Jamestown Community College

2012-2014

JAMESTOWN CAMPUS
525 Falconer Street  P.O. Box 20  Jamestown, New York 14702-0020
Telephone: 716.338.1000  FAX: 716.338.1466
800.388.8557

CATTARAUGUS COUNTY CAMPUS
260 North Union Street  P.O. Box 5901  Olean, New York 14760-5901
Telephone: 716.376.7500  FAX: 716.376.7020
800.388.8557

NORTH COUNTY CENTER
10807 Bennett Road (Route 60)  Dunkirk, New York 14048
Telephone: 716.363.6500  FAX: 716.363.6590

WARREN CENTER
589 Hospital Drive  Suite F  Warren, Pennsylvania 16365
Telephone: 814.723.3577  FAX: 814.723.3951

Supervised by the State University of New York.
Sponsored by a regional board of trustees representing
Cattaraugus County, Chautauqua County, and the City of Jamestown.

www.sunyjcc.edu

updated July 2013
The college reserves the right, whenever it deems advisable, to change its schedule of tuition and fees; to withdraw, cancel, reschedule, or modify any course, program of study, degree, requirement, or policy. The information contained in this catalog is current as of the date of publication. It does not preclude the possibility of subsequent changes in course descriptions, faculty, tuition and fees, and college policies, or other changes which may result through action by the State University of New York or the Board of Trustees of Jamestown Community College. Students should be aware that some information in the catalog may change. It is recommended that students considering enrollment check with the school director to determine if there is any change from the information provided in the catalog. The catalog contains information on the college’s teaching personnel and courses/curricula offered. Please be advised that the State Education Department separately licenses all teaching personnel and independently approves all courses and curricula offered. Therefore, it is possible that courses/curricula listed in the college catalog may not be approved at the time that a student enrolls in the college or the teaching personnel listed in the catalog may have changed. It is again recommended that students check with the school director to determine if there are any changes in the courses/curricula offered or the teaching personnel listed in the catalog.

The Master Schedule, published three times a year for the spring, summer, and fall semesters, is an addendum to the college catalog. These materials can be made available in alternative media upon request for those with disabilities. Jamestown Community College does not discriminate on the basis of color, sex, sexual orientation, race, creed, religion, national origin or citizenship, age, marital status, military status, family status, domestic violence victim status, arrest or conviction record, or predisposing genetic characteristics. This policy applies to access to all activities and programs under the college sponsorship as well as to application and selection for admission, employment, and all other personnel procedures within the college.

Jamestown Community College is accredited by the Middle States Commission on Higher Education. Its curricula are approved by the State University of New York and are registered by the New York State Department of Education. In addition, the nursing program is accredited by the National League for Nursing Accrediting Commission. JCC’s occupational therapy assistant program is accredited by the Accreditation Council for Occupational Therapy Education of the American Occupational Therapy Association. JCC is also approved by the New York State Division of Veterans’ Affairs for the training of veterans and other eligible persons.
Community colleges are unique institutions. As multifaceted as the ages and interests of their students, they react swiftly to change. As the first locally sponsored community college accepted into the State University of New York, Jamestown Community College has been in the forefront of this exciting development in education since 1950.

By providing high quality transfer programs for the university-bound, occupational skills for the career-minded, flexible schedules for working students, and specialized programs for business, industry and professional groups, and by being the cultural center of the community, JCC attempts to reach every segment of the population in the area it serves.

JCC offers the first two years of a bachelor's program, awarding the Associate in Arts degree or the Associate in Science degree, which are transferable to four-year institutions. For those pursuing a two-year career degree, it also awards the Associate in Applied Science degree as well as one-year certificates. In addition, JCC offers a variety of non-credit continuing education courses for those wishing to expand their vocational proficiency, to enrich their personal lives, or to acquire additional knowledge simply for the fun of it.

JCC’s Vision, Mission, and Beliefs

Vision
JCC, an integral part of our communities’ social and economic frameworks, will be the region’s premier provider of transfer, career, developmental, and continuing education, and will be recognized for academic excellence, a collaborative spirit, innovative leadership, and an entrepreneurial mindset.

Mission
JCC is a comprehensive, regional, open access, student-centered institution that embraces academic excellence and meets the service area's learning needs in diverse ways, including liberal arts transfer degree programs, career programs, community service, developmental education, and business and industry training. The college's partnership with the greater community contributes to the social and intellectual improvement, economic development, and cultural enrichment of western New York state and northwestern Pennsylvania.

Statement of Beliefs
Committed to Quality
The college is committed to student learning and to the promotion of the college, its mission, and the welfare of our communities.

Committed to Students
We believe students and other consumers of college services are the first priority in all we do.

Committed to Lifelong Learning
We believe the entire college community is responsible for enriching lives by creating an atmosphere dedicated to lifelong learning and intellectual inquiry and for promoting communication, collaboration, and greater understanding of our pluralistic society and the world in which we live.

Committed to Community Partnership
We believe we share responsibility for the well-being of our college and must play a role, in partnership with other community agencies, in fostering the economic, social, and cultural well-being of our community.
Jamestown Campus

The **Arts and Sciences Center** houses several programs within the sciences, technology, engineering, and mathematics and arts, humanities, and health sciences divisions; the nursing, occupational therapy assistant, and professional piloting programs; classrooms; lounges; physics and computer labs; music studios; management information systems department; the Robert Lee Scharmann Theatre; Weeks Gallery; and the Sarita Hopkins Weeks Reception Hall.

The **Katharine Jackson Carnahan Center** houses the JCC Center for Continuing Education's computer labs, conference rooms, and training facilities.

The **John D. Hamilton Collegiate Center** houses the student union, campus store, cafeteria, health center, counseling services, employment/job search services, art studios, box office, student government offices, and maintenance department. All administrative offices, including the registrar, admissions, financial aid, and business offices, are located in this building.

**Hillside Suites**, residential units accommodating 330 students, feature suites with four private single bedrooms as well as suites with three private single bedrooms and one double bedroom.

The **Hultquist Library** is a fully automated library and encompasses an outstanding collection of over 55,000 volumes, 400 periodical subscriptions, and an extensive audiovisual collection. Besides the library's resources, this building houses classrooms, the business and social sciences division, Main Street tutorial center, computer labs, conference rooms, distance learning facilities, the Lenna Theater, and student lounges.

The **Manufacturing Technology Institute**, located near the campus, is a partnership of JCC and the Manufacturers Association of the Southern Tier. MTI provides services to businesses and individuals in the region through hands-on manufacturing technical training as well as technology assistance. Mechanical technology, machine tool technology, and welding technology courses, as well as non-credit industry specific customized training programs, are taught in the facility.

The **Physical Education Complex** consists of a gymnasium for multi-purpose uses, a swimming pool, diving pool, racquetball court, running track, weight room, Life Fitness Center, and locker and shower facilities. The main gymnasium floor is also used for special spectator events, seating up to 2,000 people.

The **Science Center**, which opened in 2011, houses JCC’s biology, biotechnology, chemistry, and geology programs. The facility features energy efficient and sustainable elements designed to highlight resource conservation, habitat restoration, and social responsibility.

The **Sheldon House**, located at 9 Falconer Street, was the gift of Julia Sheldon Livengood. It is used for conferences, meetings, and as a guest house for college visitors.

Additional area facilities that are occasionally used for college programs include: Roger Tory Peterson Institute, Russell E. Diethrick Jr. Park, and College Park and Biological Station, commonly referred to as the 100-Acre Lot.

Several municipal and private facilities in the city and county, which include public schools, hospitals, nursing homes, and social service agencies, provide off-campus learning experiences for JCC students.
Cattaraugus County Campus

JCC’s Cattaraugus County Campus is situated in downtown Olean in the foothills of the Allegheny Mountains.

The **Allied Health and Science Center** includes a state-of-the-art nursing laboratory; classrooms; biology, chemistry and physics laboratories; faculty offices; and distance learning and smart classrooms.

The **College Center** features a student union, campus store, student lounge, community room, cafeteria, art gallery, information desk, board room/teleconference room, and seminar room. Student services offices - campus life, admissions, financial aid, business, counseling and career planning center, health center - are also located in the building, as well as administrative offices.

**Cutco Theater**, funded through a generous gift from Cutco Corporation, is a multipurpose facility and includes a 190-seat theater which can accommodate theater and music performances as well as lectures and training programs for large groups. The adjacent Magnano Reception Room, with complete kitchen facilities, makes this area ideal for college and community events.

The **Library and Liberal Arts Center** houses the campus library, faculty offices, the Teaching/Learning Center, classrooms, and offices for Empire State College and Houghton College's PACE program.

The **Technology Center** houses the Learning Assistance and Computer Center, JCC’s tutoring facility that offers free tutoring, individualized learning skills assessment and assistance, computer lab with Internet access, word processing and tutorial software, study areas, reserved materials, textbooks available for student use, and services and adaptive equipment for students with disabilities. In addition, the building includes state-of-the-art computer labs, classrooms, and faculty and assistant dean offices.

