAHIIM-accredited HIT program, graduates are eligible to take the national Registered Health Information Technician (RHIT) certification examination, which is offered by the American Health Information Management Association (AHIMA).

This program can be completed 100% online.

Total Credit Hours: 62

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
BI110 Survey of Human Anatomy & Physiology	3.0
HM100 Medical Terminology for Health Professionals	3.0
HM101 Health Information Management Introductory Concepts	3.0
IS101 Computers and Society	3.0

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
HM120 Pathophysiology and Pharmacology	3.0
HM121 ICD-10-CM and ICD-10-PCS Coding	4.0
HM122 Legal and Ethical Aspects of Health Information Management	3.0
MA110 Elementary Statistics	3.0

Third Semester

EN153 Practical and Professional Written Communications	3.0
HM201 CPT and HCPCS Level II Coding	3.0
HM202 Health Data and Quality Management	3.0
HM203 Electronic Health Record Management	3.0
HM204 Alternate Care Health Information Management	3.0

Fourth Semester

HM220 Health Information Management Leadership	3.0
HM221 Reimbursement Methodologies	3.0
HM225	3.0
HM230 HIT Professional Practice Experience	3.0
GE Social Science Elective (a)	3.0

This program is offered 100% online.

(a) Social Science electives include: PY101 Introduction to Psychology OR SO101 Introduction to Sociology.

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, in progress, or its equivalent and the most recent of the following:

- A current overall college grade point average (GPA) of 2.0 (minimum of 12 credits)
- High school average of 75 Math
- An SAT math score of 530 or higher, OR

- An ACT math score of 19 or higher, OR
- An appropriate MVCC Mathematics Placement test result, OR
- A minimum grade of C or better in a college-level mathematics course taken within the last seven years

Recommended:

- High school chemistry with a lab or a college-level chemistry course completed within the last seven years is recommended but not required.
- High school biology with a lab or a college-level biology course completed within the last seven years is recommended but not required.
- Keyboarding and Microsoft Office Professional are recommended but not required.

Prerequisites can be taken at other colleges. Please consult the Advisement Office to determine if those classes meet the minimum criteria. Credit-bearing prerequisite courses will require a minimum grade of C or better.

Important notice to all applicants:

If a student has legal charges pending or has been convicted of a felony 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. Additionally, applicants should understand they may be required to obtain the above mentioned documents for future gainful employment, and if they are unable to obtain proper documented immunizations and background clearance, opportunities for employment within the healthcare 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 are expected to receive appropriate supervision during completion of all tasks. The PPE allows students to gain inside knowledge and professional experience in preparation for entering the field. Students have one semester in which to complete the uncompensated minimum 100-hour, on-site requirement at a hospital or other healthcare 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 healthcare 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 healthcare 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 course 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 Sciences

Associate of Science Degree

The Health Science program provides foundational learning for students who desire entry into any of a number of different health and health-related professions. It is designed for students who want to focus on healthcare careers in fields such as nursing, radiological technology, surgical technology, and biotechnology. The Health Science program is also a transfer program that meets the requirements of the SUNY Health Education Transfer Pathway. Students interested in careers in community health, health education, health counseling, or public health can utilize this pathway as a foundation for transfer to programs leading to these health-related careers.

Total Credit Hours: 62

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
MA110 Elementary Statistics	3.0
HC100 Introduction to Health Care	3.0
CH131 College Chemistry	5.0

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
BI141 General Biology 1	4.0
HM100 Medical Terminology for Health Professionals	3.0
SO101 Introduction to Sociology	3.0
EN150 Effective Speech	3.0

Third Semester

BI216 Human Anatomy & Physiology 1	4.0
PY101 Introduction to General Psychology	3.0
HU280 An Introduction to Ethics	3.0
HI101 History of Civilization 1	3.0
BI151 Nutrition & Dietetics 1	3.0

Fourth Semester

BI217 Human Anatomy & Physiology 2	4.0
Psychology Elective (a)	3.0
History Elective (b)	3.0
BI201 Microbiology	4.0
PE172 Health and Wellness	2.0

Notes:

1. Psychology elective should be selected from the following: PY202-Child and Adolescence, PY203-Abnormal Psychology, or PY207-Life-Span Developmental Psychology
2. History elective should be selected from the following: HI111 American History 1492-1850 or HI112 American History 1850-Present

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 AAS 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 licensure. Passing the credentialing exam is necessary to receive a license to practice as an entry-level radiologic technologist in New York State.

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.

Total Credit Hours: 72

First Semester

CF100 College Foundations Seminar	1.0
BI216 Human Anatomy & Physiology 1	4.0
MA110 Elementary Statistics	3.0
RT100 Patient Care I / Ethics	1.0
RT101 Fundamentals of Radiology	2.0
RT102 Radiographic Procedures / Pathology I	3.0
RT103 Clinical Education Fundamentals	3.0

Second Semester

BI217 Human Anatomy & Physiology 2	4.0
RT104 Patient Care II / Pharmacology & IV Therapy	1.0
RT105 Image Production & Evaluation I	2.0
RT106 Radiographic Procedures / Pathology II	3.0
RT107 Clinical Education Intermediate I	5.0

Third Semester

RT108 Clinical Education Intermediate II	8.0
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Fourth Semester

EN101 English 1: Composition	3.0
PY101 Introduction to General Psychology	3.0
RT109 Radiation Biology I	2.0
RT200 Advanced Procedures / Sectional Anatomy	1.0
RT201 Image Production & Evaluation II	2.0
RT202 Clinical Education Advanced	6.0

Fifth Semester

EN102 English 2: Ideas and Values in Literature	3.0
RT203 Radiographic Physics	2.0
RT204 Radiation Biology II	2.0
RT205 Advanced Imaging Procedures / Pathology	1.0
RT207 Clinical Education Mastery	7.0

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 prerequisites 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 program. 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 and from assigned healthcare 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 & 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 Technology 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 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 75 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 75 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 and Chemistry 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 1
- 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 student's first Radiology semester will not satisfy program or prerequisite course requirements.

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 A.O.S degree in Air Conditioning Technology - Refrigeration Option.

Total Credit Hours: 34

First Semester

MA105 Technical Mathematics 1	4.0
ET108 Refrigeration 1	4.0
ET101 Technical Electricity 1	3.0
ET221 Air Conditioning Systems	5.0

Second Semester

ET102 Technical Electricity 2	3.0
ET104 Systems Diagrams	3.0
ET209 Refrigeration 2	5.0
ET220 Air Conditioning Principles	4.0
ET123 Proper Refrigerant Usage	3.0

Hotel Technology: Meeting Services Management

Associate in Applied Science Degree

This program prepares 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, accounting, business law, and computer applications. In addition to the general academic requirements, a hospitality-related internship is required. 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.

Students in the Hotel Technology: Meeting Services 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. Beard guard required.

Total Credit Hours: 62 - 63

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
FS111 Food Preparation 1	4.0
HT101 Introduction to the Hospitality Industry	3.0
FS150 Safety & Sanitation	3.0
HT101 Introduction to the Hospitality Industry	3.0
Physical Education Elective	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
AC110 Principles of Accounting	3.0
BM120 Principles of Marketing	3.0
HT105 Front Office Procedures	3.0
Any GE Social Science Course	3.0
Physical Education Elective	0.5

Third Semester

EN150 Effective Speech	3.0
AC131 Business Law 1	3.0
HT205 Housekeeping/Property Management	3.0
IS101 Computers and Society	3.0
Any GE Natural Science Course	4.0
Physical Education Elective	0.5

Fourth Semester

BM251 Organizational Behavior	3.0
HT201 Internship/Co-op	3.0
HT211 Convention Services Management	3.0
HT215 Supervisory Leadership in Hospitality	3.0
Mathematics Elective (a)	3.0 - 4.0
Physical Education Elective	0.5

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

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 studies around their career interests. The counseling emphasis 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

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
BI103 Human Life Science 1	4.0
PY101 Introduction to General Psychology	3.0
SO101 Introduction to Sociology	3.0
HS101 Introduction to Human Services	3.0
Physical Education Elective	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
HS241 Chemical Dependencies	3.0
Mathematics Elective (a)	3.0
PY203 Abnormal Psychology	3.0
PY210 Evaluation, Research and Measurement in Behavioral Science	3.0
Physical Education Elective	0.5

Third Semester

HS251 Internship 1	3.0
HS222 Theories of Counseling	3.0
Program Restrictive Elective (b)	3.0
Developmental Psychology Elective (c)	3.0
Psychology Elective (d)	3.0
Physical Education Elective	0.5

Fourth Semester

HS232 Counseling Techniques	3.0
HS252 Internship 2	3.0
Program Restrictive Elective (b)	3.0
Sociology Elective (e)	3.0
General Education Elective (f)	3.0
Physical Education Elective	0.5

* Prerequisites for internships include completion of HS101 Introduction to Human Services with a "C" or better, 25 credits completed toward the degree, a GPA of at least 2.0, and enrollment in or completion of at least two counseling required or program elective courses.

(a) Math options include: MA108 Concepts in Mathematics OR MA110 Elementary Statistics

(b) 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

(c) Developmental Psychology Electives (choose one)

- PY202 Childhood and Adolescence
- PY205 Adulthood & Aging

(d) 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

(e) 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
- SO208 Sociology of Aging
- SO210 Deaf Culture and Community

(f) 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.

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 Foundations 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 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](#).
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](#).
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](#).
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.

Interpreter Education

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 Interpreter Education, 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 will provide comprehensive knowledge and practice for students desiring to continue their education in this field.

Total Credit Hours: 62

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
AL101 American Sign Language 1	3.0
AL102 American Sign Language 2	3.0
EI101 Introduction to Education and Educational Interpreting	5.0

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
AL201 American Sign Language 3	3.0
PY101 Introduction to General Psychology	3.0
SO210 Deaf Culture and Community	3.0
GE Mathematics Elective (a)	3.0 - 4.0

Third Semester

AL202 American Sign Language 4	3.0
EI120 Processing Skills and Discourse Analysis	4.0
Mathematics Elective (a)	3.0 - 4.0
Natural Science Elective (b)	4.0
PE172 Health and Wellness	2.0

Fourth Semester

EI201 Introduction to Interpreting 1	4.0
EI250 Practical and Ethical Applications of Interpretation	3.0
EI205 Transliteration	3.0
HI101 History of Civilization 1	3.0
GE Art Elective (c)	3.0

(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, PH151, PH261, or WE101.

(c) Arts Elective: Students should select from EN197, HU183, HU184, HU187, HU188, HU204, HU205, HU210, HU292, PT205, TH193, or TH195.

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 ten 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 thirty hours of classroom observation. (Students complete 15-18 credit hours in their concentration (Mathematics, English, History/Social studies, Biology, Physics, Geology, or Chemistry). Specific courses taken depend on the area of concentration, 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.

Transfer options include:

- Biology
- Chemistry - Students in the Chemistry area of study do not need to take ED211.
- Earth Science
- English (Students must take all six courses) EN248, EN249, EN271, EN272, EN255, and EN256
- History/Social Studies (Students must take all five courses) BM110, PS101, BM115, HI102, and HI112.
- Mathematics

*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

(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 Language & Literacy in Childhood as their replacement course.

(c) Fine Arts: HU187, HU204, OR HU205.

(d) Literature Electives: EN248, EN249, EN255, EN256, EN271, EN272.

(e) History Electives: HI111 American History 1492 - 1850 OR HI112 American History 1850 - Present.

(f) MA110 is required except for students interested in Math, Chemistry, and Physics (refer to your specific area of study).

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

Total Credit Hours: 64 - 65

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
Any GE Natural Science Course	4.0
ED150 Social & Philosophical Foundations of Education	3.0
PY101 Introduction to General Psychology	3.0
Foreign Language Elective (a)	3.0
Physical Education Elective	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
History Elective (e)	3.0
Foreign Language (b)	3.0
Fine Arts Elective (c)	3.0
* Program Required Course	4.0
Physical Education Elective	0.5

Third Semester

HI101 History of Civilization 1	3.0
PY212 Adolescent Psychology	3.0
* Program Required Course	4.0
* Program Required Course	4.0
Physical Education Elective	0.5

Fourth Semester

ED211 Introduction to Exceptionalities	3.0
Literature Elective (d)	3.0
MA110 Elementary Statistics	3.0
*Program Required Course	4.0
Physical Education Elective	0.5

* Please consult with your advisor for proper course selection in the following areas of study. Refer to specific area of study page layout for guided academic transfer path. Upon successful completion students will receive a Liberal Arts & Sciences: Adolescence Education Diploma .

Liberal Arts & Sciences: Adolescence Education (Biology Transfer Advising Guide)

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 ten 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 thirty hours of classroom observation. (Students complete 15-18 credit hours in their concentration (Mathematics, English, History/Social studies, Biology, Physics, Geology, or Chemistry). Specific courses taken depend on the area of concentration, 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.

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 Language & Literacy in Childhood as their replacement course.

(c) Fine Arts: HU187, HU204, or HU205.

(d) Literature Electives: EN248, EN249, EN255, EN256, EN271, EN272.

(e) History Electives: HI111 American History 1492 - 1850 OR HI112 American History 1850 - Present.

MA110 is required except for students interested in Math, Chemistry, and Physics (refer to your specific area of study).

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

Total Credit Hours: 62

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
BI141 General Biology 1	4.0
ED150 Social & Philosophical Foundations of Education	3.0
PY101 Introduction to General Psychology	3.0
Foreign Language Elective (a)	3.0
Physical Education Elective	0.5

Second Semester

BI142 General Biology 2	4.0
EN102 English 2: Ideas and Values in Literature	3.0
Foreign Language Elective (b)	3.0
Fine Arts Elective (c)	3.0
History Elective (e)	3.0
Physical Education Elective	0.5

Third Semester

BI201 Microbiology	4.0
CH141 General Chemistry 1	4.0
HI101 History of Civilization 1	3.0
PY212 Adolescent Psychology	3.0
Physical Education Elective	0.5

Fourth Semester

CH142 General Chemistry 2	4.0
ED211 Introduction to Exceptionalities	3.0
MA110 Elementary Statistics	3.0
Literature Elective (d)	3.0
Physical Education Elective	0.5

(a) The language requirement consists of a two-course sequence in the same foreign language. American Sign Language counts as a foreign

Liberal Arts & Sciences: Adolescence Education (Chemistry Transfer Advising Guide)

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 ten 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 thirty hours of classroom observation. (Students complete 15-18 credit hours in their concentration (Mathematics, English, History/Social studies, Biology, Physics, Geology, or Chemistry). Specific courses taken depend on the area of concentration, 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.

Total Credit Hours: 62

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
CH141 General Chemistry 1	4.0
ED150 Social & Philosophical Foundations of Education	3.0
Foreign Language Elective (a)	3.0
Physical Education Elective	0.5

Second Semester

CH142 General Chemistry 2	4.0
EN102 English 2: Ideas and Values in Literature	3.0
PY101 Introduction to General Psychology	3.0
History Elective (e)	3.0
Foreign Language Elective (b)	3.0
Physical Education Elective	0.5

Third Semester

CH247 Organic Chemistry 1	5.0
HI101 History of Civilization 1	3.0
MA151 Calculus 1	4.0
Fine Arts Elective (c)	3.0
Physical Education Elective	0.5

Fourth Semester

CH248 Organic Chemistry 2	5.0
MA152 Calculus 2	4.0
PY212 Adolescent Psychology	3.0
Literature Elective (d)	3.0
Physical Education Elective	0.5

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 Language & Literacy in Childhood as their replacement course.

(c) Fine Arts: HU187, HU204, OR HU205.

(d) Literature Electives: EN248, EN249, EN255, EN256, EN271, EN272.

(e) History Electives: HI111 American History 1492 - 1850 OR HI112 American History 1850 - Present.

MA110 is required except for students interested in Math, Chemistry, and Physics (refer to your specific area of study).

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

(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

Liberal Arts & Sciences: Adolescence Education (Earth Science Transfer Advising Guide)

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 ten 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 thirty hours of classroom observation. (Students complete 15-18 credit hours in their concentration (Mathematics, English, History/Social studies, Biology, Physics, Geology, or Chemistry). Specific courses taken depend on the area of concentration, 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.

Total Credit Hours: 62

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
CH141 General Chemistry 1	4.0
ED150 Social & Philosophical Foundations of Education	3.0
Foreign Language Elective (a)	3.0
PY101 Introduction to General Psychology	3.0
Physical Education Elective	0.5

Second Semester

CH142 General Chemistry 2	4.0
EN102 English 2: Ideas and Values in Literature	3.0
Foreign Language Elective (b)	3.0
Fine Arts Elective (c)	3.0
History Elective (e)	3.0
Physical Education Elective	0.5

Third Semester

GL101 Physical Geology	4.0
HI101 History of Civilization 1	3.0
PY212 Adolescent Psychology	3.0
BI105 Environmental Science	4.0
Physical Education Elective	0.5

Fourth Semester

GL102 Historical Geology	4.0
MA110 Elementary Statistics	3.0
ED211 Introduction to Exceptionalities	3.0
Physical Education Elective	0.5
Literature Elective (d)	3.0

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 Language & Literacy in Childhood as their replacement course.

(c) Fine Arts: HU187, HU204, or HU205.

(d) Literature Electives: EN248, EN249, EN255, EN256, EN271, EN272.

(e) History Electives: HI111 American History 1492 - 1850 OR HI112 American History 1850 - Present.

MA110 is required except for students interested in Math, Chemistry, and Physics (refer to your specific area of study).

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

(a) The language requirement consists of a two-course sequence in the same foreign language. American Sign Language counts as a foreign

Liberal Arts & Sciences: Adolescence Education (English Transfer Advising Guide)

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 ten 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 thirty hours of classroom observation. (Students complete 15-18 credit hours in their concentration (Mathematics, English, History/Social studies, Biology, Physics, Geology, or Chemistry). Specific courses taken depend on the area of concentration, 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.

(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 Language & Literacy in Childhood as their replacement course.

(c) Fine Arts: HU187, HU204, OR HU205.

(d) Literature Electives: EN248, EN249, EN255, EN256, EN271, EN272.