The **Dresser-Rand Continuing Education Conference and Training Center** houses Center for Continuing Education classrooms, conference/seminar rooms, training theatre, and computer lab.

Approximately 1000 students attend daytime and evening classes at the campus. The campus has over 20 full-time faculty. Adjunct faculty, many of them experts in a variety of professional fields, complement the full-time faculty in their areas of expertise. The student/faculty ratio allows for small classes and personalized attention. The distinctive rapport which develops between the students and the faculty begins on opening day and continues to flourish through commencement and beyond.

Because a student's life outside the classroom is an important part of his/her total education, the campus provides the opportunity to participate in a variety of clubs, organizations, and intramural activities.

The Campus Activity Board organizes activities throughout the year to help students become involved in campus life. Lectures, musical events, and theatre presentations are planned each semester. In the past, students have traveled to Toronto, New York City, and Buffalo to explore various cultural opportunities.

Courses offered on the Cattaraugus County Campus are the same as those offered on the Jamestown Campus. The college's policies on the admissions, grading, academic standing, degree requirements, and other related matters are also the same. With the exception of a few local scholarships unique to each campus, all financial aid opportunities available to Jamestown Campus students are also available to Cattaraugus County Campus students.
JCC’s Extension Centers

JCC operates approved extension centers in Dunkirk (Chautauqua County) and Warren (Warren County, PA). Courses of instruction leading to the awarding of degrees registered by JCC are offered at these locations. Listings of credit and non-credit courses and programs for each location can be accessed at www.sunyjcc.edu. Counseling services are available on a regular basis at each location and special arrangements are made for library services to support the curriculum offered.

North County Center

The North County Center offers a full range of services which includes assistance in admissions, financial aid, and registration, and provides student services such as counseling and career development, disability support, library, tutoring, placement testing, computer labs, and cultural and recreation activities.

In addition to credit course offerings, the North County Center also offers non-credit courses in personal enrichment, professional development, skill upgrades, and business and industry customized training. These courses are held in the North County Training and Conference Facility which also hosts many community programs and also houses the Small Business Development Center, which provides a range of managerial and technical assistance to area business owners.

Warren Center

The Warren Center, established in 1987, operates under the auspices of the Warren-Forest Higher Education Council. The center offers the Associate in Science in Business Administration and the Associate in Arts in Liberal Arts and Sciences: Social Sciences on-site.

Students attending courses at the site are eligible for federal, state, and local financial aid opportunities, including a Pennsylvania Higher Education Assistance Agency grant.

Career and academic counseling services, registration, placement testing, and other related student services are available at the Warren Center. In addition to credit courses, the Warren Center also offers non-credit courses in personal enrichment, professional development, skill upgrades, and business and customized training.
Admissions

The minimum requirements for admission to JCC are graduation from an accredited secondary school, possession of a high school equivalency diploma, or home-school documentation. The Scholastic Aptitude Test (SAT) and the ACT Assessment Test are not required for admission.

JCC has endorsed the concept of Full Opportunity of the State University of New York and accepts the philosophical implications of that decision. This means the college has agreed to accept all applicants who are legal residents of the sponsoring area, who are 18 years of age or older, and who are high school graduates.

The college reserves the right to make exceptions to its admissions policies and to impose other criteria on students seeking admission who do not meet the requirements above. This policy does not, however, guarantee admission of students to specific programs within JCC’s curriculum. It does imply a commitment to meet the special needs of the students who may require developmental courses, tutorial services, and additional counseling services. It also challenges the college to expand its career programs, institute new approaches to the teaching-learning process, and provide students with the flexibility of changing courses and programs without penalty.

Applying to JCC

Matriculated (Degree Seeking) Students

Matriculation is the formal process by which students declare their intent to enroll in a college certificate or degree program. The process is complete once the student submits an application, with supporting documentation (official transcripts, GED, placement test scores, etc.), and has been accepted to JCC in a certificate or degree program. Federal and state financial aid is not available to non-matriculated students.

Application Process

Application for admission may be initiated at any time prior to the start of each semester, but admission cannot be guaranteed for applicants who begin the process after August 1 (for the fall semester). High school seniors, especially those concerned about admission to specific programs, should apply shortly after the beginning of their senior year. In some programs, such as nursing and occupational therapy assistant, students should consider early application deadlines, and limited enrollment. Therefore, early application is of prime importance. Visit www.sunyjcc.edu for supplemental applications and deadlines for the nursing and occupational therapy assistant programs.

New, First-Time Students

Students who have not attended another college and who are entering JCC for the first time should follow these steps:

- Apply online at www.sunyjcc.edu.
- Request high school guidance office to forward an official copy of the student’s transcript to the admissions office.
- Home-schooled students must complete the necessary documentation indicating completion of secondary level education as defined by state (see below for additional information).
- Students possessing a recognized equivalent of a high school diploma, such as a general educational development or GED certificate must submit appropriate documentation.
- Students should visit JCC to acquaint themselves further with JCC’s programs and facilities. Personal interviews are optional, unless requested by the admissions office.

Following notification of acceptance, students are informed of advisement and registration procedures that entering freshmen must complete prior to the start of classes.

Readmitted Students

A student who attended JCC previously and is returning after an absence must reapply. The reapplication can be accessed at www.sunyjcc.edu. Students who have attended another college since their last enrollment at JCC must request an official transcript be sent to the JCC admissions office.

Second Degree Candidates

A student pursuing a second degree at JCC must reapply for admission. Students must also meet with an advisor in the counseling center on either campus to update their program of study. Each additional associate’s degree will require 30 additional hours, 15 of which must be earned from JCC.

Students Transferring to JCC

A candidate for admission who has completed previous coursework is required to follow the transfer application procedure:

- Complete the online application at www.sunyjcc.edu and submit high school transcript, a copy of GED, or other documentation indicating successful completion of high school.
- Students seeking transfer credit from other institutions must request official college transcripts from all previous colleges attended and have them mailed to the JCC admissions office.

JCC will ordinarily accept transfer credit toward an associate’s degree of up to 30 hours completed at another institution. No grades C- and below are accepted as transfer credit. Students must complete a minimum of 30 semester hours of credit at JCC to be eligible for an associate degree from JCC.

Transfer credit is awarded from colleges and universities that are recognized by an appropriate accrediting agency, such as Middle States Association of Colleges and Schools.

Individuals seeking admission who do not fit one of the above categories should contact the admissions director for assistance.

Transfer of Alternative College Level Credit

Full-time students who have attended other colleges or who have earned college credit through the Independent Study Programs of the State University of New York, the College Proficiency Examinations of the State Education Department, the Advanced Placement Program of the College Entrance Examination Board, College Level Examination Program, or military experience are eligible to apply for advanced standing and credit.

Transferring Credits

A student may transfer up to 30 semester hours of credit to JCC from another institution or other external sources. JCC considers expected learning outcomes and standards when evaluating incoming transcripts. Students must complete a minimum of 30 semester hours of credit at JCC to be eligible for an associate’s degree from JCC. If transfer credits are applied toward additional degrees, the credits must be a part of the maximum of 30 allowable transfer credits. Students must complete 15 semester hours of credit from JCC to be eligible for a certificate from JCC.

An exception to this policy will be made for professional piloting students enrolled in partnership programs involving the agreement developed by JCC with other colleges. Students participating in these approved partnership programs will be allowed to transfer up to 31.5 credits from the partner institution toward their JCC degree.

A student may transfer credit hours to JCC from another post-secondary institution, recognized by an accrediting body, providing the student has earned a C grade or better or equivalent in each course being transferred to JCC. Grades C- and below and grades that do not indicate a C or higher (i.e. credit/fail, pass/fail, satisfactory) was
earned are not accepted as transfer credits. Students can appeal decisions made regarding the evaluation of their transcripts by contacting the JCC registrar.

**Appeal Process for Transfer Evaluations at JCC**

Students who wish to appeal the results of a transfer evaluation may do so by contacting the JCC registrar in writing to briefly explain the issue under appeal and request a meeting to discuss it. Transfer evaluation forms are available at www.sunyjcc.edu. The registrar, who in most cases has evaluated the credits for transfer, may request that you provide additional information (such as a course syllabus). At the meeting, the registrar, or other evaluator, will discuss with you the criteria used to evaluate the credits brought to JCC.

If the appeal is not resolved in your meeting with the registrar, you may request that the appeal be forwarded to the academic department that oversees the course(s) under review. A program coordinator or assistant dean will review the decision and all available information and render a decision to uphold the appeal or not. The coordinator or assistant dean may request that you provide additional information for consideration.

If the appeal is not resolved with the decision of the coordinator or assistant dean, you may request that the appeal be forwarded to the vice president/dean of academic affairs who will review the appeal and supporting information and render a decision to uphold the appeal or not. The vice president/dean may request that you provide additional information for consideration. The vice president/dean’s decision is final for students transferring credits to JCC from non-SUNY institutions.

If you are transferring credits to JCC from a SUNY institution and do not agree with the vice president/dean of academic affairs’ decision, you may request that the appeal be forwarded to the SUNY provost for a final decision or you may contact the SUNY provost at http://www.suny.edu/provost/academic_affairs/studenttransferappeal.cfm. It is the responsibility of the student to initiate each step of the appeal process and to provide any additional information requested pertaining to the course(s) in question. The process is outlined at www.sunyjcc.edu.

**Advanced Standing in a Certificate Program**

Students must complete 15 semester hours of credit at JCC to be eligible for a certificate from JCC. Grades C- and below are not accepted as transfer credit.

**Non-Matriculated Students Registering For Courses for Personal Enrichment**

A non-matriculated student is one who is taking courses to satisfy personal needs and interests without applying for candidacy for a degree or certificate. Non-matriculated students are not eligible to receive financial aid. JCC reserves the right to require placement testing for anyone wishing to register for classes. Non-matriculated students required to take placement tests must score at a satisfactory level to register. JCC will deny registration privileges to any student who does not comply with this procedure.

**Earning a High School Equivalency Diploma (GED)**

Students who do not possess a high school or equivalency diploma may satisfy the equivalency requirements by successful completion of 24 college level credits at JCC. Credit hours earned in this program will be applied concurrently toward the degree requirements. Visit www.sunyjcc.edu for additional information.

**Students Without a High School Diploma or GED**

Prospective students who have not earned a high school diploma or GED, but whose scheduled date of graduation has passed, are not eligible for financial aid unless they have successfully passed the GED test.

**Students with an IEP Diploma**

The State Education Department has ruled that unlike the high school diploma or the high school equivalency diploma, an Individualized Education Plan (IEP) diploma “is not an indicator of successful completion of high school study,” thus community colleges are under no legal obligation to accept IEP students under the terms of the state’s Full Opportunity policy. Any student with an IEP diploma, or those who do not have a high school diploma or its equivalent, may attend JCC part-time with no financial aid or may pursue a GED.

**Home-Schooled Students**

Home-schooled students who wish to enroll at JCC are welcomed. Students who have been home-schooled may apply for admission to JCC if they have reached compulsory age (the school year during which they turned 16 has ended). Documentation of a valid and effect individualized home instruction plan (IHIP) pursuant to section 100.10 of the regulations of the Commissioner of Education must be submitted. Home-schooled students unable to obtain this documentation must receive a high school equivalency diploma (GED) prior to receiving their degree from JCC. In all cases, home-schooled students must complete JCC’s placement testing. Contact the admissions office for additional information.

**Admission of Correspondence School Students**

According to the State Education Department, when a student has completed a high school program through correspondence study, the correspondence school must be recognized, authorized, or approved by the state educational entity where the correspondence school is located, and the student must be a resident of that state. New York residents may not use a high school program of correspondence study to meet the requirements for a secondary education in New York state.

**Early Admissions**

JCC’s Early Admissions Program is designed for qualified high school students who have completed 11th grade to begin taking college level courses full-time (minimum 12 credit hours) prior to graduating from high school and, with permission from his/her high school and parent or guardian, to have JCC courses fulfill graduation requirements. Normally students should rank in the top half of their class.

In some cases, students and their guidance counselor must meet to discuss plans for early admission and determine if college courses could be used to fulfill high school graduation requirements.

- A statement from the high school principal or counselor indicating that a high school diploma will be issued upon satisfactory completion of specified college courses is required.
- The student is responsible for requesting that an official transcript be sent from the JCC registrar’s office to the high school guidance counselor upon the completion of courses.
- A statement from the student’s parent or guardian granting permission to enroll for full-time study at JCC must be submitted.

**Pre-College Enrollment Program**

JCC’s Pre-College Enrollment Program (PEP) provides high school students the opportunity to enroll part-time in courses (up to 11 credit hours), either day, evening, or online and earn college credit prior to high school graduation. Students can enroll for classes at the Jamestown and Cattaraugus County campuses and North County and Warren centers for the fall and spring semesters and summer sessions. PEP is open to all high school students of average to better academic ability who are recommended by their high school principals or guidance counselors. In most cases, students participating in the program are juniors and seniors who rank in the top half of their high school classes. PEP students are responsible for tuition and fees. Since they cannot matriculate, federal and state financial aid is
Admissions

Applications for admission to JCC must be submitted online at www.sunyjcc.edu. There are two important dates to remember: applications for August admission (fall semester) must be completed by June 1; applications for January admission (spring semester) must be completed by November 1. Applicants should consult the catalogue or website for details on admission procedures by semester.

SUNY policy requires applicants for admission to report whether they have been convicted of a felony. Each application for admission received from an inmate or ex-offender will be evaluated and judged on its own merits by a committee established for this purpose. After applying, ex-offenders with a felony conviction must submit a conviction record indicating all felonies, a personal statement, and a letter of recommendation; however, certain situations may require additional information. A copy of the complete policy and procedure, as well as additional forms, are available from the admissions office at either campus.

JCC may deny admission to an applicant based on prior criminal convictions where such admission would involve an unreasonable risk to safety/welfare of the college community. JCC will consider an application for admission from an ex-offender if it is received at least 35 days prior to the start of the semester.

Admission Policy for Students Previously Dismissed From a College for Disciplinary Reasons

JCC will consider an application for admission from these students but it reserves the right to admit or deny any application. After applying, students must submit a detailed summary of the violations, a personal statement, and a letter of recommendation; however, certain situations may require additional information. The application deadline is 35 days prior to the start of the semester.

College Placement Testing

JCC administers a placement test to students prior to their enrollment in college courses. The test gathers information to place students in courses for which they are best prepared and in which they are most likely to succeed. The computer-based placement test consists of multiple choice questions which are used to measure ability in the basic skills of reading comprehension and math, and a 300-600 word essay in which students demonstrate their ability to write a composition. The entire test takes approximately 2½ hours to complete.

All new full-time students are required to take the placement test. New part-time students are strongly encouraged to take the placement test prior to registration. Part-time students must take the placement test prior to enrolling in any course which has a reading or writing prerequisite. Certain students may qualify for an exemption from taking the placement test. A list of exemptions is outlined at www.sunyjcc.edu/placementtesting.

Students will receive placement test results upon completion of the test. Full-time students will discuss the results with their advisors at advisement and registration meetings. Part-time students may meet with an advisor to review the test results.

JCC provides special testing procedures for students with disabilities. Arrangements must be made prior to taking the test. To arrange special testing accommodations, contact the disability support services coordinator at either the Jamestown Campus or Cattaraugus County Campus.

To register to take the placement test, visit www.sunyjcc.edu/placementtesting.

Application/Admission Policy: International Students

Any applicant who is not a U.S. citizen, or documented permanent resident (non-immigrant) of the United States and wishes to study at JCC must do so through an F-1 (student) visa and is considered an international student throughout his or her academic stay. International students wishing to complete an entire degree online should contact the JCC admissions office.

• Contact JCC’s international student program coordinator or visit www.sunyjcc.edu to obtain the international student application.
• Submit academic documents showing high school graduation and any college study beyond high school. Applicants from countries where English is not the primary language or the language of education must have documents translated into English before submitting them to the admissions office.
• Applicants from countries where English is not the primary language or the language of education must submit the results of the Test of English as a Foreign Language (TOEFL). Minimum score considerations are 500 on the paper-based exam, 173 on the computer-based exam, and 61 on the Internet-based exam.
• Scores from JCC’s college placement test can be accepted from English speaking countries in lieu of the TOEFL exam. The placement test can be sent to students residing outside of the U.S. on a selective basis. Contact the counseling center on either campus for information.
• Submit documented evidence of adequate financing to cover the cost of tuition, fees, books, room, board, and other living expenses.

Note that federal and New York state financial aid is not available to international students.

Applicants for January admission (spring semester) must complete admission procedures by November 1. Applicants for August admission (fall semester) must complete admission procedures by June 1. Applicants should take special note of the length of time required to process admissions applications and credentials. Final evaluation will take place when all admissions credentials have been submitted. If admitted to a degree program, the applicant will be issued an I-20.

To request information on the Test of English as a Foreign Language (TOEFL), write to Educational Testing Service, PO Box 6151, Princeton, NJ 08541-6151, USA or visit www.toefl.org. Official score reports will be sent directly from ETS to JCC if designated by the applicant.

Nursing Program

Accreditation

JCC’s associate degree nursing program has been awarded accreditation for achievement of quality and excellence in nursing education by the National League for Nursing Accrediting Commission.
(NLNAC), 3343 Peachtree Rd., NE, Suite 850, Atlanta, GA 30326, phone: 404.975.5000; fax: 404.975.5020; or http://www.nlnac.org/home.htm.

Licensure

Graduates of the nursing program are eligible to apply for the National Council Licensing Examination for Registered Nurses (NCLEX-RN). At the time of submission of an application for licensure and first registration, the applicant is required to report a history of a felony or misdemeanor, or if such charges are pending. State boards of nursing will review the information submitted by the applicant and will determine if the applicant is eligible for licensure. A history of a felony or a misdemeanor may jeopardize the applicant’s eligibility for licensure by state boards of nursing.