(e) History Electives: HI111 American History 1492 - 1850 OR HI112 American History 1850 - Present.

MA110 is required except for students interested in Math, Chemistry, and Physics (refer to your specific area of study).

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

Total Credit Hours: 61

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
ED150 Social & Philosophical Foundations of Education	3.0
MA110 Elementary Statistics	3.0
Foreign Language Elective (a)	3.0
PY101 Introduction to General Psychology	3.0
Physical Education Elective	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
PY212 Adolescent Psychology	3.0
Foreign Language Elective (b)	3.0
Fine Arts Elective (c)	3.0
History Elective (e)	3.0
Physical Education Elective	0.5

Third Semester

HI101 History of Civilization 1	3.0
EN248 American Literature 1	3.0
EN271 British Literature 1	3.0
Any GE Natural Science Course	4.0
Physical Education Elective	0.5

Fourth Semester

ED211 Introduction to Exceptionalities	3.0
EN249 American Literature 2	3.0
EN272 British Literature 2	3.0
Literature Elective (d)	3.0
Literature Elective (d)	3.0
Physical Education Elective	0.5

Liberal Arts & Sciences: Adolescence Education (History / Social Studies Transfer Advising Guide)

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 ten 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 thirty hours of classroom observation. (Students complete 15-18 credit hours in their concentration (Mathematics, English, History/Social studies, Biology, Physics, Geology, or Chemistry). Specific courses taken depend on the area of concentration, 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.

(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 Language & Literacy in Childhood as their replacement course.

(c) Fine Arts: HU187, HU204, OR HU205.

(d) Literature Electives: EN248, EN249, EN255, EN256, EN271, EN272.

MA110 is required except for students interested in Math, Chemistry, and Physics (refer to your specific area of study).

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

Total Credit Hours: 61

First Semester

CF100 College Foundations Seminar	1.0
ED150 Social & Philosophical Foundations of Education	3.0
EN101 English 1: Composition	3.0
MA110 Elementary Statistics	3.0
Foreign Language (a)	3.0
PY101 Introduction to General Psychology	3.0
Physical Education Elective	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
BM110 Principles of Microeconomics	3.0
PS101 American National Government	3.0
PY212 Adolescent Psychology	3.0
Foreign Language (b)	3.0
Physical Education Elective	0.5

Third Semester

BM115 Principles of Macroeconomics	3.0
HI101 History of Civilization 1	3.0
HI111 American History 1492-1850	3.0
Any GE Natural Science Course	4.0
Physical Education Elective	0.5

Fourth Semester

ED211 Introduction to Exceptionalities	3.0
HI102 History of Civilization 2	3.0
HI112 American History 1850-Present	3.0
Fine Arts Elective (c)	3.0
Literature Elective (d)	3.0
Physical Education Elective	0.5

Liberal Arts & Sciences: Adolescence Education (Mathematics Transfer Advising Guide)

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 ten 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 thirty hours of classroom observation. (Students complete 15-18 credit hours in their concentration (Mathematics, English, History/Social studies, Biology, Physics, Geology, or Chemistry). Specific courses taken depend on the area of concentration, 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.

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 Language & Literacy in Childhood as their replacement course.

(c) Fine Arts: HU187, HU204, OR HU205.

(d) Literature Electives: EN248, EN249, EN255, EN256, EN271, EN272.

(e) History Electives: HI111 American History 1492 - 1850 OR HI112 American History 1850 - Present.

MA110 is required except for students interested in Math, Chemistry, and Physics (refer to your specific area of study).

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

Total Credit Hours: 62

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
ED150 Social & Philosophical Foundations of Education	3.0
MA151 Calculus 1	4.0
PY101 Introduction to General Psychology	3.0
Foreign Language (a)	3.0
PE Physical Education	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
MA152 Calculus 2	4.0
PY212 Adolescent Psychology	3.0
History Elective (e)	3.0
Foreign Language (b)	3.0
PE Physical Education	0.5

Third Semester

HI101 History of Civilization 1	3.0
MA253 Calculus 3	4.0
MA275 Discrete Algebraic Structures	4.0
Fine Arts Elective (c)	3.0
PE Physical Education	0.5

Fourth Semester

ED211 Introduction to Exceptionalities	3.0
MA280 Linear Algebra	3.0
Any GE Natural Science Course	4.0
Literature Elective (d)	3.0
PE Physical Education	0.5

(a) The language requirement consists of a two-course sequence in the same foreign language. American Sign Language counts as a foreign

Liberal Arts & Sciences: Adolescence Education (Physics Transfer Advising Guide)

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 ten 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 thirty hours of classroom observation. (Students complete 15-18 credit hours in their concentration (Mathematics, English, History/Social studies, Biology, Physics, Geology, or Chemistry). Specific courses taken depend on the area of concentration, 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.

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 Language & Literacy in Childhood as their replacement course.

(c) Fine Arts: HU187, HU204, OR HU205.

(d) Literature Electives: EN248, EN249, EN255, EN256, EN271, EN272.

(e) History Electives: HI111 American History 1492 - 1850 OR HI112 American History 1850 - Present.

MA110 is required except for students interested in Math, Chemistry, and Physics (refer to your specific area of study).

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

Total Credit Hours: 63

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
Foreign Language Elective (a)	3.0
MA151 Calculus 1	4.0
ED150 Social & Philosophical Foundations of Education	3.0
PY101 Introduction to General Psychology	3.0
PE Physical Education	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
MA152 Calculus 2	4.0
PY212 Adolescent Psychology	3.0
Foreign Language (b)	3.0
History Elective (e)	3.0
PE Physical Education	0.5

Third Semester

CH141 General Chemistry 1	4.0
HI101 History of Civilization 1	3.0
MA253 Calculus 3	4.0
PH151 General Physics 1	4.0
PE Physical Education	0.5

Fourth Semester

ED211 Introduction to Exceptionalities	3.0
PH152 General Physics 2	4.0
Fine Arts Elective (c)	3.0
Literature Elective (d)	3.0
PE Physical Education	0.5

(a) The language requirement consists of a two-course sequence in the same foreign language. American Sign Language counts as a foreign

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). 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 this program complete all ten of the general education areas required by SUNY for a bachelor's degree. They complete six hours of professional courses (ED150, and ED205), which include at least thirty hours of classroom observation. Students complete 15-18 credit hours in their concentration (Mathematics, English, History/Social Studies, or Science). Specific courses depend on the area of concentration and the transfer institution. 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.

Total Credit Hours: 63

First Semester

CF100 College Foundations Seminar	1.0
ED150 Social & Philosophical Foundations of Education	3.0
EN101 English 1: Composition	3.0
MA171 Foundations of Mathematics 1	3.0
PY101 Introduction to General Psychology	3.0
Foreign Language Elective (a)	3.0
PE Physical Education Elective	0.5

Second Semester

ED205 Child Development	3.0
EN102 English 2: Ideas and Values in Literature	3.0
History Elective (b)	3.0
MA172 Foundations of Mathematics 2	3.0
Foreign Language Elective (a)	3.0
PE Physical Education	0.5

Third Semester

* Program Required Course	3.0
* Program Required Course	3.0
HI101 History of Civilization 1	3.0
GE Natural Science Elective (c)	4.0
PE Physical Education	0.5

Forth Semester

* Program Required Course	3.0
* Program Required Course	3.0
ED211 Introduction to Exceptionalities	3.0
EN240 Children's Literature	3.0
Fine Arts Elective (d)	3.0
PE Physical Education	0.5

Transfer options include:

- English
- General Science
- History

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

(a) 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.

(b) History Electives include: HI111 American History 1492 - 1850 OR HI112 American History 1850 - Present.

(c) Natural Science electives include BI105, BI141, BI142, BI216, BI217, CH101, CH131, CH141, CH142, CH247, CH248, GL101, GL102, PH131, PH141, PH142, PH151, PH152.

(d) Fine Arts: HU187, HU204, or HU205.

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

*Please consult with your advisor for proper course selection in the areas of study listed below. Refer to specific area of study page layout for guided academic transfer path. Upon successful completion, students will receive a Liberal Arts & Sciences: Adolescence Education diploma.

Liberal Arts & Sciences: Childhood Education (English Transfer Advising Guide)

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 ten 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 a concentration (English, History/Social Studies, or Science). Specific courses depend on the area of concentration 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 new 2012 Federal guidelines regarding educational requirements for a classroom Teacher Assistant.

Total Credit Hours: 61

First Semester

CF100 College Foundations Seminar	1.0
ED150 Social & Philosophical Foundations of Education	3.0
EN101 English 1: Composition	3.0
MA171 Foundations of Mathematics 1	3.0
PY101 Introduction to General Psychology	3.0
Foreign Language (a)	3.0
PE Physical Education	0.5

Second Semester

ED205 Child Development	3.0
EN102 English 2: Ideas and Values in Literature	3.0
History Elective (d)	3.0
MA172 Foundations of Mathematics 2	3.0
Foreign Language (a)	3.0
PE Physical Education	0.5

Third Semester

HI101 History of Civilization 1	3.0
EN255 World Literature 1	3.0
GE Natural Science Elective (b)	4.0
EN Literature Elective (e)	3.0
Physical Education Elective	0.5

Fourth Semester

ED211 Introduction to Exceptionalities	3.0
EN240 Children's Literature	3.0
Fine Arts Elective (c)	3.0
EN Literature Elective (f)	3.0
EN256 World Literature 2	3.0
Physical Education Elective	0.5

(a) 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.

(b) Natural Science electives include BI105, BI141, BI142, BI216, BI217, CH101, CH131, CH141, CH142, CH247, CH248, GL101, GL102, PH131, PH141, PH142, PH151, PH152.

(c) Fine Arts: HU187, HU204, or HU205.

(d) History Electives include: HI111 American History 1492 - 1850 OR HI112 American History 1850 - Present.

(e) English Electives include: EN248 American Literature 1 OR EN249 American Literature 2.

(f) English Electives include: EN271 British Literature 1 OR EN272 British Literature 2.

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

Liberal Arts & Sciences: Childhood Education (General Science Transfer Advising Guide)

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 ten 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 a concentration (English, History/Social Studies, or Science). Specific courses depend on the area of concentration 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 new 2012 Federal guidelines regarding educational requirements for a classroom Teacher Assistant.

Total Credit Hours: 61

First Semester

CF100 College Foundations Seminar	1.0
ED150 Social & Philosophical Foundations of Education	3.0
EN101 English 1: Composition	3.0
PY101 Introduction to General Psychology	3.0
Natural Science Elective	4.0
Foreign Language Elective (a)	3.0
Physical Education Elective	0.5

Second Semester

ED205 Child Development	3.0
EN102 English 2: Ideas and Values in Literature	3.0
Foreign Language Elective (a)	3.0
GE Natural Science Elective (b)	4.0
HI112 American History 1850-Present	3.0
Physical Education Elective	0.5

Third Semester

HI101 History of Civilization 1	3.0
MA171 Foundations of Mathematics 1	3.0
GE Natural Science Elective (b)	4.0
Fine Arts Elective (c)	3.0
Physical Education Elective	0.5

Fourth Semester

ED211 Introduction to Exceptionalities	3.0
EN240 Children's Literature	3.0
MA172 Foundations of Mathematics 2	3.0
GE Natural Science Elective (b)	4.0
Physical Education Elective	0.5

(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) Four Natural Science electives include: BI141, BI142, CH141, CH142, GL101, GL102, PH141, PH142, PH151, PH152 (must be taken in sequence)

(c) Fine Arts: HU187, HU204, or HU205.

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

Liberal Arts & Sciences: Childhood Education (History Transfer Advising Guide)

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 ten 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 a concentration (English, History/Social Studies, or Science). Specific courses depend on the area of concentration 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 new 2012 Federal guidelines regarding educational requirements for a classroom Teacher Assistant.

Total Credit Hours: 61

First Semester

CF100 College Foundations Seminar	1.0
ED150 Social & Philosophical Foundations of Education	3.0
EN101 English 1: Composition	3.0
MA171 Foundations of Mathematics 1	3.0
PY101 Introduction to General Psychology	3.0
Foreign Language Elective (a)	3.0
Physical Education Elective	0.5

Second Semester

ED205 Child Development	3.0
EN102 English 2: Ideas and Values in Literature	3.0
History Elective (b)	3.0
MA172 Foundations of Mathematics 2	3.0
Foreign Language Elective (a)	3.0
Physical Education Elective	0.5

Third Semester

HI101 History of Civilization 1	3.0
History Elective (b)	3.0
Fine Arts Elective (d)	3.0
GE Natural Science Elective (c)	4.0
Physical Education Elective	0.5

Fourth Semester

GE101 Essentials of World Geography	3.0
EN240 Children's Literature	3.0
ED211 Introduction to Exceptionalities	3.0
HI102 History of Civilization 2	3.0
HI214 New York State History	3.0
Physical Education Elective	0.5

(a) 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.

(b) History Electives include: HI111 American History 1492 - 1850 or HI112 American History 1850 - Present.

(c) Natural Science electives include BI105, BI141, BI142, BI216, BI217, CH101, CH131, CH141, CH142, CH247, CH248, GL101, GL102, PH131, PH141, PH142, PH151, PH152.

(d) Fine Arts: HU187, HU204, or HU205.

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

Liberal Arts & Sciences: Childhood Education (Utica College Transfer)

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 Early Childhood/Childhood Education (Birth-6th grade) degree program complete 18 credits in paraprofessional and professional courses in addition to the General Education requirements. These students select a concentration when they enter the transfer institution. 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.

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
ED150 Social & Philosophical Foundations of Education	3.0
EN101 English 1: Composition	3.0
MA171 Foundations of Mathematics 1	3.0
PY101 Introduction to General Psychology	3.0
Foreign Language Elective (a)	3.0
Physical Education Elective	0.5

Second Semester

ED205 Child Development	3.0
EN102 English 2: Ideas and Values in Literature	3.0
History Elective (d)	3.0
MA172 Foundations of Mathematics 2	3.0
Foreign Language Elective (a)	3.0
Physical Education Elective	0.5

Third Semester

ED201 Introduction to Early Childhood Education	3.0
ED203 Early Childhood Methods and Materials	3.0
EN240 Children's Literature	3.0
GE Natural Science Elective (b)	4.0
Fine Arts Elective (c)	3.0
Physical Education Elective	0.5

Fourth Semester

ED206 Language and Literacy in Childhood	3.0
ED211 Introduction to Exceptionalities	3.0
GE Natural Science Elective (b)	4.0
History Elective (e)	3.0
Physical Education Elective	0.5

(a) Students must complete two semesters (a six-credit sequence) of foreign language. American Sign Language counts as a foreign language in education programs at Utica College and within the SUNY System. 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 concentration to replace the foreign language courses and meet the 62-credit hour requirement for the program.

(b) Natural Science Electives include one course from two of the following categories: Biology—BI103, BI105, BI141, BI216; Chemistry—CH131, CH141; Geology—GL101; Physics—PH141, PH142, PH151.

(c) Fine Arts Elective: HU187, HU204, or HU205.

(d) History Electives include: HI111 American History 1492 - 1850 OR HI112 American History 1850 - Present.

(e) History Electives include: HI101 History of Civilization 1 OR HI102 History of Civilization 2.

*Students are required to earn a minimum grade of “C” in all educational courses to graduate from the AS program.

Notice: Students transferring to Utica College must follow this curriculum roadmap and earn a 2.75 GPA for acceptance.

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 course work 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.

Total Credit Hours: 62

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
Any GE Mathematics Course	3.0
Any GE Social Science Course	3.0
Program Elective (a)	3.0
Program Elective (a)	3.0
Physical Education Elective	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
Any GE Mathematics Course	3.0
Any GE Social Science Course	3.0
Program Elective (a)	3.0
Physical Education Elective	0.5
Program Elective (a)	3.0

Third Semester

Any GE Natural Science Course	4.0
EN150 Effective Speech	3.0
HI101 History of Civilization 1	3.0
Program Elective (b)	3.0
PE Physical Education	0.5

Fourth Semester

Any GE Natural Science Course	4.0
HI102 History of Civilization 2	3.0
Any GE Humanities Course	3.0
Program Elective (a)	3.0
Program Elective (a)	3.0
PE Physical Education	0.5

(a) Students choose from any course EXCEPT PE. All electives must be approved officially by the student's faculty advisor.

(b) 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.

Liberal Arts & Sciences: General Studies Childhood Education (Jointly Registered with SUNY Oneonta)

Associate in Science Degree

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 ten of the general education areas required by SUNY for the bachelor's degree. Students who graduate with the Associate's Degree from MVCC and earn a minimum grade point average 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.

Total Credit Hours: 63

First Semester

CF100 College Foundations Seminar	1.0
ED150 Social & Philosophical Foundations of Education	3.0
EN101 English 1: Composition	3.0
MA171 Foundations of Mathematics 1	3.0
PY101 Introduction to General Psychology	3.0
Foreign Language Elective (a)	3.0
Physical Education Elective	0.5

Second Semester

ED205 Child Development	3.0
EN102 English 2: Ideas and Values in Literature	3.0
History Elective (e)	3.0
MA172 Foundations of Mathematics 2	3.0
Foreign Language Elective (a)	3.0
Physical Education Elective	0.5

Third Semester

English Elective (c)	3.0
GE101 Essentials of World Geography	3.0
GE Western Civilization Elective (b)	3.0
GE Natural Science Elective (d)	4.0
PS101 American National Government	3.0
Physical Education Elective	0.5

Fourth Semester

ED151 Prevention & Safety Issues for the Classroom Teacher	1.0
ED211 Introduction to Exceptionalities	3.0
GL202 Earth Science for Childhood Education Majors	4.0
Humanities Elective (f)	3.0
HI214 New York State History	3.0
Physical Education Elective	0.5

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) Students must complete two semesters (a six-credit sequence) of foreign language. American Sign Language counts as a foreign language in education programs within the SUNY System. 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, the language credits must be replaced with courses approved by an advisor. **First Semester** FL level 101,191, or 201. **Second Semester** FL level 102, 192, or 202.

(b) 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.

(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) 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.

(e) History Electives include: HI111 American History 1492 - 1850 OR HI112 American History 1850 - Present.