Persons intending to practice nursing in New York state should contact the New York State Board of Nursing, 89 Washington Ave., Albany, NY 12234-1000 or call 518.474.3817.

Those intending to practice nursing in Pennsylvania should contact the Pennsylvania State Board of Nursing, PO Box 2649, Harrisburg, PA 17105-2649 or call 717.783.7142.

Admission Requirements

The nursing program is designed for full- or part-time study and may be completed in a minimum of two academic years of full-time study. The four-semester sequence of nursing courses, which begins each fall semester, must be completed sequentially. Students who desire part-time study may complete the general degree requirements before seeking admission to the program.

In addition to application to the college, students must apply for acceptance into the nursing program through the admissions office. The application to the nursing program is located at www.sunycc.edu/nursing. Enrollment into the nursing program is highly competitive. Therefore, application by February 1 is of primary importance.

Applications will continue to be reviewed after February 1 on a space available basis. Students who are not admitted for one semester must reapply if they want to be considered for another semester. Students placed on a waiting list and not admitted during a given academic year must also reapply the following year.

Criteria for admission are:

• High school and college transcripts from all institutions attended must be filed in the admissions office prior to February 1 of the year seeking admission (i.e. February 1, 2013 for fall 2013 admission).

• A grade point average (GPA) of at least 2.5 for current or previous college students.

• Placement in the top 25% of the class (with a minimum of an 90% average) for high school students or high school graduates with no college experience. If you are a high school student who was not in the top 25% of your high school class and/or did not have a minimum of an 90% average, you may still be considered for admission to the nursing program after you have completed general education courses required for the nursing program and obtained at least a 2.5 GPA. Prior to full-time enrollment at JCC, high school students are encouraged to consider enrollment in college course opportunities, i.e. College Connections.

• A passing grade in a high school or college chemistry course. A strong science-based high school curriculum is highly recommended for student success in the nursing program.

• Eligibility for placement in ENG 1530: English Composition II. Eligibility is determined by placement test, or transfer credits, equivalent to ENG 1510 and the Accuplacer reading score of 80+.

• A record of grades from credit bearing college courses must be established by applicants with a high school equivalency diploma (GED).

• Must be 18 years of age by June 1 of the intended graduation year to be eligible to take the NCLEX exam for licensure as a registered nurse.

• Students entering the nursing program will only have two opportunities to successfully complete Anatomy and Physiology I and/or II with a “C” grade or better. Students who have taken Anatomy and Physiology I or II more than twice will not be permitted to enter or continue in the nursing program. A student wishing to be considered for a waiver to the two course limit should obtain letters of support from two faculty members, at least one of which must be from a nursing faculty member.

Point System

A point system will be applied to those applicants not admitted directly from high school (JCC math/science pre-nursing students or transfer students who meet admissions requirements) based upon courses completed toward the nursing program and GPA. Ten percent of seats are reserved for high school students/graduates who meet program entrance requirements.

<table>
<thead>
<tr>
<th>Course</th>
<th>Grade and points</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 2510</td>
<td>A - 3 B - 2 C - 1</td>
</tr>
<tr>
<td>BIO 2520</td>
<td>A - 3 B - 2 C - 1</td>
</tr>
<tr>
<td>BIO 2531</td>
<td>A - 3 B - 2 C - 1</td>
</tr>
<tr>
<td>BIO 2760</td>
<td>A or B - 1</td>
</tr>
<tr>
<td>PSY 2510</td>
<td>A or B - 1</td>
</tr>
</tbody>
</table>

Meeting the criteria does not guarantee admission into the nursing program. A greater number of points improves the applicant’s chances of being selected. Violations of the “Academic Integrity” or “Student Conduct” policies in JCC’s Constitution of the Student Body, or any violations of equivalent policies at other postsecondary institutions, shall also be considered as a factor in the admissions decision.

Technical Standards for Nursing

(Cognitive, Physical, and Behavioral Criteria)

JCC provides the following technical standards with examples of learning activities to inform prospective and enrolled students of the skills required in completing their chosen profession’s curriculum and in the provision of health care services. These technical standards reflect the performance abilities and characteristics that are necessary to successfully complete the requirements of the nursing program. These standards are not a requirement of admission into the program. Individuals interested in applying for admission to the program should review these standards to develop a better understanding of the skills, abilities, and behavioral characteristics required to successfully complete the program.

Students admitted to the nursing program are expected to be able to complete curriculum requirements, which include physical, cognitive, and behavioral core competencies that are essential to the functions of the entry-level professional nurse. These core competencies are considered to be the minimum and essential skills necessary to protect the public. These abilities are encountered in unique combinations in the provision of safe and effective nursing care and can meet the criteria with or without reasonable accommodations. Students who are unsure if they can meet these criteria because of disability, or know they will need help in meeting them, must contact JCC’s disability support services office to discuss the use of reasonable accommodations and/or auxiliary aids. The college will provide reasonable accommodations but is not required to substantially alter the requirements or nature of the program.

Progression in the program may be denied if a student is unable to demonstrate the technical standards.

Cognitive:

• Recall, collect, analyze, synthesize, and integrate information from a variety of sources.

• Measure, calculate, reason, analyze, and synthesize dates.

• Problem solve and think critically in order to apply knowledge and skill.
• Communicate verbally, and through reading and writing, with individuals from a variety of social, emotional, cultural, and intellectual backgrounds.
• Relay information in oral, written, and electronic form effectively, accurately, reliably, and intelligibly to individuals and groups, using the English language.

Examples of learning activities found in the nursing curriculum and related to industry standards:
• Process information thoroughly and quickly to prioritize and implement nursing care.
• Sequence or cluster data to determine client needs.
• Develop and implement a nursing plan of care for clients in acute, long-term, and community settings.
• Report verbally and in writing client data to members of the healthcare team.
• Read and comprehend medical orders and client information found in the medical record.
• Perform math computations for medication dosage calculations both with and without a calculator.

Physical, Motor:
• Move efficiently enough to meet the needs of patients in a timely fashion.
• Coordinate fine and gross motor movements.
• Coordinate hand/eye movements.
• Maintain balance from any position.
• Negotiate level surfaces, ramps, and stairs.
• Function with both hands free for performing psychomotor tasks.
• Maneuver in small areas.
• Attend to cognitive and psychomotor tasks for up to 7-12 hours.

Examples of learning activities found in the nursing curriculum and related to industry standards:
• Transfer patients/clients in and out of bed from stretchers and wheelchairs.
• Turn and position patients.
• Control a fall by slowly lowering client to the floor.
• Perform cardiopulmonary resuscitation (CPR).
• Lift or move (turn, position) clients or objects, pull or push objects, weighing up to 50 pounds.
• Reach to shoulder or higher level to place or access equipment such as intravenous fluid bags, bend or squat to access equipment below bed level.
• Carry equipment and supplies to the client bedside.
• Manipulate small equipment and containers, such as syringes, vials, ampoules, and medication packages to administer medications without extraneous movement, contamination, or destruction.
• Accurately place and maintain position of stethoscope for detecting sounds of bodily functions.
• Record data with a pen or graphics and other flow sheets.
• Operate a computer.
• Dispose of needles in sharps container.
• Complete assigned periods of clinical practice (7-12 hour shifts, days, evenings, or nights).

Sensory:
• Acquire information from demonstrations and experiences, including but not limited to information conveyed through online coursework, lecture, small group activities, demonstrations, and application experiences.
• Collect information through observation, listening, touching, and smelling.
• Use and interpret information from diagnostic maneuvers.

Examples of learning activities found in the nursing curriculum and related to industry standards:
• Detect a fire in the client care environment.
• Draw up a prescribed quantity of medication into a syringe.
• Observe clients in a room from a distance of 20 feet away.
• Detect sounds related to bodily functions using a stethoscope.
• Detect audible alarms generated by mechanical systems such as those that monitor bodily functions, fire alarms, call bells.
• Observe and collect data from recording equipment and measurement devices used in client care.
• Communicate with client and members of the healthcare team in person and over the phone in a variety of settings, including isolation and the operating room where health team members are wearing masks and there is background noise.
• Detect foul odors of bodily fluids or spoiled foods.
• Detect smoke from burning materials.
• Detect changes in skin temperature.
• Detect unsafe temperature levels in heat-producing devices used in client care.
• Detect anatomical abnormalities, such as subcutaneous crepitus, edema, or infiltrated intravenous fluids.
• Feel vibrations such as an arterial pulse.

Behavioral:
• Demonstrate emotional stability to function effectively under stress and adapt to changing environments.
• Maintain effective, mature, and sensitive relationships with others.
• Examine and modify one’s own behavior when it interferes with others or the learning environment.
• Possess attributes that include compassion, empathy, altruism, integrity, honesty, responsibility, and tolerance.
• Establish a therapeutic relationship and communicate in a supportive manner.