(f) Humanities Electives include: HU186 Music Appreciation, HU187 Art Appreciation, HU204 History of Art 1, or HU205 History of Art 2.

Liberal Arts & Sciences: Humanities & Social Science

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.

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
HI101 History of Civilization 1	3.0
GE Mathematics Elective (a)	3.0
GE Social Science Elective (b)	3.0
Foreign Language Elective (f)	3.0
PE Physical Education	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
HI102 History of Civilization 2	3.0
HU204 History of Art 1	3.0
GE Social Science Elective (b)	3.0
Foreign Language Elective (f)	3.0
PE Physical Education	0.5

Third Semester

EN150 Effective Speech	3.0
HU205 History of Art 2	3.0
General Education Elective (c)	3.0
Restrictive Elective (d)	3.0
Any GE Natural Science Course	4.0
PE Physical Education	0.5

Fourth Semester

General Education Elective (c)	3.0
Restrictive Elective (d)	3.0
Restrictive Elective (d)	3.0
Study Abroad or Humanities Elective (e)	3.0
Any History or Humanities Course	3.0
PE Physical Education	0.5

(c) General Education - Any course from the MVCC General Education Course List not already specified in the curriculum except MA171, MA172, or EN110.

(d) Restrictive Elective - 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, or 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.

(a) Mathematics Electives include: MA108 Concepts in Mathematics, MA110 Elementary Statistics, or higher, except MA171 and MA172.

(b) Social Science Electives include: 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.

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 course or the equivalent, and one year of a laboratory science are required; two years of a foreign language are recommended.

Total Credit Hours: 62

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
MA108 Concepts in Mathematics	3.0
HI101 History of Civilization 1	3.0
Foreign Language Elective (a)	3.0
PS202 Comparative Politics	3.0
Physical Education Elective	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
MA110 Elementary Statistics	3.0
HI102 History of Civilization 2	3.0
Foreign Language Elective (a)	3.0
AN102 Cultural Anthropology	3.0
Physical Education Elective	0.5

Third Semester

EN255 World Literature 1	3.0
Any GE Natural Science Course	4.0
BM101 Survey of Economics	3.0
EN150 Effective Speech	3.0
Restricted Elective (b)	3.0
Physical Education Elective	0.5

Fourth Semester

EN256 World Literature 2	3.0
PS205 International Politics	3.0
Any GE Natural Science Course	4.0
Restricted Elective (b)	3.0
Physical Education Elective	0.5

(a) A minimum of two semesters in the same language will be required. The student will meet with the Dean of 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) Restricted Electives include: (opportunity to choose two courses listed below)

Business Electives:

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

Additional foreign language study

SA300 Study Abroad - SA300 requires permission of the student's Dean and the Coordinator of International Studies. Students must fulfill the General Education requirements described in the [General Education Quick Reference Guide](#). To ensure that you will fulfill these requirements for graduation, you must meet with your advisor as you plan each semester at MVCC.

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. Students must choose one area of interests, including: Biology, Chemistry, Environmental Science, Environmental Studies, General Science, Geology, Mathematics, Physics, Physical Education, or Sports Medicine. Upon successfully completing the program requirements, students will earn a Liberal Arts & Sciences Mathematics and Science degree. Number of courses and sequencing will vary depending on students transferring interests.

Biological Anthropology, PS101 American National Government, GE101 Essentials of World Geography.

(b) At least 6 of these 30 credits shall be in mathematics, at a level approved by the Department administering the program.

(c) At least 8 of these 30 credits shall be in laboratory science, at a level approved by the Department administering the program.

(d) At least 4 of these 30 credits shall be in Mathematics or Science at a level approved by the Department administering the program.

(e) Restrictive Elective - Refer to specific student transfer advising guide: Biology, Chemistry, Environmental Studies, Environmental Science, General Science, Geology, Mathematics Physical Education, Physics, or Sports Medicine.

Total Credit Hours: 61 – 65 (Refer to Transfer Advising Guide)

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
GE Social Sciences Elective (a)	3.0
GE Mathematics Elective (b)	3.0 - 4.0
Restrictive Elective (e)	3.0
Restrictive Elective (e)	3.0
PE Physical Education	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
GE Mathematics Elective (b)	3.0 - 4.0
Restrictive Elective (e)	3.0
Restrictive Elective (e)	3.0
GE Social Science Elective (a)	3.0
PE Physical Education	0.5

Third Semester

HI101 History of Civilization 1	3.0
GE Natural Sciences Elective (c)	4.0
GE Mathematics or Natural Science Course (d)	4.0
Restrictive Elective (e)	3.0 - 4.0
PE Physical Education	0.5

Fourth Semester

HI102 History of Civilization 2	3.0
Any GE Humanities Course	3.0
GE Natural Sciences Elective (c)	4.0
Restrictive Elective (e)	3.0
Restrictive Elective (e)	3.0
PE Physical Education	0.5

General requirements: At least 30 General Education Credits in the following areas.

(a) At least 6 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

Liberal Arts & Sciences: Mathematics & Science (Biology Transfer Advising Guide)

Associate in Science Degree

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.

Total Credit Hours: 63

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
BI141 General Biology 1	4.0
MA150 Precalculus	4.0
CH141 General Chemistry 1	4.0
PE Physical Education	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
MA151 Calculus 1	4.0
BI142 General Biology 2	4.0
CH142 General Chemistry 2	4.0
PE Physical Education	0.5

Third Semester

CH247 Organic Chemistry 1	5.0
HI101 History of Civilization 1	3.0
GE Social Science Elective (a)	3.0
Mathematics Elective (b)	3.0 - 4.0
PE Physical Education	0.5

Fourth Semester

CH248 Organic Chemistry 2	5.0
GE Social Science Elective (a)	3.0
History Elective (c)	3.0
Natural Science Elective (d)	4.0
PE Physical Education	0.5

(a) Social Science Electives include: PY101, SO101, AN101, PS101 or BM101.

(b) Mathematics Electives include: MA152 Calculus 2 OR MA110 Elementary Statistics.

(c) History Electives include: HI102, HI111, or HI112.

(d) Natural Science Electives include: BI105, WE101, or BI201.

Liberal Arts & Sciences: Mathematics & Science (Chemistry Transfer Advising Guide)

Associate in Science Degree

Graduates with a concentration of studies 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 STEM center 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.

Total Credit Hours: 61 - 62

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
MA151 Calculus 1	4.0
CH141 General Chemistry 1	4.0
GE Social Science Elective (a)	3.0
Any PE Physical Education Course	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
PH261 Engineering Physics 1	4.0
MA152 Calculus 2	4.0
CH142 General Chemistry 2	4.0
Any PE Physical Education Course	0.5

Third Semester

CH247 Organic Chemistry 1	5.0
PH262 Engineering Physics 2	4.0
Chemistry Elective (b)	4.0 - 5.0
Any PE Physical Education Course	0.5

Fourth Semester

HI101 History of Civilization 1	3.0
CH248 Organic Chemistry 2	5.0
Chemistry Elective (b)	4.0 - 5.0
GE Social Science Elective (a)	3.0
Any PE Physical Education Course	0.5

(a) Social Science GE Electives include: BM101, PY101, SO101, AN101, PS101, OR GE101.

(b) Chemistry Electives include: BI141, BI142, BI201, CH246, ES151, GL101, MA253, MA260, PH263, ES151, ES161 OR Internship

Liberal Arts & Sciences: Mathematics & Science (Environmental Science - Biophysical Transfer Advising Guide)

Associate in Science Degree

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.

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

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. Students with math placement scores higher than MA125 may substitute a higher math for MA125.

(a) Social Science Business Management Electives include: BM101, BM110, or BM115.

(b) Social Science Electives Include: PY101, SO101, or AN101.

(c) General Education Electives include: EN197, GE101, HI102, HI103, HI104, HI111, HI112, FL101, HU183, HU187, HU188, HU204, HU227, HU228, HU295, SO207, TH193, TH195, or any Foreign Language.

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
MA125 College Algebra and Trigonometry	4.0
BI141 General Biology 1	4.0
CH141 General Chemistry 1	4.0
PE Physical Education	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
MA150 Precalculus	4.0
BI142 General Biology 2	4.0
CH142 General Chemistry 2	4.0
PE Physical Education	0.5

Third Semester

MA151 Calculus 1	4.0
HI101 History of Civilization 1	3.0
BI105 Environmental Science	4.0
GE Social Science BM Elective (a)	3.0
GE Social Science Elective (b)	3.0
PE Physical Education	0.5

Fourth Semester

BI202 Ecology	4.0
MA110 Elementary Statistics	3.0
PH261 Engineering Physics 1	4.0
PE Physical Education	0.5
General Education Elective (c)	3.0

Program Recommendations:

It is recommended students coming into this program have had at least two years of high school mathematics, or the equivalent, and two years

Liberal Arts & Sciences: Mathematics & Science (Environmental Studies - Social Science Transfer Advising Guide)

Associate in Science Degree

HU227, HU228, HU295, SO207, TH193, TH195, or any Foreign Language.

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.

Total Credit Hours: 62

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
BI141 General Biology 1	4.0
BI105 Environmental Science	4.0
MA115 Intermediate Mathematics	4.0
PE Physical Education	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
BI142 General Biology 2	4.0
CH141 General Chemistry 1	4.0
MA125 College Algebra and Trigonometry	4.0
PE Physical Education	0.5

Third Semester

MA110 Elementary Statistics	3.0
HI101 History of Civilization 1	3.0
Restrictive Elective (a)	4.0
EN150 Effective Speech	3.0
SO101 Introduction to Sociology	3.0
PE Physical Education	0.5

Fourth Semester

BI202 Ecology	4.0
PS101 American National Government	3.0
GE Social Science BM Elective (b)	3.0
General Education Elective (c)	4.0
PE Physical Education	0.5

(a) Restrictive electives include: CH142, GL101, WE101, or MA150.

(b) Social Science - Business Management Electives include; BM101, BM110, or BM115

(c) General Education Electives include: AN102, EN197, GE101, HI102, HI103, HI104, HI111, HI112, FL101, HU183, HU187, HU188, HU204,

Liberal Arts & Sciences: Mathematics & Science (General Science Transfer Advising Guide)

Associate in Science Degree

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.

Total Credit Hours: 62 - 63

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
MA125 College Algebra and Trigonometry	4.0
BI141 General Biology 1	4.0
HI101 History of Civilization 1	3.0
PE Physical Education	0.5

Second Semester

BI142 General Biology 2	4.0
EN102 English 2: Ideas and Values in Literature	3.0
CH141 General Chemistry 1	4.0
Mathematics Elective (a)	3.0 - 4.0
PE Physical Education	0.5

Third Semester

CH142 General Chemistry 2	4.0
Natural Science Elective (b)	4.0
Natural Science Elective (b)	4.0
GE Social Science Elective (c)	3.0
PE Physical Education	0.5

Fourth Semester

History Elective (d)	3.0
GE Social Science Elective	3.0
Natural Science Elective (b)	4.0
IS101 Computers and Society	3.0
Restrictive Elective (e)	3.0
PE Physical Education	0.5

(a) Mathematics Electives include: MA110 OR MA150

(b) Natural Science Electives include: BI105, BI201, BI202, BI216, BI217, CH247, CH248, GL101, GL102, PH141, PH142, PH151, PH152, OR WE101.

(c) Social Science Electives include: BM101, PY101, SO101, AN101, OR PS101.

(d) History Electives include: HI111, OR HI112.

(e) Restrictive Electives include: EN150, EN153 or MA115.

Liberal Arts & Sciences: Mathematics & Science (Geology Transfer Advising Guide)

Associate in Science Degree

This Liberal Arts & Sciences Mathematics & Sciences option prepares students for baccalaureate programs in Geology and related Earth Sciences.

Total Credit Hours: 61

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
BI141 General Biology 1	4.0
GL101 Physical Geology	4.0
MA125 College Algebra and Trigonometry	4.0
PE Physical Education	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
BI142 General Biology 2	4.0
GL102 Historical Geology	4.0
MA150 Precalculus	4.0
PE Physical Education	0.5

Third Semester

CH141 General Chemistry 1	4.0
PH151 General Physics 1	4.0
MA151 Calculus 1	4.0
Social Science Elective (a)	3.0
PE Physical Education	0.5

Fourth Semester

CH142 General Chemistry 2	4.0
PH152 General Physics 2	4.0
HI101 History of Civilization 1	3.0
Restricted Elective (b)	4.0
PE Physical Education	0.5

(a) Social Science Electives: AN101, BM101, PS101, GE101, PY101, or SO101.

(b) Math & Natural Science Electives: MA 110, MA 152, GL 203 or BI 105

GL 102 & GL 203 are Spring term only courses and alternate annually. Students who participate in this two year program will have the opportunity to take both courses during their Spring semesters.

Liberal Arts & Sciences: Mathematics & Science (Mathematics Transfer Advising Guide)

Associate in Science Degree

Graduates in this area of study 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 S.T.E.M. 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.

(d) 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.

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
MA150 Precalculus	4.0
HI101 History of Civilization 1	3.0
Restrictive Sequence Elective (b)	3.0
GE Social Science Elective (a)	3.0
PE Physical Education	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
GE Social Science Elective (a)	3.0
MA151 Calculus 1	4.0
HI102 History of Civilization 2	3.0
Restrictive Sequence Elective (b)	3.0
PE Physical Education	0.5

Third Semester

MA275 Discrete Algebraic Structures	4.0
MA152 Calculus 2	4.0
GE Natural Science Elective (c)	4.0
Restrictive Elective (d)	3.0
PE Physical Education	0.5

Fourth Semester

GE Natural Science Elective (c)	4.0
MA253 Calculus 3	4.0
Restrictive Elective (d)	3.0
MA280 Linear Algebra	3.0
PE Physical Education	0.5

(a) Social Science Electives include: AN101, BM101, PS101, PY101, or SO101.

(b) Restrictive Sequence Electives include: Students should take either CI110 and CI130 or two semesters of a foreign language.

(c) Natural Science Electives include: BI141 & BI142, CH141 & CH142, GL101 & GL102, PH142 & PH142, PH151 & PH152, or PH261 & PH262. Physics sequence recommended.

Liberal Arts & Sciences: Mathematics & Science (Physical Education Transfer Advising Guide)

Associate in Science Degree

Science Electives: BM101, BM110, BM115, or PS101. Coaching Electives: CO231 or CO232.

This instruction is designed specifically 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.

Total Credit Hours: 64 - 65

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
SO101 Introduction to Sociology	3.0
MA115 Intermediate Mathematics	4.0
History Elective (a)	3.0
Any PM - Physical Education Course	1.0
Any PM - Physical Education Course	1.0

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
MA110 Elementary Statistics	3.0
BI141 General Biology 1	4.0
Take any Sociology GE Course	3.0
Any PM - Physical Education Course	1.0
Any PM - Physical Education Course	1.0

Third Semester

PY101 Introduction to General Psychology	3.0
Any GE Humanities Course	3.0
BI216 Human Anatomy & Physiology 1	4.0
HI101 History of Civilization 1	3.0
Restrictive Elective (b)	3.0-4.0
Any PM - Physical Education Course	1.0
Any PM - Physical Education Course	1.0

Fourth Semester

HI102 History of Civilization 2	3.0
Any GE Humanities Course	3.0
BI217 Human Anatomy & Physiology 2	4.0
Any Psychology GE Course	3.0
Any PM - Physical Education Course	1.0
Any PM - Physical Education Course	1.0

(a) History Electives include: HI111 American History 1492 - 1850 OR HI112 American History 1850 - Present.

(b) Restrictive Electives include: Natural Science Electives: CH141, CH142, GL101, GL102, PH141, PH142, PH151 or PH152. Social

Liberal Arts & Sciences: Mathematics & Science (Physics Transfer Advising Guide)

Associate in Science Degree

High School Mathematics Courses A and B or the equivalent, and one year laboratory science are required. 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.

Total Credit Hours: 63

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
CH141 General Chemistry 1	4.0
MA151 Calculus 1	4.0
Computer & Information Sciences Elective (a)	3.0
PE Physical Education	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
CH142 General Chemistry 2	4.0
MA152 Calculus 2	4.0
PH261 Engineering Physics 1	4.0
PE Physical Education	0.5

Third Semester

ES291 Electrical Circuits 1	4.0
MA253 Calculus 3	4.0
PH262 Engineering Physics 2	4.0
PE Physical Education	0.5
GE Social Science Elective (b)	3.0

Fourth Semester

HI101 History of Civilization 1	3.0
MA260 Differential Equations	3.0
MA280 Linear Algebra	3.0
PH265 Modern Physics and Thermodynamics	4.0
PH270 Waves and Oscillations	3.0
PE Physical Education	0.5

(a) Computer and Information Sciences Electives include: CI130 Programming in C++ OR CI140 Computer Programming for Engineers & Scientists.

(b) Social Science Electives include: AN101, PS101, PY101 or SO101.

Liberal Arts & Sciences: Mathematics & Science (Sports Medicine Transfer Advising Guide)

Associate in Science Degree

MVCC offers an emphasis in Sports Medicine. The Certified Athletic Trainer is an educated and skilled professional specializing in athletic healthcare. In cooperation with physicians and other allied health personnel, the athletic trainer functions as an integral member of the athletic healthcare team in secondary schools, colleges and universities, sports medicine clinics, professional sports programs and other athletic healthcare settings. This program provides students with a solid start in becoming certified athletic trainers or related professionals.

Through a comprehensive study of sciences, psychology, and sports medicine, students are fully prepared to transfer to a four-year school and are ready to complete a degree in athletic training, or related field of study, such as sports medicine, sports psychology, or personal training. Students are also afforded the unique opportunity to learn anatomy and physiology through the study of cadavers. In addition, through our program, students experience the day-to-day happenings of a college athletic training room through the completion of two practicums. These classes permit students to attend to the needs of student-athletes on a particular sports team and learn how the process works from initial injury to determining return-to-play status. The hours spent in these practicums provide students with an early start toward completing hands-on hours required for licensure and completion of the four-year degree.

This program is designed specifically for students intending to transfer to a four-year college as a Sports Medicine major, after graduation from MVCC.