Cardiopulmonary Resuscitation (CPR)
Prior to entrance into NUR 1510, students are required to present evidence of completion of a course in Basic Life Support (BLS) that includes infant, child, and adult CPR and Automated External Defibrillator (AED). The acceptable courses are: BLS for the Health Care Provider (American Heart Association) or CPR/AED for the Professional Rescuer (American Red Cross). Students are strongly encouraged to take BLS during the summer prior to entering the nursing program. By taking BLS during the summer, the student will be compliant with the CPR requirement throughout the two-year nursing program. Courses may be available through the nursing program, JCC, and/or in the community.

Entry Into Nursing Program With Advanced Standing

Advanced Standing - Second Semester
Persons with prior experience in the health care field, such as a licensed practical nurse who does not meet the transfer requirements from an articulation agreement, or a paramedic, may apply for admission to NUR 1520 by challenging NUR 1500 and NUR 1510. The application will be reviewed when the individual has met the following criteria:
• Criteria for admission as outlined on page 8.
For challenging NUR 1510:
• A score of 75% or better on the NUR 1510 challenge examination (score valid for two years), and
• Achievement of a satisfactory grade for basic nursing assessment and intervention skills.
For challenging NUR 1500:
• A score of 100% on dosage calculation and 75% on theory on the NUR 1500 challenge examination.

Students should contact the nursing program secretary to schedule the challenge examination and skills evaluation. A $30 fee is charged for each challenge exam and an $80 fee is charged for each nursing assessment and intervention skills evaluation. These fees are to be paid at the business office prior to taking any challenge examination.
The applicant must bring a receipt when appearing for a challenge exam.

Prior to entry into NUR 1520 the student must have successfully completed the following courses:

- BIO 2510: Anatomy and Physiology I 4 credits
- ENG 1530: English Composition II 3 credits
- NUR 1500: Basic Pharmacology & Dosage Calculations 1 credit
- PSY 1510: General Psychology 3 credits

Upon acceptance into NUR 1520, the student with advanced standing is required to take NUR 1450 (see course descriptions). Students accepted into the program are notified of the date(s) of the course.

**Advanced Standing - Third Semester**

Licensed practical nurses and/or select nursing transfer students may be considered for advanced standing. These students may apply for NUR 2510 after completing the following requirements:

- Successful challenge of NUR 1500, NUR 1510, and NUR 1520.
- Successful completion of the following required courses in general education:
  - BIO 2510: Anatomy and Physiology I 4 credits
  - BIO 2520: Anatomy and Physiology II 4 credits
  - ENG 1530: English Composition II 3 credits
  - NUR 2970: Health Assessment 3 credits
  - PSY 1510: General Psychology 3 credits
  - PSY 2510: Life Span Development 3 credits

Upon acceptance into NUR 2510, the student is required to take NUR 1450, as described in the NUR 1520 challenge procedure.

Acceptance into any nursing course is contingent upon space available in the course and the qualifications of the applicants.

**Transfer or Readmission Into Nursing Program Policy**

A student seeking transfer or readmission may enter the nursing program according to the following criteria:

1. Each student must apply for admission/readmission to the nursing program through the admissions office at either the Jamestown or Cattaraugus County campus. If you wish to enter the nursing program in the fall semester, you need to apply by February 1, and for the spring semester, by October 1. Applications may continue to be accepted past the deadlines on a space available basis.

2. Each student must be accepted into the college for the semester being readmitted. (Application/reapplication must be completed by any transfer student or readmitted student who was not attending JCC the semester immediately prior to admission.)

3. Students seeking readmission or transfer into the nursing program need to meet the same criteria as students entering the nursing program for the first time.

4. Any readmitted student who withdrew two years ago or longer will be required to enter NUR 1510 or successfully challenge NUR 1510.

5. A minimum grade of “C” is required in each nursing course. A student will be permitted to repeat one nursing core course (NUR 1510, NUR 1520, NUR 2510, and NUR 2520) one time. Should the student be unsuccessful in repeating any nursing core course, he/she would be ineligible to continue in the nursing program. Students who are unsuccessful in more than one nursing core course and have already repeated one core course will not be eligible to repeat a second nursing core course. Withdrawal from a core nursing course after the first 30 calendar days will be considered a failure of the course for reapplication purposes. In case of illness or other extreme circumstances, the faculty may consider a one-time exception. The student wishing to be considered for a waiver to the withdrawal counting as a failure for reapplication purposes should obtain letters of support from two faculty members. The waiver with letters of support from two faculty members should be submitted to the nursing program committee for consideration.

6. Once the nursing sequence of courses has begun, the student must complete the program in three years. The faculty may consider exceptions to the three-year period. The student wishing to be considered for a waiver to the three-year period should obtain letters of support from two full-time nursing faculty members. The waiver, with letters of support, will be submitted to the nursing program committee for consideration.

7. A student seeking transfer or readmission into the nursing program will be considered on the basis of space available and grade point average. Special consideration will be given to individuals whose education was interrupted due to a military commitment.

8. A transfer student must complete at least 30 credit hours at JCC to be eligible for graduation. The student is required to successfully complete NUR 1450 when transferring into the nursing program. Content of the course is to include the philosophy and organizing structure of the nursing program, nursing process, and information regarding student conduct. Students accepted into the program by transfer are notified of the date(s) of the course.

9. Students seeking readmission or transfer into NUR 1520, 2510, or 2520 will be conditionally accepted according to the following policy:

   **Students who are conditionally reaccepted into the nursing program must successfully demonstrate selected skills learned in the previous semester(s) as identified by nursing faculty. Students will be granted the opportunity to practice the skills and will have two opportunities to successfully demonstrate the skills. During this time the resources of the college laboratory will be available to them. The demonstration of skills will occur prior to the start of the semester. Students will be notified as to the skills to be demonstrated and the times for demonstration. Students who do not successfully demonstrate selected skills after the second opportunity will be denied reacceptance into the nursing program. An $80 fee will be charged for the skills demonstration. The fee must be paid at the business office prior to the demonstration of skills. The student must bring a copy of the receipt to the testing site.**

**Transfer from a Practical Nursing Program**

JCC has articulation agreements with the Erie II-Chautauqua-Cattaraugus County, Cattaraugus-Alleghany BOCES Schools of Practical Nursing, and the Practical Nursing Program at Venango Technology Center. Graduates of these programs may transfer into NUR 1520 based on the following criteria:

- Meet the college and nursing program admission criteria.
- Attain an overall GPA of 85% in the LPN program.
- Graduate within the previous three years.
- Complete or challenge NUR 1500.

**Occupational Therapy Assistant Program**

The occupational therapy assistant program is designed for full- and part-time study and may be completed in two academic years of full-time study. The four-semester sequence of OTA courses, which begins each fall semester, must be completed sequentially. The fourth semester (OTA 2700 and OTA 2720: Fieldwork II) must be completed within 12 months following successful completion of third semester OTA coursework. Fieldwork II assignments may have special housing and transportation requirements. Students who successfully complete JCC’s occupational therapy assistant program receive an Associate in Applied Science degree. Coursework includes a series of general education courses with an emphasis on the biological and psychological sciences. Professional studies focus on how human occupational development is affected by illness and injury and how function in various life roles can be facilitated.

Occupational therapy provides service to those individuals whose abilities to cope with tasks of living are threatened or impaired by developmental deficits, the aging process, poverty and cultural differences, physical injury or illness, or psychological and social dis-
Admissions

For the NBCOT certification examination. A felony conviction may affect a graduate's ability to sit for the NBCOT examination. Licenses are usually based on the results of the NBCOT certification examination. Graduates of the program will be eligible to sit for the National Certification in Occupational Therapy examination or attain state licensure.

Admission Requirements

New full- and part-time students seeking admission must follow JCC application procedures and apply for acceptance into the OTA program. Steps for admission are:

• Students must first apply for general admission to JCC.
• Students must then complete the application for admission to the occupational therapy assistant program. The form is available at www.sunyjcc.edu/ota.

In keeping with the requirements of the Americans with Disabilities Act, preadmission inquiries about medical or disabling conditions are prohibited. For potential students to decide whether or not they may be able to participate fully in the program, students must review the OTA essential skills form available at www.sunyjcc.edu/ota. Students should examine these criteria carefully before applying to the program. Reasonable accommodations, including the use of auxiliary aids, will be made for students with documented functional limitations through JCC’s disability support services office.

After acceptance into the program, but before enrollment, students need to submit health and physical records, including proof of required immunizations, to JCC’s health center. All physicals must be completed by the occupational health physician provided through JCC. Following review, the applicant will be fully admitted into the OTA program.

Criteria for admission into the OTA program includes:

• Academic performance:
  • High school average of 80% or better.
  • Applicants with a GED will be accepted into the math/science degree program until a college grade point average is established. With an established GPA, students can apply and be considered for the OTA program.
• Currently enrolled JCC students or transfer students must have a GPA of 2.5 or better.
• Successful completion of high school chemistry, CHE 1500, or CHE 1530.
• Applicants must have ENG 1530 eligibility.

Application Procedures

Applicants must file a SUNY or JCC admissions application, complete the JCC application for admission to the OTA program, and include a copy of their high school transcript and all college transcripts from institutions other than JCC. Deadline: March 15 or until program is full. Meeting the criteria does not guarantee admission into the OTA program. Admission to the OTA program is selective and limited to assure that the number of students enrolled in the program is commensurate with available instructional and clinical resources.