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
PY101 Introduction to General Psychology	3.0
MA115 Intermediate Mathematics	4.0
CO232 Health Science Applied to Coaching	3.0
GE Natural Science Elective (a)	4.0

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
Psychology Elective (b)	3.0
MA110 Elementary Statistics	3.0
GE Natural Science Elective (a)	4.0
AT101 Introduction to Sports Medicine	3.0

Third Semester

AT201 Sports Medicine Practicum 1	1.0
HI101 History of Civilization 1	3.0
GE Natural Science Elective (a)	4.0
History Elective (c)	3.0
EN150 Effective Speech	3.0
PE172 Health and Wellness	2.0

Fourth Semester

HI102 History of Civilization 2	3.0
Any GE Humanities Course	3.0
GE Natural Science Elective (a)	4.0
AT202 Sports Medicine Practicum 2	1.0
BI151 Nutrition & Dietetics 1	3.0

(a) Natural Science Electives include: BI141 General Biology 1, BI142 General Biology 2, BI216 Anatomy & Physiology 1, BI217 Anatomy & Physiology 2, CH131 College Chemistry, CH141 General Chemistry 1, CH142 General Chemistry 2, PH151 Physics 1, or PH152 Physics 2.

(b) Psychology Electives include: 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) History Electives include: HI111 American History 1492 - 1850 OR HI112 American History 1850 - Present.

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. The Psychology Internship allows students to gain direct experience in work settings related to a variety of psychology careers. 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.

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
MA110 Elementary Statistics	3.0
PY101 Introduction to General Psychology	3.0
HS101 Introduction to Human Services	3.0
SO101 Introduction to Sociology	3.0
PE Physical Education	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
Biology Elective (a)	4.0
HS241 Chemical Dependencies	3.0
PY203 Abnormal Psychology	3.0
PY210 Evaluation, Research and Measurement in Behavioral Science	3.0
PE Physical Education	0.5

Third Semester

IS101 Computers and Society	3.0
Foreign Language Elective (b)	3.0
HI101 History of Civilization 1	3.0
PY204 Social Psychology	3.0
PY207 Life-Span Development Psychology	3.0
PE Physical Education	0.5

Fourth Semester

Humanities Elective (c)	3.0
Arts Elective (d)	3.0
Psychology Elective (e)	3.0
Psychology Elective (e)	3.0
American History Elective (f)	3.0
PE Physical Education	0.5

(c) Choose one of the following Humanities General Education courses: HU210, HU280, EN240, EN241, or EN265

(d) Choose one of the following Arts General Education courses: HU210, PT206, TH193, or EN197

(e) Choose two (2) courses from the following: PY201 Applied Behavioral Analysis, PY206 Theories of Personality, PY208 Death, Dying & Bereavement, PY209 Forensic Psychology

(f) Choose one of the following American History General Education courses: HI111, HI112, or AC131

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) BI103 Human Life Science or BI141 General Biology 1

(b) Choose one of the following Foreign Language General Education courses: SP101, SP102, SP191, SP201, FR101, FR102, FR191, FR201, or AL101.

Liberal Arts & Sciences: Public Policy

Associate in Science Degree

(f) Program Electives include: SS218 Methods of Research OR PY210 Evaluation, Research & Measurements.

This program prepares students to respond to the changes in government and their communities. It provides the skills to understand public policy making. Students choose electives from a broad range of disciplines in the field of policy making. 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.

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
IS101 Computers and Society	3.0
PS101 American National Government	3.0
PS102 Introduction to Public Policy	3.0
SO101 Introduction to Sociology	3.0
PE Physical Education	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
CJ106 Ethics in Criminal Justice	3.0
MA110 Elementary Statistics	3.0
PS203 State and Local Government	3.0
Any GE Natural Science Course	4.0
PE Physical Education	0.5

Third Semester

AC115 Financial Accounting	3.0
BM101 Survey of Economics	3.0
PY101 Introduction to General Psychology	3.0
Program Elective (a)	3.0
Program Elective (b)	3.0
PE Physical Education	0.5

Fourth Semester

PS206 Grant Writing	3.0
History Elective (e)	3.0
Mathematics or Science Elective (c)	3.0-4.0
Criminal Justice Elective (d)	3.0
Program Elective (f)	3.0
PE Physical Education	0.5

(a) Program 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.

(d) Any Criminal Justice course that is offered in the Criminal Justice Degree.

(e) History Electives include: HI111 American History 1492 - 1850 OR HI112 American History 1850 to Present.

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 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.

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.

(b) Students can also choose: AN 101, BM 101, GE 101, PS 101

(c) Choose one of the following: BI 105, GL100, PH 106, PH 112, PH 141, WE 101

(d) Choose two of the following: EN 275, EN 282, TH 194, TH195, TH 197, TH 283.

(e) Choose one of the following: HU 186, HU 187, HU 188, HU 204, HU 205, HU 227

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
MA110 Elementary Statistics	3.0
Foreign Language Elective (a)	3.0
HU191 Acting 1: Principles of Acting	3.0
TH193 Introduction to Theater	3.0
PE Physical Education	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
Foreign Language Elective (a)	3.0
TH194 Technical Theater	3.0
HU192 Acting 2: Characterization and Scene Study	3.0
Humanities Elective (e)	3.0
PE Physical Education	0.5

Third Semester

Science Elective (c)	4.0
EN280 Dramatic Literature: The Classic Theatre	3.0
PY101 Introduction to General Psychology	3.0
Program Elective (d)	3.0
HI101, HI111, or HU204	3.0
PE Physical Education	0.5

Fourth Semester

EN281 Dramatic Literature: Modern Drama	3.0
SO101 Introduction to Sociology	3.0
Program Elective (d)	3.0
HI102, HI112, or HU205	3.0
TH196 Theater Practicum	3.0
PE Physical Education	0.5

(a) 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

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, <http://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 School of STEM - Career for an advisor.

(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

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
MA121 Fundamentals of College Mathematics 1	4.0
MT114 Manufacturing Processes	3.0
MT140 Drafting and Design Using AutoCAD	3.0
MT155 Introduction to Solid Modeling	3.0
Physical Education Elective	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
MA122 Fundamentals of College Mathematics 2	4.0
MT126 Statics: Mechanical	3.0
MT141 Machining Fundamentals	4.0
Physical Education Elective	0.5

Third Semester

CH141 General Chemistry 1	4.0
MT207 Computer Aided Manufacturing	3.0
MT230 Strength of Materials: Mechanical	4.0
MT231 Lean Six Sigma	4.0
Physical Education Elective	0.5

Fourth Semester

MT203 Design of Machine Elements	3.0
MT204 Automatic Controls	3.0
MT209 Materials Science	3.0
MT252 Fluid Mechanics	4.0
GE Social Science Elective (b)	3.0
Physical Education Elective	0.5

(a) In the third semester CH131 College Chemistry may be substituted for CH141 General Chemistry 1.

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

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
MA115 Intermediate Mathematics	4.0
PY101 Introduction to General Psychology	3.0
SO101 Introduction to Sociology	3.0
PE Physical Education	1.0

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
MA121 Fundamentals of College Mathematics 1	4.0
MT225 Applied Mechanics and Strength of Materials	4.0
PH112 Science of Light 1	4.0
PE Physical Education	1.0

FAA Certification Required for Graduation

Consult with faculty advisor for FAA requirements

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 complements classroom-based instruction.

Gainful Employment - follow the link below for gainful employment information.

<https://www.mvcc.edu/institutional-effectiveness/gainful-employment/gainful-employment-disclosures.php>

Total Credit Hours: 32

First Semester

ET105 Computer Control Fundamentals	2.0
ET127 Modern Industrial Practice	3.0
MA105 Technical Mathematics 1	4.0
MT149 Pneumatic and Hydraulic Systems	3.0
ET101 Technical Electricity 1	3.0

Second Semester

ET102 Technical Electricity 2	3.0
ET104 Systems Diagrams	3.0
ET131 Electrical Machinery and Controls 1	4.0
ET251 Mechatronics Systems	3.0
MT139 Mechanical Systems	4.0

Metal Fabrication

Associate in Occupational Studies Degree

This program prepares students for careers in metal fabrication and related manufacturing fields. The combination of laboratory and lecture sessions provide the theory and practical application of the metal fabrication trades. Topics of study include Computer Numerical Control (CNC) machining, manual machining, computer-aided manufacturing (CAM), 3D solid modeling, and manufacturing processes. Students will also gain knowledge and experience in modern welding processes, including gas metal arc welding, gas tungsten arc welding, shielded metal arc welding, as well as oxy-fuel processes and plasma cutting.

Upon completion of their training, students will be prepared to test for American Welding Society and New York State Department of Transportation welding certifications.

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
MT170 Oxy-Acetylene Welding Procedures	4.0
MT174 Electric Arc Welding	4.0
MT270 Welding Procedures for MIG and TIG	4.0
MT272 Advanced Electric Arc Welding Procedures	4.0

Second Semester

MT271 Metallurgy for Welders	3.0
MT278 Welding Inspection and Quality Control Testing	4.0
MT277 Welders Blueprint Reading and Metal Fabrication	4.0
MT276 Welders Ornamental Iron and Blacksmithing	4.0
MT279 Sheet Metal Fabrication	3.0

Third Semester

MT291 Introduction to Machining	4.0
MT292 Introduction to CNC Milling	4.0
MT294 Introduction to CNC Turning Centers	4.0
MT114 Manufacturing Processes	3.0

Fourth Semester

MT295 Advanced CNC Turning Centers	4.0
MT296 Multi-Axis CNC Machining	4.0
MT297 CNC Capstone	4.0
PE172 Health and Wellness	2.0

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.

Total Credit Hours: 62 - 63

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
PY101 Introduction to General Psychology	3.0
BI216 Human Anatomy & Physiology 1	4.0
NU101 Nursing 1 (Fundamentals of Nursing)	5.0
NU111 Nursing Pharmacotherapeutics 1	1.0

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
BI217 Human Anatomy & Physiology 2	4.0
PY207 Life-Span Development Psychology	3.0
NU102 Nursing 2A (Family Centered Nursing during the Pregnancy Cycle)	4.0
NU103 Nursing 2B (Mental Health and Psychiatric Nursing Throughout the Life Cycle)	4.0

Third Semester

NU201 Nursing 3 (Threats to Basic Human Needs Throughout the Life Cycle: Part 1)	10.0
BI201 Microbiology	4.0

Fourth Semester

NU202 Nursing 4 (Threats to Basic Human Needs Throughout the Life Cycle: Part 2)	10.0
Mathematics Elective (a)	3.0 - 4.0

(a) Math options include: MA108 Concepts in Mathematics, MA110 Elementary Statistics, OR MA115 Intermediate Mathematics.

- 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 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.

Nutrition & 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.

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
BI151 Nutrition & Dietetics 1	3.0
BI216 Human Anatomy & Physiology 1	4.0
BI141 General Biology 1	4.0
PE Physical Education	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
MA125 College Algebra and Trigonometry	4.0
BI251 Nutrition Across the Lifespan	3.0
BI217 Human Anatomy & Physiology 2	4.0
SO101 Introduction to Sociology	3.0
PE Physical Education	0.5

Third Semester

CH141 General Chemistry 1	4.0
FS111 Food Preparation 1	4.0
MA110 Elementary Statistics	3.0
FS150 Safety & Sanitation	3.0
PE Physical Education	0.5

Fourth Semester

Natural Science Elective (a)	4.0
HI101 History of Civilization 1	3.0
IS101 Computers and Society	3.0
PY101 Introduction to General Psychology	3.0
SS218 Methods of Research	3.0
PE Physical Education	0.5

For successful completion of this program, it is strongly recommended students complete two years of high school mathematics, or the equivalent, and one year of chemistry - lab included.

(a) Natural Science electives include: CH142 General Chemistry 2 OR BI201 Microbiology.

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, Family Y, recreation and parks, nursing homes, youth agencies, and fitness centers. Working with an advisor; students plan a concentration of studies 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 the Fitness/Wellness emphasis 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 Generalist emphasis 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 an emphasis in Recreation Management. The Recreation & 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.

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
IS101 Computers and Society	3.0
RE100 Introduction to Recreation	3.0
RE105 Recreation Leadership and Activity Development	3.0
PE Physical Education	0.5
Program Restricted Elective (a)	3.0

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
MA108 Concepts in Mathematics	3.0
BI105 Environmental Science	4.0
RE102 Recreation Safety and Liability	3.0
RE106 Outdoor Recreation and Leisure Activities	3.0
PE Physical Education	0.5

Third Semester

EN150 Effective Speech	3.0
RE205 Recreation Internship 1	3.0
RE214 Therapeutic Recreation	3.0
PY101 Introduction to General Psychology	3.0
Program Restricted Elective (a)	3.0
PE170 First Aid	1.0

Fourth Semester

RE207 Recreation Internship 2	3.0
RE210 Recreation Program and Facility Management	3.0
SO101 Introduction to Sociology	3.0
Program Restricted Elective (a)	3.0
Program Restricted Elective (a)	3.0

One high school mathematics course or its equivalent is required.

(a) Students Elective 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

 - 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

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
CT265 Introduction to Geographic Information Systems	3.0
FB101 Introduction to Modeling and Fabrication	3.0
UA120 Remotely Piloted Aircraft Systems Operational and Industrial Operations	3.0
ET112 Electronics of Remotely Piloted Aircraft Systems	3.0
Physical Education Elective	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
UA102 Introduction to Remote Sensing	3.0
CT267 Advanced Geographic Information Systems	3.0
UA215 Remotely Piloted Aircraft Systems Mission Planning and Operations	3.0
UA121 Mechanics of Remotely Piloted Aircraft Systems	3.0
Physical Education Elective	0.5

Third Semester

CT153	3.0
UA217 Remotely Piloted Aircraft Systems Operations 1	3.0
UA218 Remotely Piloted Aircraft Systems Operations 2	3.0
PT205 History of Photography 1	3.0
MA110 Elementary Statistics	3.0
Physical Education Elective	0.5

Fourth Semester

CT266 Capstone Geographic Information Systems	3.0
CI104 Introduction to Cybersecurity	3.0
GL101 Physical Geology	4.0
GE101 Essentials of World Geography	3.0
UA221 Special Topics in Remotely Piloted Aircraft Systems Operations	3.0
Physical Education Elective	0.5

Program Micro-credentials:

Remotely Piloted Aircraft Systems Maintenance

This micro-credential will provide a mid-program milestone for RPAS students as well as a mechanism to upskill the incumbent workforce to perform maintenance and routine service of RPAS, ensuring the aircraft conforms to design and safe operating conditions. Courses include:

- FB101 - Introduction to Modeling & Fabrication 3 cr.
- ET112 - Electronics of RPAS 3 cr.
- UA121 - Mechanics of RPAS 3 cr.

Remotely Piloted Aircraft Systems Operations

This micro-credential will provide a mid-program milestone for RPAS students as well as a mechanism to upskill the incumbent workforce to perform as RPAS pilots and mission planners for both multirotor and fixed wing RPAS. Courses include:

- UA120 - RPAS Operations & Industrial Operations 3cr.
- UA215 - RPAS Mission Planning & Operations 3 cr.
- UA217 - RPAS Operations 1 3 cr.
- UA218 - RPAS Operations 2 3 cr.

Remotely Piloted Aircraft Systems Data Analysis

This micro-credential will provide a mid-program milestone for RPAS students as well as a mechanism to upskill the incumbent workforce to collect, validate, georeference, and analyze data rendered from RPAS missions. Courses include:

- CT153 - Introduction to Global Positioning Systems 3 cr.
- UA102 - Introduction to Remote Sensing 3 cr.
- CT265 - Introduction to Geographic Information Systems 3 cr.
- CT267 - Advanced Geographic Information Systems 3 cr.
- CT266 - Capstone in Global Positioning Systems 3 cr.

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 A.A.S degree involves four semesters of entry and advanced level coursework, plus a five-week summer session. A.A.S 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 Therapist Multiple Choice exam (TMC) 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. Passing national credentialing exams is necessary to receive a license to practice as an entry-level and advanced-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.

Total Credit Hours: 65

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
BI216 Human Anatomy & Physiology 1	4.0
RC101 Basic Science for Respiratory Care	2.0
RC103 Cardiopulmonary Pharmacology	3.0
RC111 Principles of Respiratory Care 1	4.0

Second Semester

BI217 Human Anatomy & Physiology 2	4.0
RC112 Principles of Respiratory Care 2	4.0
RC115 Cardiopulmonary Diseases	3.0
RC131 Clinical Practicum 1	3.0

Third Semester

EN102 English 2: Ideas and Values in Literature	3.0
Mathematics Elective (a)	3.0
RC213 Principles of Respiratory Care 3	2.0
RC232 Clinical Practicum 2	6.0

Fourth Semester

BI209 Basic Pathophysiology	3.0
Social Science Elective (b)	3.0
RC214 Acid Base Physiology	2.0
RC233 Clinical Practicum 3	6.0

Summer Session

RC215 Principles of Respiratory Care 4	1.0
RC234 Clinical Practicum 4	5.0

(a) Mathematics options include: MA108 Concepts in Mathematics OR MA110 Elementary Statistics

(b) Social Science options include: PY101 Introduction to Psychology OR SO101 Introduction to Sociology

Students must have a minimum GPA of 2.5 to be considered for admission to the Respiratory Care program.

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 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 seven 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 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

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.

Total Credit Hours: 30

First Semester

BM251 Organizational Behavior	3.0
ET115 Basic Electricity 1	3.0
FM161 Facility Blueprints	3.0
FM180 Public Health & Safety in Schools	3.0
FM246 Introduction to Alternative Energy Systems	3.0

Second Semester

BM254 Human Resources Management	3.0
CT242 Mechanical & Electrical Systems for Buildings	3.0
EN101 English 1: Composition	3.0
FM101 New York State Public School Budgeting & Accounting	3.0
FM244 Introduction to Green Building Technology	3.0

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 decisionmaking 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.

(c) Natural Science elective options: WE101 Introduction to Weather Studies OR GL101 Physical Geology.

Total Credit Hours: 64

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
ET115 Basic Electricity 1	3.0
FM101 New York State Public School Budgeting & Accounting	3.0
FM161 Facility Blueprints	3.0
HI101 History of Civilization 1	3.0
PE Physical Education (a)	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
MA108 Concepts in Mathematics	3.0
BM251 Organizational Behavior	3.0
CT242 Mechanical & Electrical Systems for Buildings	3.0
ET116 Basic Electricity 2	3.0
PE Physical Education (a)	0.5

Third Semester

BM101 Survey of Economics	3.0
BM252 Supervisory Management	3.0
FM105 Education Law for Facilities Management	3.0
FM180 Public Health & Safety in Schools	3.0
FM247 Introduction to Geothermal Heating & Cooling	3.0
PE Physical Education (a)	0.5

Fourth Semester

FM244 Introduction to Green Building Technology	3.0
FM246 Introduction to Alternative Energy Systems	3.0
FM248 Introduction to Solar Voltaic Systems	3.0
Program Restricted Elective (b)	3.0
Natural Science Elective (c)	4.0
PE Physical Education (a)	0.5

Semiconductor Manufacturing Technology

Associate in Applied Science Degree

(b) Program Electives: ET141 Programmable Logic Controllers, ET291 Fundamentals of Highly Automated Manufacturing Systems.

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.

Total Credit Hours: 63 - 63.5

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
ET151 Circuits 1	4.0
ET153 Introduction to Electronics	2.0
ET154 Computer Programming	2.0
MA121 Fundamentals of College Mathematics 1	4.0
Physical Education Elective	0.5

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
ET152 Circuits 2	4.0
ET161 Linear Electronics	3.0
ET181 Digital Electronics 1	3.0
MA122 Fundamentals of College Mathematics 2	4.0
Physical Education Elective	0.5

Third Semester

CH141 General Chemistry 1	4.0
ET290 Fundamentals of High Vacuum Technology	3.0
MT204 Automatic Controls	3.0
MT231 Lean Six Sigma	4.0
Physical Education Elective	0.5

Fourth Semester

ET285 Motors and Controls	4.0
ET289 Introduction to Semiconductor Manufacturing	4.0
GE Social Science Elective (a)	3.0
Program Elective (b)	3 - 3.5
Physical Education Elective	0.5

Preparation for this program should include:

Two high school mathematics courses, or the equivalent

One laboratory science (physics and chemistry are recommended)

(a) 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.

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 A.A.S. degree in Individual Studies. Many of the courses can be used in other business-related degree programs.

Total Credit Hours: 30

Plan of Study:

AC115 Financial Accounting	3.0
AC131 Business Law 1	3.0
BM120 Principles of Marketing	3.0
BM129 Business Mathematics	3.0
BM150 Principles of Entrepreneurship	3.0
IS101 Computers and Society	3.0
BM251 Organizational Behavior	3.0
Program Elective (a)	3.0
Business Management Elective (b)	3.0
AA106 Business Communications	3.0

(a) Program Electives include: Any AC, BM (above 101), or IS course other than those already required in the program. BM294 Business Internship substitutes for two business electives.

(b) Business Management Electives include: BM254 Human Resources Management OR BM264 Professional Selling.

Sports Management

Associate in Science Degree

Ready to Apply?

[Start the application process now!](#)

This transfer Liberal Arts program is designed for students interested in the {sports}management field who plan to transfer into a four year Business or Sports Management Program. Graduates from this program can continue with their sports management education and can pursue careers as team managers, personal agents, and executives in business that support professional and amateur sports. They can also work in fitness centers, recreation centers, and ice arenas, as well as sporting good sales and marketing.

speaking with potential MVCC students, many feel that Sport Management would be a great addition to the choices that we already offer and help to attract new students. The Jorgensen Center provides an excellent facility to run the program with the new field house and the fitness center. Also, the success of the athletic program and the 19 sports that we have, provide an opportunity for students in the major to gain valuable experience in the industry.

(a) History Electives include: HI111 American History 1492 - 1850 OR HI112 American History 1850 - Present.

(b) Natural Science Electives include: BI103, BI105, BI141, BI216, CH101, CH111, CH131, CH141, GL101, GL102, PH112, PH141, PH145, PH151, PH261, or WE101

Total Credit Hours: 61

First Semester

CF100 College Foundations Seminar	1.0
EN101 English 1: Composition	3.0
AC131 Business Law 1	3.0
HI101 History of Civilization 1	3.0
IS101 Computers and Society	3.0
SM101 Foundations of Sport Management	3.0

Second Semester

EN102 English 2: Ideas and Values in Literature	3.0
MA115 Intermediate Mathematics	4.0
History Elective (a)	3.0
SM102 Sport and Society	3.0
SM111 Sport Event Practicum 1	1.0
PE154 Fitness Center	1.0

Third Semester

AC115 Financial Accounting	3.0
EN150 Effective Speech	3.0
PY101 Introduction to General Psychology	3.0
SM112 Sport Event Practicum 2	1.0
GE Natural Science Elective (b)	4.0
PE Physical Education	0.5

Fourth Semester

BM110 Principles of Microeconomics	3.0
BM120 Principles of Marketing	3.0
MA110 Elementary Statistics	3.0
SM201 Leadership for Sport Professionals	3.0
SO101 Introduction to Sociology	3.0
PE Physical Education	0.5

Prerequisite: Meet MVCC Admission requirements.

This transfer program is designed to allow students the opportunity to complete in 2 years with an A.S. in Sports Management. The student will then have an opportunity to transfer seamlessly into an upper level SUNY College. Sports Management is a program that is exciting to students that are interested in MVCC and the sports industry. In discussions with MVCC Admissions Counselors and coaches who

Welding

Certificate

This certificate prepares individuals for actual welding work using welding processes and techniques, while preparing for the New York State Certification Examination.

Total Credit Hours: 34

First Semester

MT170 Oxy-Acetylene Welding Procedures	4.0
MT174 Electric Arc Welding	4.0
MT270 Welding Procedures for MIG and TIG	4.0
MT272 Advanced Electric Arc Welding Procedures	4.0

Second Semester

MT273 Welding Certification	5.0
MT277 Welders Blueprint Reading and Metal Fabrication	4.0
Certificate Elective (a)	4.0

(a) Certificate Electives include: MT276 Welders Ornamental Iron & Blacksmithing OR MT278 Welding Inspection & Quality Control Testing.

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 Math Course or its equivalent is recommended.

Total Credit Hours: 61 - 62

First Semester

CF100 College Foundations Seminar	1.0
EN110 Oral and Written Communication	3.0
MA105 Technical Mathematics 1	4.0
MT170 Oxy-Acetylene Welding Procedures	4.0
MT174 Electric Arc Welding	4.0
PE Physical Education	0.5

Second Semester

MT107 Basic Machine Shop Practice	3.0
MT270 Welding Procedures for MIG and TIG	4.0
MT272 Advanced Electric Arc Welding Procedures	4.0
PE Physical Education	0.5

Third Semester

MA106 Technical Mathematics 2	3.0
MT140 Drafting and Design Using AutoCAD	3.0
MT271 Metallurgy for Welders	3.0
MT278 Welding Inspection and Quality Control Testing	4.0
PE Physical Education	0.5

Fourth Semester

MT273 Welding Certification	5.0
MT276 Welders Ornamental Iron and Blacksmithing	4.0
MT277 Welders Blueprint Reading and Metal Fabrication	4.0
PE Physical Education	0.5

Students may replace MT276 Welders Ornamental Iron & Blacksmithing with an Internship. Please consult with your Faculty Advisor.

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% of New Yorkers live within 15 miles of a SUNY campus, and nearly 100% 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% 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.

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 comprised of 18 members, 15 of whom are appointed by the Governor, with the consent of the NYS Senate, 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% of their operating cost of one-half of their capital costs.

University Centers and Doctoral Degree Granting Institutions ⁽¹⁾

- Binghamton University
- New York State College of Ceramics at Alfred University
- 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 College of Veterinary Medicine at Cornell University
- New York State School of Industrial and Labor Relations at Cornell University
- Stony Brook University
- SUNY College of Environmental Science and Forestry
- SUNY College of Optometry
- SUNY Downstate Health Sciences University
- SUNY Polytechnic Institute
- University at Albany
- University at Buffalo
- Upstate Medical University

University Colleges ⁽¹⁾

- Buffalo State College
- Purchase College
- SUNY Brockport
- SUNY Cortland
- SUNY Empire State College
- SUNY Fredonia
- SUNY Geneseo
- SUNY New Paltz
- SUNY Old Westbury
- SUNY Oneonta
- SUNY Oswego
- SUNY Plattsburgh
- SUNY Potsdam

Colleges of Technology ⁽¹⁾

- Alfred State College
- Farmingdale State College
- Maritime State College
- SUNY Canton
- SUNY Cobleskill
- SUNY Delhi
- SUNY Morrisville

Community Colleges ⁽²⁾

- 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
- Orange County Community College
- Rockland Community College
- Schenectady County Community College
- Suffolk County Community College
- Sullivan County Community College
- SUNY Adirondack
- SUNY Broome Community College
- SUNY Ulster
- Tompkins Cortland Community College
- 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.

SUNY Leadership

State University of New York Central Administrative Office: H. Carl McCall SUNY Building, 353 Broadway, Albany, NY 12246

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Accurate as of June 1, 2021

Mohawk Valley Community College

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- Stephanie Reynolds, Vice President for Student Affairs; BA, SUNY Empire State College; MSW, Syracuse University
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- Franca Armstrong, Associate Vice President of Workforce Development and Dean of the Rome Campus; AA, Mohawk Valley Community College; BA, Utica College; MS, SUNY University Center at Albany. Awards: 2011 Chancellor's Award for Excellence in Professional Service, 2010 Excellence in Professional Service
- Frank DuRoss, Vice President of Community Development and Executive Director of the MVCC Foundation; BS, Utica College
- Jill Heintz, Executive Director of Organizational Culture and Wellness; BA, Hartwick College; MA, SUNY University Center at Stony Brook
- Crystal Marceau, Executive Director of Human Resources; BS, SUNY College at Oneonta; MBA, DeVry University
- Todd Marshall, Chief Equity and Inclusion Officer/CDO; MA, Cornell University; Ph.D., Cornell University; Awards: 2019 Heart of the Hawk
- Alen Smajic, Executive Director of Marketing and Communications; AAS, Mohawk Valley Community College; BS, SUNY Polytechnic Institute; MBA, SUNY Polytechnic Institute

MVCC Emeriti

- Josephine Alexander, Professor Emerita
- Jerome Alvermann, Deceased, Vice President Emeritus
- Michael C. Austin, Trustee Emeritus
- Diana Ayers-Darling, Professor Emerita

- Grace Esther Balutis, Deceased, Professional Staff Emerita
- Edward I. Barber, Deceased, Administrator Emeritus
- Joyce B. Baumann, Associate Professor Emerita
- Sharon Benedetto, Distinguished Retiree
- Barbara A. Berlin, Counselor Emerita
- Kathy Bernstein, Deceased, Professor Emerita
- Betty Bishop, Deceased, Professor Emerita
- Thomas A. Blanchfield, Deceased, Professor Emeritus
- Deborah T. Bogan, Administrator Emerita
- Colleen Bolton, Professor Emerita
- John K. Bolton, Jr., Vice President Emeritus
- Dr. Jennifer A. Boulanger, Dean Emerita
- Sarah Brooks, Deceased, Professor Emerita
- Gerard Brophy, Deceased, Administrator Emeritus
- Annette Broski, Administrator Emerita
- Jerome Brown, Administrator Emeritus
- Michael J. Burke, Deceased, Professor Emeritus
- James Burns, Deceased, Professor Emeritus
- Rose Button, Assistant Dean Emerita
- Harold Cantor, Professor Emeritus
- Thomas Capraro, Professor Emeritus
- Nancy Caputo, Associate Dean and Professor Emerita
- Antoinette (Toni) Carbone, Deceased, Professional Staff Emerita
- Dr. Clinton R. Carpenter, Professor Emeritus
- Steve Casakos, Professor Emeritus
- Mary Q. Chapin, Trustee Emerita
- Albert L. Christensen, Professor Emeritus
- Diane Clark, Distinguished Retiree
- Robert Clarke, Professor Emeritus
- Dr. Sarah A. Coleman, Professor Emerita
- Donald C. Connelly, Deceased, Professor Emeritus
- Warren Copeland, Deceased, Trustee Emeritus
- Roger Cowdery, Professor Emeritus
- Marie Czarnecki, Professor Emerita
- Priscilla (Kitty) Dack, Deceased, Professional Staff Emerita
- Eileen A. Dailey, Distinguished Retiree
- Rose Danella, Professor Emerita
- Willis V. Daugherty, Deceased, Trustee Emeritus
- Paul Davidson, Barneveld, Professor Emeritus
- Sherry Day, Distinguished Retiree
- Joseph DeBuvitz, Honorary Employee and Director Emeritus
- Robert C. Decker, Professor Emeritus
- Dr. Robert O. Dell, Professor Emeritus
- Denise M. DiGiorgio, Vice President Emerita
- Carol J. Dinger, Distinguished Retiree
- John T. Dizer, Deceased, Professor Emeritus
- Celia Domser, Professor and Administrator Emerita
- Salvatore (Sam) Drogo, Deceased, Professor Emeritus
- Francis Dunning, Professor Emeritus
- Dorothy Dur, Deceased, Trustee Emerita
- Dr. Jim Dyer, Deceased, Professor Emeritus
- Dr. Maryrose Eannace, Vice President Emerita
- Debra L. Edick, Distinguished Retiree
- Dr. Sandra Engel, Administrator and Professor Emerita
- Barbara L. Evans, Professor Emerita
- David Evans, Deceased, Trustee Emeritus
- Dr. Carolyn Evans, Professor Emerita
- Ralph Feola, Vice President Emeritus
- Russel Fielding, Deceased, Trustee Emeritus
- Patricia Fox, Administrator Emerita
- Wayne S. Freed, Associate Professor Emeritus
- Arthur Friedberg, Professor Emeritus
- Harold Gabel, Deceased, Professor Emeritus
- Cornelius Gall, Professor Emeritus
- Hon. Anthony Garramone, Trustee Emeritus
- Dr. James Gifford, Professor Emeritus
- Dr. Linda I. Gigliotti, Professor Emerita
- Tom Giometti, Deceased, Professor Emeritus
- Catherine Glod, Professor Emerita
- Leslie Goerner, Associate Professor Emerita
- Jerome Goodman, Deceased, Professor Emeritus
- Barbara Granato, Distinguished Retiree
- Nancy J. Green, Professor Emerita
- Emlyn Griffith, Esq., Deceased, Honorary Professor Emeritus/
Regent Emeritus, The University of the State of New York 215
- Julius Grossman, Deceased, Professor Emeritus
- Paul M. Halko, Distinguished Retiree
- Charles Hall, Deceased, Trustee Emeritus
- Leon W. Heselton, Professor Emeritus
- Charles A. Higgerson, Deceased, Professor Emeritus
- Dana Higgins, Deceased, Trustee Emeritus
- John Hollinger, Deceased, Administrator Emeritus
- Elizabeth Hubbard-Ovens, Trustee Emerita
- Raymond C. Hurlburt, Deceased, Professor Emeritus
- William E. Hysell, Professor Emeritus
- Anne Ichihana, Professional Staff Emerita
- Edwin (Duane) Isenberg, Associate Professor Emeritus
- Milton H. Jannone, Deceased, Professor Emeritus
- Robert Jastrab, Counselor Emeritus
- Dean B. Jeanblanc, Deceased, Professor Emeritus
- Gilbert Jones, Deceased, Trustee Emeritus
- Robert R. Jorgensen, Deceased, Professor Emeritus
- Dr. Robert Jubenville, Dean and Professor Emeritus
- Virginia Juergensen, Deceased, Professor Emerita
- Paul Katchmar, Administrator Emeritus
- David Katz, III, Administrator and Professor Emeritus
- Donald Kelly, Professor Emeritus
- Paul H. Kempkes, Professor Emeritus
- Tom Kernan, Deceased, Trustee Emeritus
- Paul Kewley, Professor Emeritus
- Kenneth A. Klein, Associate Professor Emeritus
- Phil Korn, Deceased, Professor Emeritus
- Raymond Kosiewicz, Professor Emeritus
- Anthony Kwiatkowski, Counselor Emeritus
- Ronald Labuz, Professor Emeritus
- Robert Lacell, Administrator Emeritus
- Angelo Lattuca, Professor Emeritus
- Dennis Lee, Professor Emeritus
- Mary Alice Levine, Deceased, Professor Emerita
- Dr. Yixiong (Shawn) Liang, Associate Professor Emeritus
- Weiliang Loh, Professor Emeritus
- Carmelita Lomeo-Smrtic, Deceased, Professor Emerita
- Marjorie Loveland, Deceased, Professor Emerita
- Stuart MacMackin, Deceased, Trustee Emeritus
- Gene Madden, Deceased, Trustee Emeritus
- Thomas Maneen, Professional Staff Emeritus
- Susan Martineau, Professor Emerita
- K. Wayne Maser, Distinguished Retiree
- David F. McCarthy, Professor Emeritus
- Bruce McLean, Deceased, Trustee Emeritus
- John H. McMillan, Deceased, Professor Emeritus
- Malcome McNall, Administrator Emeritus
- Jonathan Meeter, Professor Emeritus
- Richard Meili, Professor Emeritus
- Robert W. Merrill, Deceased, Professor Emeritus
- Grace Messere, Deceased, Classified Staff Emerita
- Timothy B. Messick, Deceased, Assistant Professor Emeritus
- Larry Migliori, Professor and Administrator Emeritus
- Roy L. Mitchell, Professor Emeritus
- Steven J. Mocko, Professor Emeritus
- William Newman, Professor Emeritus
- Doreen Nicholls, Professor Emerita
- Pamela J. Nigro, Professional Staff Emerita
- Norbert Oldani, Professor Emeritus
- James O'Looney, Deceased, Professor Emeritus
- Theresa A. Paladino, Distinguished Retiree
- Albert V. Payne, Deceased, President Emeritus
- William Perrotti, Professor Emeritus
- Lorie L. Phillips, Professor Emerita
- Alexander Piejko, Professor Emeritus