Preference is given to applicants living in the New York counties of Chautauqua, Cattaraugus, and Allegany and the Pennsylvania counties of Warren, Potter, McKean, and Forest. Applicants who are not United States citizens will be considered if they have permanent resident status or an F-1 student visa issued by JCC.

OTA Applicants With College Credits

A point system will be applied to those applicants who meet admissions requirements based upon courses completed toward the OTA program and who meet the GPA requirement. To receive points, an applicant must have completed the courses and cannot be currently enrolled in the courses. Unless already on file, supporting documentation for all points, including transcripts, is required at the time of application submission. All points will be reviewed prior to acceptance by the admissions office. Meeting the criteria does not guarantee admission into the OTA program. A greater number of points improves the applicant’s chances of being selected.

<table>
<thead>
<tr>
<th>Course</th>
<th>Grade and points</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 2510</td>
<td>A - 4 B - 3 C - 2</td>
</tr>
<tr>
<td>BIO 2520</td>
<td>A - 4 B - 3 C - 2</td>
</tr>
<tr>
<td>ENG 1530</td>
<td>A - 3 B - 2 C - 1</td>
</tr>
<tr>
<td>MAT 1540</td>
<td>A - 3 B - 2 C - 1</td>
</tr>
<tr>
<td>PSY 2560</td>
<td>A - 3 B - 2 C - 1</td>
</tr>
<tr>
<td>SOC 1510</td>
<td>A - 3 B - 2 C - 1</td>
</tr>
</tbody>
</table>

OTA Applicants Without College Credit

Applicants without college credit (first time freshmen) are evaluated for admission using the criteria of rank in their high school class, overall GPA, volunteer function, and previous health care experience.

Readmission to the OTA Program

A student seeking readmission may enter the OTA program according to the following criteria:

• Each student must apply for readmission. Admission criteria must be fulfilled.
• Any readmitted student who has withdrawn from the program for a period greater than three years will be given credit for OTA 1510 only, providing a grade of “C” or higher was obtained. The student is required to complete all other OTA courses in sequence.
• A minimum grade of “C” on the professional grading scale is
required in each OTA course. A student is permitted to repeat each OTA course one time. If the student is unsuccessful in repeating any OTA course, he/she is ineligible to continue in the OTA program.

- A student seeking readmission to the OTA program is considered on a space available basis and GPA.

**Chautauqua County Sheriff’s Law Enforcement Academy Admission Policy**

The Chautauqua County Sheriff’s Law Enforcement Academy is offered through the Chautauqua County Sheriff’s Department for students interested in becoming a local or county police officer in New York state. Acceptance into the academy is conducted on a competitive selection process which is contingent on the evaluation of a candidate’s prior college credits, cumulative GPA, psychological profiling, intensive background investigation (felony convictions will bar admittance; misdemeanor convictions may bar admittance), law enforcement agency appointment/sponsorship, oral board interview, physical agility screening, military records, if applicable, civil service list standing, second language skills, and training zone residency. **Note: Some of these components are not required but will give the candidate additional points toward acceptance.**

All candidates must meet New York state statutes as required by the Municipal Training Council for state certification of police officers. These standards are outlined in the Chautauqua County Sheriff’s Academy Rules and Procedures Manual. Matriculated students who are enrolled in the Law Enforcement Academy may receive an A.A.S.-Individual Studies, a certificate in individual studies, or a certificate in law enforcement technology by completing a sequence of courses listed on page 60. Details on the program can be obtained from the admissions director or the academy director on the Jamestown Campus.

**Corrections Academy Admission Policy**

The Corrections Academy is offered through the Chautauqua County Sheriff’s Department for students interested in becoming a correctional officer at a local or county jail. Acceptance to the academy is contingent on successful completion of medical, psychological, and physical fitness examinations and an oral interview. An intense background investigation is conducted by an appropriate law enforcement agency. Applicants must also complete a pre-service application questionnaire.

Students who successfully complete the Corrections Academy and additional college coursework may receive an A.A.S.-Individual Studies, a certificate in individual studies, or a certificate in corrections officer technology as outlined on page 60. Previous college work may be applied to this degree program.

Questions about the degree program should be directed to JCC’s criminal justice director.

---

**Financial Planning**

The cost of a college education is one of the major financial concerns of the American family. While few people doubt the ultimate value of this investment, many students seeking higher education find it difficult to meet their educational expenses within a concentrated period of time. Jamestown Community College believes that a college education should be within the reach of every student and offers a comprehensive financial aid program to support this goal.

Students attending JCC may participate in a full range of federal, state, and institutional grants, scholarships, loans, and work-study programs. Students must be accepted and matriculated by the JCC admissions office and meet academic eligibility criteria to receive awarded funds.

Although the primary obligation for college expenses rests with the student and his/her parents, federal and state agencies, JCC, and the community provide assistance to meet the financial costs of a college education. Eligibility criteria and application deadlines vary for individual sources of financial aid. Students are encouraged to learn about the resources and programs available to them at www.sunyjcc.edu/financialaid.

Students may contact the financial aid office in person or by telephone for general questions and assistance, in addition to scheduling personal appointments for special circumstances.

**Applying for Financial Aid**

Students initiate the application process for all financial aid programs by filing the Free Application for Federal Student Aid (FAFSA) at www.fafsa.gov. The FAFSA application should be filed between January 1 and March 1 of each year for the following academic year. Due to limited funds for some programs, students who apply for aid by March 1 will receive priority consideration for federal campus-based and institutional aid programs. Late applicants are eligible for federal Pell grants, loans, and some state and miscellaneous scholarship programs.

After filing the FAFSA, New York state and Pennsylvania residents must complete applications for state grants from their respective state agencies. Applications for the Tuition Assistance Program (TAP) for full-time New York state students can be completed online at www.hesc.org. New York state residents anticipating part-time status should request the Aid to Part-time Study (APTS) application from the financial aid office and submit it to the college prior to the start of each semester. Full-and part-time Pennsylvania residents must complete PHEAA grant applications according to state instructions and deadlines.

Students interested in institutional scholarships and grants should complete the JCC application for miscellaneous awards and/or the individual scholarship applications. All applications are available in the financial aid office and at www.sunyjcc.edu/financialaid.
Awarding and Disbursement of Aid

Federal and state grants and institutional scholarships are awarded on an annual basis, and are disbursed to the student's account each semester when the student's financial aid file is complete, the eligibility verification process is finalized, and attendance is confirmed.

Student loans are issued in at least two disbursements to the college business office, and are available to eligible students within the first two weeks of classes each semester. Federal regulations require the exception that first time freshman borrowers wait until 30 days after the first day of classes to receive their first loan disbursement.

Credit for aid that registered students are approved to receive is temporarily applied to their student accounts approximately six weeks before classes begin. If anticipated aid exceeds tuition, fees, and residence hall charges, students may charge textbooks and supplies from JCC’s campus store when classes begin, up to the refund amount listed on their account. After attendance in class is confirmed, aid funds are forwarded to the college on the student’s behalf and applied to his account. The JCC business office issues refund checks for excess aid via U.S. mail within 14 days of receipt of funds.

Grants

The Federal Pell Grant is available to undergraduate students who enroll in three or more credit hours and demonstrate financial need, according to federal formulas.

The Federal Supplemental Educational Opportunity Grant (FSEOG) is for students of academic promise who are in great financial need, according to federal formulas, and who are Pell grant recipients. Students who have submitted financial aid applications by March 1 will be given preference to receive this grant award.

Iraq and Afghanistan Service Grants are for students whose parent or guardian died as a result of military service in Iraq or Afghanistan after the events of 9/11. If you were under the age of 24 or were enrolled in college at least part-time when your parent or guardian died, you may receive an award up to the maximum annual Pell grant. This grant does not have to be repaid and is prorated for enrollment in less than 12 credits/semester.

The Tuition Assistance Program (TAP) is available to New York state resident students who enroll full-time (12 hours or more) and demonstrate financial need, according to New York state formulas. Students who were first-time freshmen in the 2006-07 academic year or thereafter, have earned 12 credits or more in each of the two prior consecutive semesters, and have maintained a minimum of a “C” average may be eligible for a reduced Part-time TAP award if enrolled in 6-11 credit hours.

Aid for Part-Time Study (APTS) is designed for New York state resident students who enroll part-time (less than 11 credit hours) and demonstrate financial need, according to state formulas. Applications are available in the financial aid office and at www.sunyjcc.edu/financialaid.

The PEP Grant is a financial aid award program for high school students enrolled at JCC through the early admission, or Pre-College Enrollment programs. Applications and program details are available in the financial aid and admissions offices.

Pennsylvania students attending JCC’s Warren Center and Jamestown Campus who are enrolled in an associate's degree program may qualify for a PHEAA grant from the Pennsylvania Higher Education Assistance Agency. Students must meet financial, academic, and residency requirements to qualify for the award. Students can apply for the grant by completing the Free Application for Federal Student Aid by May 1 each year.