- Cheryl K. Plescia, Professor Emerita
- Deborah Pryputniewicz, Distinguished Retiree
- Frank Przybycien, Professor and Administrator Emeritus
- William R. Pulhamus, Deceased, Professor Emeritus
- Beverly Quist, Professor Emerita
- Mark Radlowski, Administrator and Professor Emeritus
- Dennis Rahn, Administrator Emeritus
- Maria Ramos, Professor Emerita
- Peter M. Rayhill, Trustee Emeritus
- Mario J. Restive, Assistant Professor Emeritus
- Joanne Rettke, Deceased, Administrator Emeritus
- Ron Rhodes, Professor Emeritus
- Joseph Riley, Deceased, Professor Emeritus
- Charles Rogers, Professor Emeritus
- Dr. George Rogers, Deceased, Professor Emeritus
- Norayne W. Rosero, Professor Emerita
- Ricardo F. Rosero, Associate Professor Emeritus
- Samuel Russo, Jr., Administrator Emeritus
- Maria Salamida, Distinguished Retiree
- Robert Sanger, Professor Emeritus
- Dr. Michael I. Schafer, President Emeritus
- Rudolph Schatzel, Deceased, Trustee Emeritus
- Harold Schecter, Deceased, Administrator Emeritus
- Ellis Searles, Professor Emerita
- Steven D. Senior, Associate Professor Emeritus
- Mike Sewall, Professor Emeritus
- Dr. James C. Sheaffer, Deceased, Professor Emeritus
- John Siegenthaler, Professor Emeritus
- Ann Smallen, Professor Emerita
- Dr. Ivan Smith, Professor Emeritus
- James Smrtic, Professor Emeritus
- John Snyder, Professor Emeritus
- Raymond H. Stan, Deceased, Professor Emeritus
- John B. Stetson, Trustee Emeritus
- George Strong, Professor Emeritus
- W. Richard Suhr, Administrator Emeritus
- Mary Lourdes Summa, Distinguished Retiree
- John D. (Jack) Susenburger, Associate Professor Emeritus
- Alfreda G. Suskie, Deceased, Professor Emerita
- Charles Svoboda, Professor Emeritus
- Douglas H. Swartout, Professor Emeritus
- John Swistak, Associate Professor Emeritus
- Eugenia Taft, Professor Emerita
- Dr. Satya Tandon, Professor Emeritus
- Richard Thomas, Professor Emeritus
- Herbert Thorpe, Counselor Emeritus
- Frank Tobiasz, Deceased, Professor Emeritus
- Lawrence A. Trivieri, Professor Emeritus
- Jean VanAuken, Deceased, Professor Emerita
- Sheila Vandever, Trustee Emerita
- Stephanie Verostek, Administrator Emerita
- Sister Rose Vincent, Deceased, Trustee Emerita
- Jean Wagner, Professor Emerita
- Jean Walls, Professor Emerita
- Merlen Ward, Administrator Emeritus
- Beverly Warner, Deceased, Professor Emerita
- Debra K. Waterman, Associate Professor Emerita
- Dr. Lewis A. White, Vice President Emeritus
- Donald Willner, Dean and Professor Emeritus
- Don Wills, Professor Emeritus
- Mary Carmel Wolf, Trustee Emerita
- Jackie L. Womack, Distinguished Retiree
- Paul Worlock, Deceased, Trustee Emeritus
- N. Joseph Yagey, Trustee Emeritus
- Ronald F. Zollweg, Deceased, Professor Emeritus

MVCC Administrators *

- Cory Albrecht, Director of Advanced Institute for Manufacturing; BS, SUNY Polytechnic Institute
- David Amico, Executive Director for Public Safety; AAS, Mohawk Valley Community College; BS, Utica College; MS, American Military University
- Paul Arvantides, Director of the Small Business Development Center BA, Hamilton College; BS, SUNY Polytechnic Institute
- Tania Bader, Assistant to the Vice President for Administrative Services; AAS, Mohawk Valley Community College
- Todd Behrendt, Dean of the School of Art; AAS, Mohawk Valley Community College; BFA, Burlington College; MS, Utica College
- Salina Billins, Director of Educational Opportunity Program (EOP); MS, Utica College; Awards: 2021 Pride of the Hawk
- Kathleen Bouse, Assistant to the Office of the Vice President for Learning and Academic Affairs; BA, SUNY College at Oswego
- Gary Broadhurst, Dean of Athletics and Professor; AAS, Mohawk Valley Community College; BSE, SUNY College at Cortland; MSE, SUNY College at Cortland; Awards: 2001 Chancellor's Award for Excellence in Professional Service
- Stephanie Bush, Recruitment and Employment Specialist; BS, Syracuse University
- Walter Constantini, Director Aviation Programs – Tea Leaf; BS, Embry Riddle Aeronautical University
- Melissa Copperwheat, Dean of the School of Health Sciences; AS, St. Elizabeth College of Nursing; BSN, SUNY Polytechnic Institute; MS, LeMoyne College; MSN, SUNY Polytechnic Institute; Awards: 2014 Heart of the Hawk
- Colleen Cornmire, Senior Systems Analyst; AAS, Mohawk Valley Community College; BS, SUNY Polytechnic Institute; Awards: 2012 Pride of the Hawk, 2014 Excellence in Professional Service, 2015 Chancellor's Award for Excellence in Professional Service
- Tracy Coulson, Director of Student Accessibility and Wellness; BA, SUNY College at Cortland; MPA, SUNY University Center at Binghamton; Awards: 2013 Eye of the Hawk Award, 2015 Excellence in Professional Service, 2016 Chancellor's Award for Excellence in Professional Service, 2018 Altitude Award
- Julie Dewan, Dean of Curriculum and Assessment; AS, Herkimer College; BS, SUNY College at Oneonta; MA, SUNY University Center at Albany; Awards: 2016 Excellence in Professional Service, 2017 Chancellor's Award for Excellence in Professional Service
- Jennifer DeWeerth, Dean of Student Enrollment; BA, Swarthmore College; MDIV, University of Chicago; Awards: 2012 Excellence in Professional Service, 2013 Chancellor's Award for Excellence in Professional Service, 2019 Eye of the Hawk Award
- Christina DiSano, Assistant to the Office of Human Resources; BS, St. John Fisher College
- Bill Dustin, Director of Events and Guest Services; BS, LeMoyne College; Awards: 2017 Excellence in Professional Service; 2018 Chancellor's Award for Excellence in Professional Service
- Deanna Ferro-Aurience, Director of Development; AAS, Mohawk Valley Community College; BA, Marist College; MS, Ithaca College; Awards: 2014 Pride of the Hawk, 2015 Aeries Award, 2019 Excellence in Professional Service, 2020 Chancellor's Award for Excellence in Professional Service
- Stephen Frisbee, Director of College Libraries; BA, St. Lawrence University; MLS, SUNY University Center at Albany; Awards: 2009 Chancellor's Award for Excellence in Professional Service, 2008 Excellence in Professional Service, 2010 Aeries Award
- Dennis Gibbons, Dean of Student Life; BA, SUNY College at Cortland; MA, SUNY Empire State College; Awards: 2007 Chancellor's Award for Excellence in Professional Service, 2006 Excellence in Professional Service, 2018 Diversity, Equity & Inclusion Award, 2019 Eye of the Hawk Award
- Dianne Head, Payroll Manager; AAS, Penn State University/University Park; BS, Utica College
- Daniel Ianno, Director of Admissions; AAS, Mohawk Valley Community College; BA, SUNY College at Oswego

- Gloria Karol, Assistant to the President and Secretary to the Board of Trustees; AAS, Mohawk Valley Community College; BBA, SUNY Polytechnic Institute; Awards: 2014 Altitude Award, 2020 Pride of the Hawk
- Todd Kubica, Upward Bound Project Director; MSE, Westbrook College; Awards: 2021 Excellence in Professional Service
- Sarah Lam, Director of Community and Workforce Development; BS, SUNY College at Cortland; MED, SUNY College at Cortland; Awards: 2014 Altitude Award, 2016 Pride of the Hawk
- Rachel Libby, Academic Planner; BA, LeMoyne College
- Troy Little, Director of Law Enforcement Programs; AAS, Mohawk Valley Community College; BA, Saint Leo University; MA, SUNY University Center at Albany; Awards: 2017 Heart of the Hawk, 2017 Heart of Hearts, 2017 Genesis Outstanding Educator Award
- James Lynch, Assistant Vice President of Learning and Academic Affairs; AS, Johnson & Wales University; AS, Springfield Tech Community College; MA, Cambridge College; Awards: 2015 Altitude Award, 2020 Eye of The Hawk
- James Maio, Dean of Student Support; BA, Saint Bonaventure University; MSE, Saint Bonaventure University; Awards: 2019 Eye of the Hawk Award
- Dawson McDermott, Director of Holistic Student Support; 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, 2018 Altitude Award, 2018 Excellence in Professional Service, 2019 Chancellor's Award for Excellence in Professional Service
- Shane McGovern, Director of Dual Credit; BA, Hamilton College; Awards: 2021 Excellence in Professional Service
- Michael McHarris, Director of Facilities and Operations; BS, SUNY College of Environmental Science & Forestry; BS, Utica College; Awards: 2010 Chancellor's Award for Excellence in Professional Service, 2009 Excellence in Professional Service, 2018 Pride of the Hawk, 2018 Pride of Pride
- Jake Mihevc, Dean of the School of STEM – Transfer; BA, SUNY College at Geneseo; MA, Utica College
- Marie Miknavich, Director of Institutional Research and Analysis; BS, SUNY College at Plattsburgh; MA, SUNY University Center at Albany
- Brian Molinaro, Controller; BS, Alfred University
- Anne Nolan, Assistant to the Vice President of Community Development; BA, SUNY University Center at Albany; Awards: 2019 Pride of The Hawk, 2020 Pride of Pride
- Mary Noti, Assistant to the Vice President for Learning and Academic Affairs; AAS, Herkimer College; 2017 Pride of the Hawk, 2017 Pride of Pride
- Mary Jane Parry, Executive Director of Information Technology; AAS, Mohawk Valley Community College; AAS, Mohawk Valley Community College; BA, SUNY Empire State College
- Morris Pearson, Director of Education Outreach Center; AAS, Mohawk Valley Community College; BS, SUNY Polytechnic Institute; MA, Liberty University
- Michael Pede, Director of Financial Aid; BA, SUNY College at Fredonia; MS, Syracuse University
- James Roberts, Dean of the School of Humanities; BA, Utica College; MA, SUNY University Center at Binghamton; Awards: 2017 Altitude Award, 2018 Heart of the Hawk
- Ibrahim Rosic, Assistant Dean of the School of STEM and Director of the Learning Commons; AAS, Mohawk Valley Community College; BA, SUNY Polytechnic Institute; MS, SUNY Polytechnic Institute; Awards: 2013 Pride of the Hawk
- Amanda Roy-Small, Assistant to the Vice President of Student Affairs; AS, Mohawk Valley Community College; BA, SUNY College at Oneonta
- Kristen Skobla, Executive Director of the Center for Leadership Excellence and Leadership Mohawk Valley; BS, Siena College; MA, SUNY Empire State College; Awards: 2016 Excellence in Professional Service, 2017 Chancellor's Award for Excellence in Professional Service
- Rosemary Spetka, Director of Student Records & Registrar; BA, School of Social Work; BA, University of California: Los Angeles
- Timothy Thomas, Assistant Vice President of Learning and Academic Affairs; MA, Union College; Awards: 2019 Pride of the Hawk, 2019 Pride of Pride
- Christine VanNamee, Dean of the School of Business and Hospitality; BS, SUNY College at Brockport; MBA, SUNY Polytechnic Institute
- Janet Visalli, Director of Holistic Student Support; BA, Wells College; Awards: 2006 Chancellor's Award for Excellence in Professional Service, 2005 Excellence in Professional Service, 2009 Pride of the Hawk, 2009 Pride of Pride
- Nancy Wallace, Associate Director of Human Resources for Employment and Compensation; AAS, Herkimer College; BS, Utica College; MBA, SUNY Polytechnic Institute
- Gail Warchol, Associate Director of Human Resources for Benefits and Labor Relations; AAS, Mohawk Valley Community College; BPS, SUNY Polytechnic Institute; MS, SUNY Polytechnic Institute
- Therese Winchester, Auxiliary Services Director
- Joe Woodrow, Dean of the School of STEM – Careers; BS, SUNY College of Environmental Science & Forestry; MS, SUNY College of Environmental Science & Forestry; Ph.D., University of Hawaii at Manoa
- Richard Zaklukiewicz, Assistant Controller; AAS, Herkimer College; BS, Utica College

MVCC Faculty *

- Peter Abbe, Assistant Professor; Certificate, Mohawk Valley Community College; AAS, Mohawk Valley Community College
- Bryan Alquire, Professor; AA, SUNY Canton College of Technology; AAS, Onondaga Community College; BS, SUNY Polytechnic Institute; MBA, The Sage Colleges
- Belinda Alvarado, Associate Professor; BA, University of Findlay; MA, University of Findlay; Awards: 2015 Heart of the Hawk, 2015 Heart of Hearts
- Carli Amodio, Instructor; AAS and AS, Mohawk Valley Community College; BS, Grand Canyon University
- Glenn Ballard, Instructor; AOS, Mohawk Valley Community College; BT, SUNY Polytechnic Institute
- Melissa Barlett, Associate Professor; BS, Allegheny College; Ph.D., Kent State University; Awards: 2013 Heart of the Hawk, 2013 Heart of Hearts, 2020 Excellence in Faculty Service, 2020-2021 Diversity, Equity & Inclusion Award, 2021 SUNY Chancellor's Award for Excellence in Faculty Service
- Jeffrey Birt, Associate Professor; BS, Cornell University; MS, SUNY Polytechnic Institute
- Erica Brindisi, Assistant Professor; BS, Utica College; MS, Albany Medical College
- Michael Brown, Instructor; AAS, Mohawk Valley Community College; BS, Clarkson University
- Eileen Bush, Associate Professor; BS, Utica College; MS, A.T. Still University; Awards: 2021 Heart of the Hawk, 2020-2021 Heart of Hearts
- Ruyn Cavic, Assistant Professor; BS, Marymount College; MSE, Fordham University; Ph.D., Capella University; Awards: 2018 Diversity, Equity & Inclusion Award, 2020 Heart of The Hawk
- Nur Acar Cayirdag, Instructor; MA, University of Georgia; Ph.D., Middle East Tech University, Turkey
- Alan Chace, Assistant Professor; AAS, Mohawk Valley Community College; BA, SUNY College at Oneonta; MA, SUNY University Center at Albany
- Angie Christian, Assistant Professor; Certificate, Onondaga Community College; BS, SUNY University Center at Buffalo; MED, SUNY College at Oswego
- Robert Christman, Associate Professor; BA, St. Vincent DePaul Seminary; MDIV, St. Vincent DePaul Seminary; MS, Saint Thomas University; PSYD, Carlos Albizu University

- Scot Connor, Assistant Professor; AAS, Mohawk Valley Community College; BFA, Syracuse University; MFA, Academy of Art College; Awards: 2012 Heart of the Hawk
- Katey Cordary, Instructor; BS, SUNY College at Cortland; MSE, Alfred University; Ph.D., Capella University
- Elin Cormican, Professor; AB, Augustana College; MSW, University South Carolina
- Shannon Crocker, Assistant Professor; BS, Spring Hill College; MS, University of South Alabama; Awards: 2019 Heart of the Hawk, 2019 Heart of Hearts, 2019 Aeries Award
- Paul Cruskie, Associate Professor; BBA, Saint Bonaventure University; MA, Saint Bonaventure University; 2006 Chancellor's Award for Excellence in Scholarship/Creative Activities, 2005 Excellence in Scholarship/Creative Activities
- Shahida Dar, Professor; BS, University of Punjab; MS, University of Punjab; Ph.D., University of Delaware
- Sean Davis, Assistant Professor; AS, Hudson Valley Community College; BS, Rochester Institute of Technology; MBA, Southern New Hampshire University; MA, SUNY University Center at Albany
- Joann DeTraglia, Associate Professor; AAS, Paul Smiths College; BS, University of Nevada-Las Vegas; MED, College of Saint Rose; MED, SUNY College at Oswego; Awards: 2007 Excellence in Adjunct Teaching
- Alyssa Devine, Instructor; BA, Colgate University; MS, Georgetown University
- Dominic DiMaggio, Head Coach/Athletics Specialist; BS, Southern New Hampshire University; MS, Southern New Hampshire University
- Alison Doughtie, Professor; BA, Rice University; MA, Indiana University; Awards: 2015 Heart of the Hawk, 2017 Excellence in Teaching, 2018 Chancellor's Award for Excellence in Teaching
- Emily Durr, Head Coach/Athletics Specialist; BS, Iowa State University
- Dayton Elseth, Associate Professor; BS, North Dakota State University; MA, Central Missouri State University
- Nicholas Evanoff, Head Coach/Athletics Specialist; BS, Utica College; MS, Utica College
- Michael Faitell, Associate Professor; AA, Orange County Community College; BA, SUNY College at Geneseo; MA, College of Saint Rose
- James Fiore, Professor; AAS, Mohawk Valley Community College; BT, SUNY Polytechnic Institute; MS, SUNY Polytechnic Institute; Awards: 2014 Excellence in Scholarship/Creative Activities, 2013 Aeries Award, 2015 Chancellor's Award for Excellence in Scholarship/Creative Activities, 2021 Excellence in Teaching
- Aaron Fried, Coordinator of Academic Program Development and Associate Professor, BS, SUNY College at Brockport; MS, Syracuse University; MS, Syracuse University; Ph.D., SUNY Upstate Medical University; Ph.D., Syracuse University; Awards: 2018 Heart of the Hawk, 2019 Excellence in Faculty Service, 2020 Altitude Award, 2020 Chancellor's Award for Excellence in Faculty Service, 2020-2021 Eye of the Hawk
- Rosemary Fuoco, Professor; AAS, Mohawk Valley Community College; BS, SUNY Polytechnic Institute; MS, SUNY College at Oswego
- Karen Getman, Assistant Professor; AAS, SUNY Morrisville College of Agriculture & Technology; BA, SUNY Polytechnic Institute; MS, Fort Hays State University
- Nicholas Gioppo, Associate Professor; BS, Youngstown State University; MS, Bowling Green State University
- Robert Gould, Associate Professor; BS, SUNY College at Cortland; MA, University of North Carolina at Chapel Hill
- Alexander Haines-Stephan, Associate Professor; BA, SUNY College at Geneseo; MS, Utica College; Awards: 2018 Eye of the Hawk Award, 2021 Excellence in Faculty Service
- Christi Harrington, Professor; BFA, University of Michigan-Ann Arbor; MFA, New York Academy of Art
- Alan Hazen, Instructor; MS, Eastern Kentucky University
- Michael Higgins, Assistant Professor; AAS, SUNY College of Tech at Alfred; BET, Rochester Institute of Technology; MBA, SUNY College at Oswego
- Luke Hobaica, Instructor; AOS, Mohawk Valley Community College; BS, SUNY College at Oswego
- David Hoffman, Associate Professor; AOS, SUNY Cobleskill College of Agriculture & Technology; BS, Rochester Institute of Technology; MS, SUNY College at Oswego
- Lori Hughes, Assistant Professor; MS, Worcester State College
- Robert Huyck, Associate Professor; AS, Adirondack Community College; BS, SUNY College at Oneonta; MBA, SUNY College at Oswego; Awards: 2015 Excellence in Teaching, 2016 Chancellor's Award for Excellence in Teaching
- Douglas Hyldelund, Associate Professor; AAS, Mohawk Valley Community College; BFA, SUNY College at Fredonia; MA, SUNY Empire State College
- Scott Jackson, Instructor; AS, Onondaga Community College; BS, SUNY College at Oswego; MS, Rensselaer Polytechnic Institute
- Thomas Jennings, Associate Professor; BS, Purdue University West Lafayette; BS, Rensselaer Polytechnic Institute; MS, Rensselaer Polytechnic Institute
- Brian Judycki, Professor; BA, SUNY University Center at Albany; MS, SUNY Polytechnic Institute
- William Judycki, Professor; AAS, Mohawk Valley Community College; BS, Rochester Institute of Technology; MS, Syracuse University
- Michelle Kelly, Associate Professor; BS, SUNY College at Brockport; MS, SUNY College at Brockport
- Richard Kelly, Associate Professor; BS, SUNY College at Cortland; MS, Utica College; Awards: 2018 Excellence in Teaching, 2019 Chancellor's Award for Excellence in Teaching
- Pattina Keniston, Instructor; BS, SUNY Empire State College; Awards: 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 Chancellor's Award for Excellence in Scholarship/Creative Activities, 2016 Aeries Award, 2016 Heart of the Hawk, 2021 Excellence in Teaching
- Jennifer Krohn, Associate Professor & Athletic Trainer; BS, Virginia Commonwealth University; MS, James Madison University; Awards: 2018 Diversity, Equity & Inclusion Award
- Michael Kuczynski, Instructor; BS, University of Minnesota; Ph.D., Michigan State University
- Patricia Kuhn, Instructor; AS, St. Elizabeth College of Nursing; BSN, Grand Canyon University; MSN, Southern New Hampshire University
- Gary Kulis, Associate Professor; BA, University of Maine at Presque Isle; MA, SUNY University Center at Binghamton; Awards: 2018 Eye of the Hawk Award
- Jerome LaLonde, Professor; MA, Syracuse University
- Mary Kate LaPaglia, Assistant Professor; Certificate, Faxton-St. Luke's School of Radiography; AS, Herkimer College; BS, SUNY Empire State College; MA, Trident University International
- Aaron Lewis, Instructor; BS, SUNY College at Oneonta; MS, SUNY College at Oneonta; MS, SUNY Polytechnic Institute
- Samuel Lilly, Assistant Professor; AAS, Mohawk Valley Community College; AS, Mohawk Valley Community College; BSN, Keuka College; MSN, Walden University
- Kyle Lince, Professor; BS, SUNY Polytechnic Institute; MS, SUNY Polytechnic Institute
- Tia Lock, Associate Professor; AAS, Herkimer College; BS, SUNY Polytechnic Institute; MS, SUNY College at New Paltz
- Stacey McCall, Assistant Professor; BA, Elms College; MA, SUNY University Center at Albany; MA, SUNY University Center at Albany
- Maureen McCleary, Associate Professor; BA, Utica College; MS, SUNY Upstate Medical University
- Josef "Sam" McManus, Instructor; MS, Utica College; Awards: 2020 Heart of the Hawk

- Gabriel Melendez, Professor; BSC, University of El Salvador; MA, University of Tennessee: Knoxville; Awards: 2018 Eye of the Hawk Award
- Brittnee Mexico, Head Coach/Athletics Specialist; MED, Utica College
- Thomas Mihevc, Associate Professor; BS, Rochester Institute of Technology; MS, SUNY Polytechnic Institute; Awards: 2020 Excellence in Teaching; 2021 SUNY Chancellor's Award for Excellence in Teaching
- Amanda Miller, Assistant Professor; BS, University of West Florida; MS, University of Oregon; Awards: 2021 Heart of the Hawk
- Christine Miller, Professor; AAS, Mohawk Valley Community College; BFA, SUNY College at Fredonia; MFA, SUNY College at New Paltz; Awards: 2008 Chancellor's Award for Excellence in Scholarship/Creative Activities, 2007 Excellence in Scholarship/Creative Activities, 2018 Heart of the Hawk, 2018 Heart of Hearts, 2018 Genesis Outstanding Educator Award, 2019 Excellence in Teaching, 2020 Chancellor's Award for Excellence in Teaching
- Robert Mineo, Assistant Professor; MS, SUNY Polytechnic Institute; Awards: 2018 Eye of the Hawk Award
- 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 Chancellor's Award for Excellence in Teaching, 2015 Heart of the Hawk, 2016 Heart of Hearts, 2021 Excellence in Scholarship/Creative Activities
- Frank Noti, Assistant Professor; AAS, Herkimer College; AS, Mohawk Valley Community College; BED, SUNY College at Oneonta; MSE, SUNY College at Cortland; Awards: 2019 Heart of The Hawk
- Nelissa Nowicki, Assistant Professor; BA, Skidmore College; MS, Syracuse University; MA, Boston College; Awards: 2018 Eye of the Hawk Award
- Carolyn West-Pace, Professor; BA, Syracuse University; MA, Syracuse University; MPHIL, Syracuse University; Ph.D., Syracuse University; Awards: 2000 Chancellor's Award for Excellence in Teaching, 1999 Excellence in Teaching, 2018 Excellence in Faculty Services, 2019 Chancellor's Award for Excellence in Faculty Services
- Fumin Pan, Assistant Professor; BS, Yuzhou University; MS, Zhejiang University; MS, University of Massachusetts-Amherst; Ph.D., University of Massachusetts-Amherst
- Michelle Parker, Assistant Professor; BSN, Utica College; MSN, SUNY Polytechnic Institute
- Russell Penner, Assistant Professor; AS, Liberty University; BS, Liberty University; MS, Syracuse University; Awards: 2018 Eye of the Hawk Award
- Joshua Piejko, Instructor; BA, Rochester Institute of Technology; MS, SUNY Polytechnic Institute
- Alisia Pooley, Assistant Professor; Certificate, Onondaga Community College; BA, SUNY College at Oswego
- Kristen Raab, Instructor; AS, Mohawk Valley Community College; BA, Utica College; MS, Utica College; Awards: 2017 Pride of the Hawk
- Dina Radeljas, Assistant Professor; AAS, Mohawk Valley Community College; BS, SUNY Polytechnic Institute; MS, SUNY Polytechnic Institute; Ph.D., Capella University; Awards: 2020 Heart of The Hawk, 2020 Heart of Hearts
- Anna Radlowski, Associate Professor; BA, Wells College; MA, Wesleyan University; Awards: 2018 Eye of the Hawk Award, 2018 Excellence in Teaching, 2019 Chancellor's Award for Excellence in Teaching
- Todd Rankins, Associate Professor; Certificate, Riverside School of Aeronautic; AAS, Herkimer College; BA, SUNY Polytechnic Institute
- James Rice, Instructor; BA, SUNY University Center at Albany; MS, Utica College
- John Ringlehan, Instructor; AAS, Mohawk Valley Community College; AAS, Mohawk Valley Community College; BS, SUNY Polytechnic Institute
- Nathan Roscup, Assistant Professor; BS, SUNY University Center at Buffalo; MS, Northeastern University; Awards: 2016 Eye of the Hawk Award, 2017 Heart of the Hawk
- Amanda Sandstrom, Instructor; AAS, St. Elizabeth College of Nursing; MS, Grand Canyon University
- Roman Santos, Associate Professor; BA, Brigham Young University; MA, San Diego State University; MA, University of Phoenix
- Renee Sbiroli, Assistant Professor; BS, SUNY College at Oswego
- Thomas Schink, Assistant Professor; AS, Corning Community College; BA, SUNY College at Potsdam; MA, SUNY College at Potsdam; Awards: 2018 Eye of the Hawk Award
- George Searles, Professor; BA, Marist College; MA, SUNY College at New Paltz; Ph.D., SUNY University Center at Binghamton; Awards: 2003 Chancellor's Award for Excellence in Scholarship/Creative Activities, 1985 Chancellor's Award for Excellence in Teaching, Advancement of Teaching NYS Professor of the Year 2002, 2003 NYS United Teachers Higher Education Member of the Year, 1984-1985 MVCC Award for Excellence in Service, Carnegie Foundation New York State Teacher of the Year, NYS Professor of the Year 2002, 2021 SUNY Distinguished Teaching Professor
- Scott Selden, Associate Professor; AAS, Mohawk Valley Community College; BFA, SUNY College at Fredonia; MA, SUNY Empire State College
- Erin Severs, Associate Professor; BA, Knox College; MA, University of Maine/Orono
- Amit Sharma, Assistant Professor; MS, Washington State University
- Brandon Shaw, Associate Professor; AAS, Mohawk Valley Community College; BS, SUNY College at Oneonta; MS, University of New England; Awards: 2013 Heart of the Hawk, 2010 Pride of the Hawk, 2019 Altitude Award
- Rialda Shulman, Associate Professor; BA, Utica College; MS, Utica College
- Michael Sisti, Instructor; BS, University of Vermont; MSE, Utica College
- 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 Chancellor's Award for Excellence in Teaching
- Matthew St. Croix, Assistant Professor; BS, Saint John Fisher College; MS, Saint John Fisher College
- Derrick Stevens, Assistant Professor; BS, Tennessee Technological University; Ph.D., North Carolina State University
- Kenny Stover, Instructor; AAS and AOS, Mohawk Valley Community College
- Melissa Thomas, Associate Professor; BA, SUNY Polytechnic Institute; MA, The Sage College-Albany Campus
- Thomas Townsley, Assistant Professor; MA, Syracuse University; Awards: 2016 Excellence in Scholarship/Creative Activities, 2017 Chancellor's Award for Excellence in Scholarship/Creative Activities
- Alina Mildred Treis, Professor; BA, College of Saint Rose; BA, University of Bombay; MA, SUNY University Center at Albany; Ph.D., SUNY University Center at Albany
- Frank Vellone, Instructor; AAS, Onondaga Community College; BT, SUNY Polytechnic Institute; MS, Utica College
- James Vitale, Professor; AAS, Mohawk Valley Community College; BFA, SUNY College at Buffalo; MFA, Syracuse University; Awards: 2011 Chancellor's Award for Excellence in Scholarship/Creative Activities, 2011 Excellence in Scholarship/Creative Activities 2017 Excellence in Teaching, 2018 Chancellor's Award for Excellence in Teaching
- Brandon Walcutt, Instructor; BBA, University Alaska; MBA, University of North Florida
- David Warren, Head Coach & Athletics Specialist; AAS, Herkimer College; BS, SUNY College at Cortland

- Justin Wilcox, Professor; AAS, Mohawk Valley Community College; BBA, SUNY Polytechnic Institute; MBA, SUNY Polytechnic Institute
- Lindsey Williams, Associate Professor; AS, Mohawk Valley Community College; BS, Florida State University; MS, Florida State University; Awards: 2013 Altitude Award, 2013 Heart of the Hawk
- Lorin Williams, Instructor; BA, SUNY University Center at Binghamton; PSYD, William James College
- Ross Wittenberg, Instructor; BS, American University; MS, American University
- Jason Yager, Associate Professor; AS, Butler County Community College; BS, SUNY Polytechnic Institute; MBA, SUNY Polytechnic Institute; Awards: 2008 Chancellor's Award for Excellence in Professional Service, 2007 Excellence in Professional Service
- William Zogby, Associate Professor; BS, University of Scranton; MA, Northeastern University; MBA, Syracuse University
- Kim Carhart, Senior Account Clerk; AAS, Mohawk Valley Community College
- Erica Carrock, Assistant Director of Events and Guest Services; BA, Utica College
- Tabitha Carter, Coordinator of Distributed Learning; AS, Herkimer College
- Richard Allan Cavoli, Building Maintenance Worker
- Michael Celio, Data Processing Clerk; AS, Herkimer College; BS, Utica College
- Lisa Chamberlin, Health Professions Resources Specialist; BSN, Syracuse University
- Louise Charbonneau, Librarian & Professor; BA, University of Quebec Montreal; MLS, SUNY University Center at Albany; Ph.D., SUNY University Center at Albany; Awards: 2012 Chancellor's Award for Excellence in Librarianship; 2011 Excellence in Librarianship

MVCC Staff *

- Michael Ahearn, Technical Coordinator for Events and Guest Services; BFA, Syracuse University
- Alexandra Almanzar, College Services Associate; BA, Utica College
- Michael Anderson, Building Maintenance Worker
- Patricia Antanavage, Student Support Advisor, Retention Coordinator; BS, Ball State University; Awards: 2015 Excellence in Professional Service; 2016 Chancellor's Award for Excellence in Professional Service
- Elyssa Arnone-Earl, Coordinator for Center for Leadership Excellence; MS, Utica College
- Peggy Axel, Library Cataloging Coordinator; BS, Utica College
- George Aylesworth, Environmental Health & Safety Officer; BA, Hamilton College
- Sarah Barcomb, YouthBuild Project Coordinator; MSE, SUNY College at Cortland
- Kathryn Barefoot, Assistant Registrar; AA, Suffolk County Community College; BS, Utica College
- Carmen Barretta, Working Supervisor
- Todd Barretta, Light Motor Equipment Operator
- Ryan Barsuch, Supervising Public Safety Officer & Peace Officer; BA, SUNY College at Oswego; Awards: 2019 Excellence in Classified Services, 2020 Chancellor's Award for Excellence in Classified Services
- Philip Benson, Admissions Counselor; BA, SUNY College at Cortland
- Nicole Benton, Technical Assistant - Placement Testing; Certificate, Mohawk Valley Community College; AS, Mohawk Valley Community College; BA, SUNY University Center at Albany
- David Bolinski, Senior Building Maintenance Mechanic
- Christina Born, Grant Writer; AS, Mohawk Valley Community College; BA, SUNY College at Oswego
- Maureen Boufas, Assistant Director of Financial Aid; AAS, Herkimer College; BS, SUNY Polytechnic Institute
- Marcia Bramhall, Auxiliary Services Customer Service Representative
- Monica Brown-Hodkinson, Student Support Advisor; BS Utica College; MS Utica College
- Nicole Bruzzese, College Services Associate; BA, Colgate University
- Lisa Bullet, Data Processing Clerk; Awards: 2008 Excellence in Classified Services, 2009 Chancellor's Award for Excellence in Classified Services
- Timothy Burke, Education Outreach Center Coordinator; AA, SUNY Morrisville College of Agriculture and Technology; BT, SUNY Morrisville College of Agriculture and Technology
- Charles Burkhart, Material Management Coordinator; AAS, Herkimer College
- Karin Capuana, Office Specialist I; Awards: 2013 Excellence in Classified Services, 2014 Chancellor's Award for Excellence in Classified Services
- Bernard Carcone, Building Maintenance Mechanic
- Norma Chrisman, Manager of Educational Technologies; AAS, Herkimer College; BS, Bellevue University; Awards: 2012 Chancellor's Award for Excellence in Professional Service; 2011 Excellence in Professional Service; 2010 Pride of the Hawk
- Karl Christiansen, Senior Public Safety Officer and Peace Officer
- Alexandria Compo, Multimedia Advertising Designer; BFA, Pratt Institute
- Stephen Cook, Coordinator, Cybersecurity Initiatives; MS, Utica College
- Deborah Cornish, Technical Assistant; AAS, Mohawk Valley Community College; BA, University of New Hampshire
- Grace Costello, Student Support Advisor; BS, SUNY College at Oneonta
- Shonda Cruz, College Services Associate; Awards: 2017 Excellence in Part-Time Service
- Sandra Cummings, Coordinator of Student Activities; AAS, Mohawk Valley Community College; BA, SUNY Polytechnic Institute
- Sara Cutright, College Services Associate, AAS, Mohawk Valley Community College; AAS, Herkimer College; BS, Utica College
- Karen Dean, Senior Administrative Assistant; AAS, Mohawk Valley Community College; Awards: 2012 Pride of the Hawk
- Carolyn DeJohn, Assistant Director of Community Education; AB, SUNY University Center at Binghamton; BA, SUNY University Center at Binghamton; MA, SUNY Empire State College; Awards: 2014 Excellence in Professional Service, 2013 Pride of the Hawk, 2015 Chancellor's Award for Excellence in Professional Service, 2017 Aeries Award, 2018 Diversity, Equity & Inclusion Award
- Danielle DelGiudice, Tutor & Mentor for Writing; BA, Bennington College; MFA, Long Island University
- Katelyn DiCastro, Accessibility Resources Transitional Support Specialist; BS, Daemen College; MS, Capella University; Awards: 2019 Diversity, Equity & Inclusion Award
- Brittany Dielemans, Coordinator of Judicial Affairs and Community Standards; BS, Springfield College; MS, Post University
- Steffani DiPiero, GEAR UP Program Specialist; BA, SUNY University Center at Albany
- Candice Docherty, Senior Multimedia Designer; BFA, Cazenovia College
- Elizabeth Doherty, Coordinator of Career Services; BS, Elmira College; MED, University of Texas at Austin; Awards: 2011 Pride of the Hawk, 2018 Diversity, Equity & Inclusion Award
- Oleg Donchuk, Programmer Analyst; BS, Kharkov Institute of Business Administration; MS, SUNY Polytechnic Institute; Awards: 2011 Pride of the Hawk
- Fred Dyer, Building Maintenance Worker
- Jerry Dygert, Light Motor Equipment Operator
- Daniel Eddy, Student Support Advisor; MA, SUNY College at Oswego; Awards: 2018 Altitude Award, 2018 Diversity, Equity & Inclusion Award
- Kirsten Edwards, Technical Assistant - Admissions; AA, Herkimer College; BA, Southern New Hampshire University
- Claire Ehrlich, Librarian & Instructor; MS, University of Illinois – Urbana Champaign