Veterans' Educational Assistance programs are available to part- and full-time students who are eligible armed forces veterans honorably discharged according to Veterans Administration guidelines. The application process should be initiated at www.gibill.va.gov.

Students with disabilities may be eligible for assistance through the New York State Adult Career and Continuing Education Services-Vocational Rehabilitation (ACCESS-VR) program. Learn more about the program at http://www.access.nysed.gov/vr/.

State Aid To Native Americans is available to members of native American families located on reservations within New York state. Applications can be obtained by contacting the higher education representative on one’s reservation.

Loans

Students interested in federal loans start the application by filing the annual Free Application for Federal Student Aid (FAFSA).

Federal subsidized and unsubsidized Direct Stafford Loans are available to students enrolled in a minimum of six credit hours and who are in good academic standing.

Federal Direct Parent Loans (PLUS) are available to the parents of part- and full-time students whose financial expenses cannot be met by other funding sources.

Limited short-term emergency loans are designed for part- and full-time students who have filed for financial aid and can demonstrate proof of aid eligibility beyond tuition and fees expenses. Students must have valid emergency needs which cannot be met by any other source.

Scholarships

The Unified Student Assistance (USA) Scholarship for top students in JCC’s service area is the best known of the college’s institutional scholarships. Over 70 different scholarships, with varying application processes and renewal criteria, can be viewed at sunyjcc.edu/financialaid/scholarships/current.

Self-Help (Employment Opportunities)

The student assistant program is an on-campus employment program for matriculated students enrolled in at least six credit hours who have requested consideration for the program and meet the work schedule requirements.

The Federal Work Study (FWS) program is available to matriculated students enrolled in at least six credit hours who have been offered eligibility due to financial need according to a federal formula. Students who have submitted a FAFSA will be contacted if they are eligible to participate in this employment program.

Effect of Withdrawal from College on Federal Student Aid

Students who withdraw from all classes prior to the end of the semester may not be entitled to 100% of the aid they have been awarded. Financial aid is granted on the premise that the student will be enrolled for the entire semester. Students who withdraw from the college may be required to repay a proportionate amount of their federal financial aid. The amount students may be required to repay is based on the time in the semester that they withdraw. Earlier withdrawals will result in larger repayments than those filed later in the semester. Federal regulations require that students who receive Title IV funds (Pell or SEOG grants or student loans) must complete 60% of the semester or session in order to maintain eligibility for their entire grant or loan for that period. Repayment of unearned Title IV funds must be made to the federal programs in the following order: Unsubsidized Federal Stafford loans, Subsidized Federal Stafford Loans, Federal PLUS Loans received on behalf of the student, Federal Pell Grant, Federal SEOG Program Aid.

Students are encouraged to consult with the financial aid office if they intend to stop attending classes. Instructions for withdrawal are described under the Academic Information section. The failure of a student to notify the registrar in writing of withdrawal may delay refund of tuition due, pursuant to Section 5002 of the Education Law.
Maintaining Eligibility for Financial Aid

Students receiving federal and/or state financial aid must meet certain academic standards to maintain eligibility to receive aid. These standards are outlined briefly in the charts below. A detailed explanation of these standards is available at www.sunyjcc.edu/financialaid. Students with questions concerning academic eligibility to receive financial aid are encouraged to contact the financial aid office.

Federal and state satisfactory academic progress standards are subject to change based on any new regulations issued by government agencies. Please read “Satisfactory Academic Progress” in the Academic Information section for details on interpreting the charts.

Tuition and Fees Payment Policy

Student bills for tuition and fees should be paid no later than the due dates published each semester in the master schedule. Students are expected to pay their bills in full, or make alternate arrangements as follows, according to semester due dates.

Payment by cash, check, money order, and MasterCard/Visa/Discover is accepted by the college business office.

JCC also offers an online payment option for student tuition and fees through Nelnet Business Solutions which allows payment in full or in installments with authorized ACH transactions from a bank account, debit card, and most major credit cards. Contact the JCC business office for additional information regarding the online payment process.

Students whose bills will be paid by third party agencies or employers must submit payment or written confirmation from the agency/employer to the college business office by the semester due date.

Students expecting grants, loans, or scholarships to pay their bills must apply for those funds. Upon completion of the financial aid disbursement process by the college, eligible students will have their aid credited to their student bills. Students who have not completed the financial aid process as of the semester due date are expected to make a downpayment on their bills and sign a promissory note with the business office. Students expecting financial aid assume the responsibility for payment of their accounts in the event they do not receive sufficient aid to pay the entire amount of their bills.

Students with delinquent accounts may be denied the privilege of registering for additional credit and non-credit courses and the release of grades and/or transcripts. Also, students who do not make satisfactory payment arrangements will be subject to collection efforts that may include the use of a collection agency.

JCC reserves the right to charge the student for any agency or attorney fees necessary for the collection of any amount not paid in accordance with the college’s payment procedures.
Financial Planning

Tuition and Fees Refund Policy
Reduction of student tuition and fee charges for class registration and refunds of payments are determined by the date official withdrawal forms are completed by the student and filed with the registrar's office.

Fall and Spring Semesters
Students withdrawing from college or who reduce their credit load to part-time status are entitled to a reduction of tuition and fee charges and refund of payment as outlined for the fall and spring semester 15-week class schedule. Charges for courses with alternate schedules in the fall and spring sessions will be pro-rated accordingly. Students who withdraw from any or all classes shall be liable for payment of tuition and are eligible for refunds according to the following schedule:

<table>
<thead>
<tr>
<th>Schedule</th>
<th>Tuition</th>
<th>Reduction of Liability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior to first day of instruction</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>1st week of instruction</td>
<td>25%</td>
<td>75%</td>
</tr>
<tr>
<td>2nd week of instruction</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>3rd week of instruction</td>
<td>75%</td>
<td>25%</td>
</tr>
<tr>
<td>4th week of instruction and later</td>
<td>100%</td>
<td>0%</td>
</tr>
</tbody>
</table>

*Students participating in drop/add procedures during the first week of classes are not assessed charges for dropped classes required for course scheduling changes.

Summer Sessions
Students withdrawing from summer courses are entitled to a reduction of tuition and fee charges and refund of payment as outlined for the six-week class schedule. Charges for courses with alternate schedules in the summer will be pro-rated accordingly.

<table>
<thead>
<tr>
<th>Schedule</th>
<th>Tuition</th>
<th>Reduction of Liability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior to first day of instruction</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>During the 1st week of instruction</td>
<td>75%</td>
<td>25%</td>
</tr>
<tr>
<td>During the 2nd week of instruction</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>After 3rd week of instruction</td>
<td>100%</td>
<td>0%</td>
</tr>
</tbody>
</table>

*Students participating in drop/add procedures during the first two days of the summer sessions are not assessed charges for dropped classes required for course scheduling changes.

Examples of how refunds are calculated are available upon request from the business office.

For all instructional periods, amounts reduced for students who received Title IV assistance for the period of enrollment will be returned and allocated in the following order to:
1. Federal Direct Stafford Loans (unsubsidized, subsidized)
2. FPLUS Loans
3. Federal PELL Grants
4. Federal SEOG Program Aid
5. Required refunds of other federal, state, private, or institutional assistance
6. The student

Students may be responsible for unpaid charges after refunds have been returned to the financial aid award programs.

Students receiving federal Title IV assistance and state aid may have their awards reduced if they withdraw from JCC or stop attending classes prior to the scheduled end of any semester. As a result, JCC will return funds to the appropriate programs as listed above, and students may be responsible for repayment of some or all of their awards. Students are advised to file their course withdrawals promptly and to consult with the financial aid and business offices if they intend to stop attending classes. Explanation and examples of refund calculations for all semesters are available upon request from the business office.

Exceptions to the college's refund policy are considered under extenuating circumstances. Students may appeal a refund calculation by forwarding their written request for further reduction of tuition and fees with supporting documentation to JCC's business office within 10 days of the date of withdrawal.

Certificate of Residence
For tuition purposes, New York residency means that the student has lived in the state as a permanent resident for the immediate 12 months prior to the start of a semester. Students who have not lived in New York state for 12 consecutive months are assessed non-resident status.

The residence for the period of time students have served active military duty is deemed to be their permanent address prior to enlistment. Those students currently serving active military duty and attending classes are considered New York state residents.

New York State Education Law 6305 requires JCC to have a current certificate of residence on record for each student account every academic year. Students who have lived in New York for at least one year are required to submit certificate of residence documentation at the following times:

- Students who pre-register earlier than 60 days prior to the start of classes are mailed an affidavit for a certificate of residence with instructions. Students registering for classes within 60 days of the start of classes are asked to complete an affidavit upon registration. All students are required to complete the certification process as follows:
  - Proof of residency in New York state for the past 12 months is necessary with a current address in the city of Jamestown. Students who have moved to the city within the last 12 months must provide proof of their prior residence in New York state.
  - Students living in Chautauqua County, Allegany County, Cattaraugus County, and Erie County must complete the top portion of the form and return the notarized affidavit to JCC's business office. JCC will complete the certification process with these counties by mail.
  - Students living in other counties in New York state must complete the affidavit and present it with proof of residency to the county treasurer's office. The county treasurer will issue a fully completed certificate of residence which should be forwarded to the JCC business office.