- Matthew English, Senior Public Safety Officer and Peace Officer
- Jennifer Fanelli, Marketing Communications Strategist; AAS, Mohawk Valley Community College; BA, Utica College; Awards: 2016 Altitude Award, 2018 Diversity, Equity & Inclusion Award, 2018 Excellence in Professional Service, 2019 Chancellor's Award for Excellence in Professional Service, 2020 Pride of The Hawk
- Kelly Farrell, Mail Clerk
- Teresa Fava-Schram, Coordinator of Workforce Development; BS, SUNY Fashion Institute of Technology
- Donna Felitto, College Services Associate; Awards: 2014 Excellence in Classified Services, 2015 Chancellor's Award for Excellence in Classified Services
- Neil Ferris, Resident Director – Academic Initiatives
- Matthew Fikes, Data Analytics and Visualization Specialist; BA, SUNY College at Oswego
- Joseph Fiorenza, Building Maintenance Mechanic
- Lisa Flo, Helpdesk Analyst; AAS, Mohawk Valley Community College
- Marissa Flo, Administrative Assistant
- Rachel Michelle Freiburger, Data Processing Clerk
- Sabrina Fryman, Principal Accounting Supervisor; AAS, Jefferson Community College; BS, Cameron University; MBA, Cameron University; MS, Southern New Hampshire University
- David Gallagher, Custodian
- Kayleigh Gapp, Administrative Assistant; BA, Hofstra University
- Emily Gifford, Coordinator of International Student Services; BA, University of New Hampshire; MA, School for International Training
- Melissa Golbach, College Services Associate; BS, SUNY College at Brockport
- Rachel Golden, Student Support Advisor; AAS, Mohawk Valley Community College; BS, Utica College; BS, SUNY University Center at Buffalo; MS, Touro College
- Jennifer Gonzales, Auxiliary Services Controller
- Caitlyn Graham, Financial Aid Advisor; AS, Mohawk Valley Community College; BS, SUNY Morrisville College of Agriculture & Technology
- Michael Grider, YouthBuild Case Manager; BA, Utica College
- Alison Grimshaw, Senior Custodian
- David Guido, Building Maintenance Mechanic
- Amir Habas, Educational Application Assistant; AAS, Mohawk Valley Community College
- Dale Haley, Residence Life Maintenance
- Christopher Hanrahan, Associate Business Advisor; AAS Mohawk Valley Community College; BS, SUNY Polytechnic Institute
- Gina Hayduk, Government Contracting Coordinator; MBA Rensselaer Polytechnic Institute
- David Hazer, Assistant Director of Facilities and Operations; AAS, SUNY Morrisville
- Charles Hendricks, Network and Security Specialist; AAS, Mohawk Valley Community College; BS, SUNY Polytechnic Institute
- Kathe Herting, College Services Associate; AAS, Mohawk Valley Community College
- Chrono Ho, Multimedia Developer; BBA, SUNY Polytechnic Institute
- Jonathan Hodge, Admissions Counselor; AA, Minnesota State Community and Technical College; BS, Saint Cloud State University
- Matthew Hoffman, Senior Public Safety Officer and Peace Officer
- Geordan Holmes, Licensed Mental Health Practitioner; AS, Mohawk Valley Community College; BA, SUNY Oswego; MS, SUNY Oswego
- De'Anna Hopkinson, Student & Residence Life Specialist; AAS, Mohawk Valley Community College
- Brandon Horender, Dual Credit Project Coordinator; AS, Herkimer College; BA, SUNY University Center at Albany
- Jocelyn Ireland, Librarian & Assistant Professor; BA, Albion College; MSIS, SUNY University Center at Albany
- Justin Johnson, Student Support Advisor; MA, SUNY University Center at Albany
- Matthew Johnson, Building Maintenance Worker
- Ronald Jones, Technical Assistant; AAS, Mohawk Valley Community College; AS, Mohawk Valley Community College; BA, SUNY Polytechnic Institute
- Aiko Kane, Library Clerk; AA, Mohawk Valley Community College; BS, SUNY Polytechnic Institute; Awards: 2011 Excellence in Part-Time Service
- James Kelly, IV, Additive Manufacturing Specialist; AAS, Mohawk Valley Community College; BS, SUNY Empire State College
- Erica Kennard, Residence Life Associate; AS, Mohawk Valley Community College; BS, SUNY Polytechnic Institute
- Dena Kennelty, Data Processing Clerk
- Stacy Kenyon, Financial Systems Accountant; AAS, Mohawk Valley Community College; BS, SUNY Empire State College
- 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, Public Safety Officer
- Travis Kirk, Data Processing Clerk
- Michael Kopec, Labor Supervisor; Awards: 2011 Excellence in Classified Services, 2012 Chancellor's Award for Excellence in Classified Services
- Marek Kosciński, Technical Assistant; Certificate, Mohawk Valley Community College; AOS, Mohawk Valley Community College
- Kathy Kotary, Intake and Process Support; AS, Mohawk Valley Community College; Awards: 2020 Excellence in Professional Service, 2021 SUNY Chancellor's Award for Excellence in Professional Service
- Kathleen Kresa, College Services Associate; AA, Mohawk Valley Community College; BA, SUNY College at Potsdam
- Karen Kuznia, Office Specialist II; AAS, Mohawk Valley Community College; AS, Mohawk Valley Community College
- Stephanie Lai, College Service Associate
- Paul LaPorte, Cyber & Network Program Coordinator; BS, SUNY Polytechnic Institute
- James LaValla, Mail Courier
- Ronald Lavarney, Custodian
- David Lerman, Senior Business Consultant; BS, SUNY Polytechnic
- Jenny Lewis, Student Support Advisor; BS, Cazenovia College; MS, SUNY College at Plattsburgh; Awards: 2018 Altitude Award
- Jeanne Litz, College Services Associate
- Craig Loomis, Light Motor Equipment Operator
- Linda Loudon, Staff Accountant; AAS, SUNY Cobleskill College of Agriculture & Technology; BS, Utica College
- Nancy Maier, Building Maintenance Worker
- Michael Makoi, Building Maintenance Worker
- Matthew Maloy, Coordinator of Workforce Development; Certificate, Mohawk Valley Community College; AOS, Mohawk Valley Community College; BBA, Alfred State College/Ceramics
- Tamara Mariotti, Coordinator of Accessibility Resources; AAS, SUNY College of Tech at Alfred; BS, SUNY College at Cortland; Awards: 2017 Pride of the Hawk, 2018 Diversity, Equity & Inclusion Award, 2019 Diversity, Equity & Inclusion Award
- David Marlunga, Building Maintenance Worker
- Michael Marusic, Senior Manufacturing Consultant; AAS, Fulton-Montgomery Community College; BT, SUNY Polytechnic Institute; MBA, Rensselaer Polytechnic Institute
- Dean McCarthy, Supervisor of Residence Hall Facilities
- Paul McBee, Residence Hall Maintenance
- Ushona Lavett McLean, STEP Coordinator; AA, Mohawk Valley Community College; AAS, Mohawk Valley Community College; BS, SUNY Empire State College; MA, SUNY Empire State College
- Kelly McNamara, Technical Assistant; AS, Mohawk Valley Community College; BS, SUNY College at Brockport; MS, SUNY College at Brockport
- Robert Miller, Custodian
- Thomas Monaghan, HVAC Building Superintendent; Awards: 2004 Excellence in Classified Services
- Delvin Moody, GEAR UP Program Specialist; BA, University of Rochester

- Kendrick Morrison, Assistant Director of Admissions; AAS, Herkimer College; BS, Utica College; Awards: 2020 Excellence in Professional Service, 2021 SUNY Chancellor's Award for Excellence in Professional Service
- Ronald Moskal, Building Maintenance Worker
- Jamal Moyer, STEP Program Specialist; BS, Utica College
- Sergey Myalik, Manager of End-User Computing; AOS, Mohawk Valley Community College; BS, Bridgewater University
- Cathy Myers, Office Specialist I; Awards: 2016 Excellence in Classified Services, 2017 Chancellor's Award for Excellence in Classified Services
- James Myers, Coordinator of Research and Analysis; AAS, Mohawk Valley Community College; BS, Utica College; Awards: 1992 Excellence in Classified Service, 2019 Excellence in Professional Service, 2020 Chancellor's Award for Excellence in Professional Service
- Laura Nassar, College Services Associate; BS, SUNY College at New Paltz
- Danson Ndonge, Building Maintenance Worker
- Suzanne Neary, Registration Specialist; BA, SUNY College of Oswego; EDM, SUNY University Center at Buffalo
- Kathryn Nolan, College Services Associate
- Jessica Norris, Financial Aid Advisor; BS, SUNY Geneseo
- Michael O'Donnell, Supervising Public Safety Officer & Peace Officer; BA, SUNY College at Potsdam
- Nicole Ollerenshaw, Licensed Mental Health Practitioner; BA, Utica College; MS, SUNY College at Oswego; Awards: 2018 Diversity, Equity & Inclusion Award
- Joyce Palmer, Coordinator of Expendable & Fixed Asset Procurement; BS, SUNY Polytechnic Institute
- Rosemarie Pastorella, Student Support Advisor; AAS, Mohawk Valley Community College; BA, SUNY Polytechnic Institute
- Rhona Patterson, Upward Bound Program Coordinator; AAS, Mohawk Valley Community College; AS, Mohawk Valley Community College; BA, Utica College; Awards: 2014 Aeries Award
- Lesley Paul, Senior Office Specialist I; BA, SUNY College at Oswego; MLS, SUNY University Center at Buffalo
- Vincent Pellizzi, Programmer Analyst; AAS, Mohawk Valley Community College; BS, SUNY Polytechnic Institute
- Sean Peters, Custodian
- Edward Pierce, Building Maintenance Worker
- Kate Polivka, Technical Assistant; AAS, Mohawk Valley Community College; BS, Southern New Hampshire University
- Isabella Popowski, Events and Guest Services Associate; AS, Mohawk Valley Community College
- Daniel Porcelli, Bursar; AAS, Mohawk Valley Community College; Awards: 2012 Pride of the Hawk, 2012 Pride of Pride
- Justin Rahn, Student Support Advisor; AAS, Mohawk Valley Community College; BA, Nazareth College; MS, Kansas State University; Awards: 2013 Eye of the Hawk Award, 2018 Altitude Award
- Breanne Rathbun, Tutor & Mentor for Mathematics; BS, Rensselaer Polytechnic Institute
- Alexander Ree, Building Maintenance Worker
- Kalynn Riedman, Admissions Specialist; AA, Mohawk Valley Community College; BBA, SUNY College at Oswego; BS, SUNY College at Oswego
- Yue Riesbeck, Career Counselor; CAS, Syracuse University; BA, China Uni Geoscience-Beijing; MS, Syracuse University; MA, Syracuse University
- Gary Robertson, Custodian
- Matthew Rodriguez, Building Maintenance Worker
- Robert Rogan, Technical Assistant; AAS, Mohawk Valley Community College; AS, Mohawk Valley Community College; BS, SUNY Polytechnic Institute
- Lori Rycraft, College Services Associate; AAS, Mohawk Valley Community College; Awards: 2007 Excellence in Classified Service
- Jairo Sabillon, EOP Counselor; BA, Utica College
- Karen Sabonis, Coordinator of the Health Center and College Nurse; AAS, Saint Elizabeth College of Nursing; BSN, SUNY Polytechnic Institute; Awards: 2021 Pride of the Hawk, 2020-2021 Pride of Pride
- Seyed Armin Safizadeh-Shabastary, Senior Public Safety Officer and Peace Officer
- Jay Salsberg, Senior Offset Printing Machine Operator; AS, Mohawk Valley Community College; Awards: 2015 Excellence in Classified Service, 2016 Chancellor's Award for Excellence in Classified Service
- Mark Saxe, Supervisor of Facilities Services
- Robin Saxe, Student Support Advisor; AA, Munson-Williams-Proctor Institute; BS, SUNY College at Oneonta; Awards: 2020 Pride of The Hawk
- Barbara Seaton, Technical Assistant; BA, Upper Iowa University; BS, Upper Iowa University; Awards: 2003 Chancellor's Award for Excellence in Professional Service, 2002 Excellence in Professional Service
- Michelle Sebastian, Community Resources Specialist; AS, Mohawk Valley Community College; BA, SUNY Polytechnic Institute
- Safet Sehovic, Senior Custodian
- Kevin Siembab, Career and Employer Relations; AA, Herkimer College; BS, SUNY Polytechnic Institute
- Rachel Simonds, Student Support Advisor; BS, The Sage College-Albany Campus; MA, College of Saint Rose
- Asiana Smith, Resident Director – Community Development; Awards: 2021 Altitude Award
- David Smith, Technical Assistant; AS, SUNY Delhi College of Technology; BS, SUNY Polytechnic Institute
- Donna Smith, College Services Associate
- Jewel Smith-Rudolph, Job Corps Scholar Counselor; AA, Mohawk Valley Community College; BS, SUNY Polytechnic Institute
- Shaina Stafford, Data Processing Clerk
- Diana Stefanovich, Senior Custodian; Awards: 2020 Excellence in Classified Service, 2021 SUNY Chancellor's Award for Excellence in Classified Service
- Zachary Steffen, Business Consultant; BS, SUNY University Center at Albany
- Peter Steiner, Network Technician; AAS, Utica School of Commerce; BS, SUNY Polytechnic Institute
- Ardwin Stepanick, Data Base Administrator; AAS, Mohawk Valley Community College; BS, Utica College
- Crystal Strain, Administrative Assistant
- Justin Suits, Building Maintenance Worker
- Geri Sultenfuss, Senior Office Specialist; Awards: 2002 Excellence in Classified Services
- James Sunderhaft, Assistant Registrar; BS, SUNY Polytechnic Institute; MPA, Walden University
- Shelby Sweet, Business Consultant; BBA, SUNY Polytechnic Institute; MS, SUNY Polytechnic Institute
- Nadine Swiger-Ortis, Administrative Assistant
- Dustin Swiss, Technical Assistant – Hospitality; AOS, Culinary Institute of America
- Courtney Taurisano-Sprague, Development Assistant; BS, Syracuse University; MA, Jones International University
- Martin Tracy, Supervising Public Safety Officer and Peace Officer
- Lisa Tripoli, Data Processing Clerk
- Tina Trybalski, College Services Associate; AAS, Mohawk Valley Community College
- Thomas Tubbs, Custodian
- Cassie Tuff, Senior Public Safety Officer and Peace Officer; BS, Cazenovia College; MA, University of North Dakota
- Saingghech Ung, GEAR UP Coordinator; AS, Mohawk Valley Community College; BS, SUNY College at Buffalo
- Michael Vallese, Public Safety Officer; AAS, Mohawk Valley Community College; BPS, SUNY Polytechnic Institute
- Juan N. Velez, Building Maintenance Worker
- Jon-David Velletto, Coordinator of Workforce Development; AAS, Mohawk Valley Community College; BA, New England Culinary Institute; MBA, Bryant University

- Mary Vescio, College Services Associate; BA, LeMoyne College
- Katherine Voce, Public Relations Specialist; BA, Utica College; MS, SUNY Polytechnic Institute
- Lily Wadsworth, Librarian for Technology and Access Services; BA, Utica College; MS, SUNY University Center at Albany
- Matthew Warchal, Upward Bound Program Specialist; BA, SUNY College of Oswego; MA, SUNY University Center at Albany
- Patricia Washington, Coordinator Re-Entry Program; AAS, Herkimer College; BS SUNY Polytechnic Institute; MS, Grand Canyon University
- Thomas Welpe, Storekeeper; AAS, Herkimer College; 2021 Excellence in Classified Service
- Bonnie Wetherbee, Residence Life Housekeeper
- Nancy Will, College Services Associate; AAS, Utica School of Commerce
- James Willey, Coordinator of Workforce Development; BS, SUNY Polytechnic Institute
- Corinne Wilson, AIM Program Specialist; AAS, SUNY Rockland Community College; AAS, SUNY Rockland Community College; BS, SUNY Polytechnic Institute
- Richard Woolheater, Building Maintenance Worker
- John Wosnjuk, Light Motor Equipment Operator
- David Yahnke, Placement Testing Coordinator; AAS, Mohawk Valley Community College; BPS, SUNY Empire State College; MS, SUNY Polytechnic Institute
- David Yevich, Custodian
- Daniel Yoxall, Assistant Superintendent of Buildings and Grounds; Awards: 2015 Pride of the Hawk, 2015 Pride of Pride, 2018 Excellence in Classified Service, 2019 Chancellor's Award for Excellence in Classified Service
- Jerad Zarnoch, Senior Building Maintenance Mechanic; Awards: 2017 Excellence in Classified Service, 2018 Chancellor's Award for Excellence in Classified Service
- Thomas Zenon, Veteran Education Coordinator; BA, Citadel Military College
- Tania Zenzillo, Residence Life Housekeeper
- Sharon Zohne, Photographer/Videographer; AAS, Mohawk Valley Community College; BFA, Rochester Institute of Technology; Awards: 2005 Chancellor's Award for Excellence in Professional Service, 2004 Excellence in Professional Service

* Please report any errors to the Human Resources Department by emailing nwallace@mvcc.edu.

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