Faculty Student Association Fees
All students attending classes on campus, whether full- or part-time, pay a Faculty Student Association fee. The fee amount is based on the total number of credit hours for which each student is registered. These fees are used to finance a variety of non-academic activities and services, including cultural events; intercollegiate sports; speakers; noontime programs; exhibitions; access to the Total Fitness program on the Jamestown Campus, the Olean YMCA-JCC facilities through the Cattaraugus County Campus, and Darwin's Fitness Center through the North County Center; music and theatre programs; recreation and intramural programs; and student club and student government activities. The funds are administered by a faculty-student board of directors.

A student identification card is issued to each on-campus student and entitles the holder to free or reduced admission to all sports, cultural, and entertainment events supported by FSA fees.
**College Fee Schedule**

*Tuition and fees are established annually. The figures below may be helpful in planning tuition and fee expenses. As tuition and fees may change, students are advised to consult current master schedules or www.sunyjcc.edu.

**UPDATED JULY 2013**

### Tuition (effective 2013-2014 academic year)

**Full-time students (12 or more credit hours)**  
- New York state resident*: $2,110 per semester  
- Non-resident: $4,220 per semester

**Part-time students (1-11 hours)**  
- New York state resident*: $176 per credit hour tentative  
- Non-resident: $352 per credit hour tentative

### Residence Hall Suites
- $3,465 per semester, single  
- $3,095 per semester, double

The following fees are mandatory unless noted as optional and are not refundable after drop/add period:

#### Aviation (AVN) Flight Fees
- up to $13,000 (pending review with program coordinator)

#### College Processing Fee
- (one-time fee payable upon admission to JCC)  
  - $85

#### Faculty Student Association (FSA) Fee
- $9.25 per credit hour

#### Health Services Fee
- $1.50 per credit hour

#### Insurance
- student accident insurance (optional for part-time students)  
  - $9 per semester tentative  
- student sickness insurance (optional for all)  
  - $51 per semester tentative

#### Laboratory/Studio Fees
- varies $10-$185

#### Placement Test Retesting Fee
- $10

#### Late Payment Fee
- $25

#### Returned Check Fee
- $20 per check

#### SUNY Learning Network (SLN) Fee (online courses only)
- $13 per credit hour

#### Technology Fee
- $6 per credit hour

#### Special Fees
- Additional degree/certification  
  - $20

#### Life Experience assessment
- portfolio review fee  
  - $25  
- per credit awarded fee  
  - $10 per credit hour

### Annual College Expenses
To aid in planning for direct college expenses for full-time students, the following outline of annual estimated costs is presented.

- New York state resident tuition and fees: $4,660  
- Books and supplies: 1,000  
- $5,660**

* A resident must have had a permanent address in New York state for 12 months prior to the start of classes. Students who do not meet this requirement will be charged non-resident tuition. Students must complete a certificate of residence as described on page 18.

** Students may also incur additional costs for transportation, living expenses, and personal needs. Estimated student budgets used for financial aid eligibility are established annually and are available from the financial aid office or online at www.sunyjcc.edu/financial aid.
Student Services

The student development faculty and staff provide programs and services which encourage the growth of personal responsibility and self-direction. These programs and services are an integral part of the total educational experience.

Academic Advisement
The basic purpose of academic advisement is to provide sound and accurate academic information that will further a student's academic plan each semester. This is accomplished by assigning all full-time students an advisor in their academic area who will assist them with career planning, course selection, transfer college decision-making, and life goal setting.

To accomplish this mission, full- and part-time students meet periodically with advisors to review life and career goals, to assess movement toward these goals, and to discuss alternatives that will support goal acquisition. It is fundamental to the advisor-advisee relationship that students take responsibility for their own decision-making while faculty take responsibility for the necessary education to fulfill the role of advisor.

It is ultimately the student's responsibility to learn and know the graduation and program requirements for the degree being sought and to monitor progress toward fulfilling those requirements.

More details on academic advisement can be obtained through the counseling centers or at www.sunyjcc.edu/counseling/advising.

Academic Support Centers
JCC offers academic assistance to students at its two skills centers, Main Street on the Jamestown Campus and the Learning Assistance and Computer Center on the Cattaraugus County Campus. In addition to help with most academic subjects, students can receive personalized assistance with reading, writing, and study skills. Students seeking help can receive one-to-one tutoring from trained peer tutors and experienced faculty members. Textbooks, study guides, and other resource materials are available. Computer labs offer students access to microcomputer applications, including word processing and Internet research. Students with special learning needs can also receive individualized assistance at both centers.

Open, informal, and work-oriented atmospheres make the centers pleasant places to visit. Main Street is located on the second floor of the Hultquist Library on the Jamestown Campus, and the Learning Assistance and Computer Center is located in the Technology Center on the Cattaraugus County Campus. Limited tutorial services are available at the North Country Center.

Counseling and Career Planning Services
The counseling centers on the Cattaraugus County and Jamestown campuses provide JCC students with a variety of confidential counseling services. Counselors are available to respond to student problems and concerns. Particular emphasis is placed on issues related to student growth and development and educational, transfer, and career decision-making and planning. Students who are experiencing stress, coping, or adjustment problems may find it helpful to meet with a counselor to deal more effectively with these issues.

The centers have extensive information available to those who seek a greater awareness of career and educational opportunities. CareerPath and MCP/FOCUS, online career and transfer planning programs, are available for student use. Those interested in learning more about themselves may also take a variety of tests, including personality and vocational interest inventories.

The centers are also responsible for overseeing the Life Experience Credit Assessment Program. Students interested in life experience credit can get details through the counseling centers.

Community residents are encouraged to use the centers’ career and educational counseling and information services.

Counseling services are available in the Counseling and Career Development Center, Jamestown Campus; Counseling and Career Planning Center, Cattaraugus County Campus; and on a limited basis at the North County and Warren centers. Office hours are posted at www.sunyjcc.edu/counseling.

Employment and Job Search Services
Students are encouraged to use the various resources available in the counseling centers when looking for a job. Part-time, full-time, and seasonal positions are posted at each campus and on JCC’s website. Employment development specialists are available on the Cattaraugus County and Jamestown campuses to help students develop a job search strategy, write resumes and cover letters, prepare for interviews, and obtain information about internships.

Students seeking full- or part-time work can take advantage of the Jobs in Your Inbox service. By registering for this service, students receive information about jobs that are posted with the college at an email address of their choice. On-campus student employment opportunities and applications are available at the counseling centers. Students also have the opportunity to meet employers and develop professional networks during career fairs and on-campus recruiting.

Graduate placement statistics are available from the office of institutional research.

Disability Support Services
JCC is dedicated to assisting qualified students with disabilities in earning grades that reflect their abilities and not their disabilities. The disability support services offices are located in the college’s tutoring centers: Main Street on the Jamestown Campus and the Learning Assistance Center on the Cattaraugus County Campus.

Students from all college sites should contact the disability support services coordinator at the Jamestown Campus office to inquire about and/or arrange for services.

Policy Statement for Students with Disabilities
Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 state that qualified students with disabilities have the right to reasonable modifications in all on and off-campus academic programs and services, as well as in student services in order to make a college education truly accessible. The philosophy of Jamestown Community College is to do its utmost to maximize the educational opportunities of all its students. Thus, our policy regarding students with disabilities is a manifestation of our general approach to all students. We believe in treating students as individuals and in doing our best to meet individual needs.

To plan for necessary modifications and support services, students must contact the disability support services office coordinator and provide documentation that verifies the existence of a disability and supports the need for accommodation. We can best meet the needs of students if requests for accommodations are made as soon as possible after the master schedule is available. For those students who have a disability requiring services and/or equipment from outside the college, such as course materials in alternate media or sign language interpreters, we strongly urge three months’ advance notice. All disability-related information is treated confidentially.

Programs, or portions of programs with separate admissions policies (e.g. field placements), may have additional performance criteria for students to review prior to application. The nursing program’s essential skills and abilities information is published in the college catalog and on the college website. The occupational
therapy assistant program’s essential skills information is available on JCC’s website. Both programs require medical exams prior to field placement. Admission to the professional piloting program requires students to obtain an FAA First Class Medical Certificate prior to admission to the program. Both the Chautauqua County Sheriff’s Law Enforcement Academy and Corrections Academy require medical examinations, agility/fitness exams, and psychological profiling prior to acceptance. Full admissions criteria for both academies are published on page 15.

When a student requests a modification which is beyond the scope of authority of the disability support services coordinator to decide, the request will be decided upon by a committee appointed by the dean of academic affairs. The procedure for filing such requests is available in the disability support services office, in the office of the dean of academic affairs, and on JCC’s website.

Health Centers

JCC’s health centers provide the college community with services ranging from clinical evaluation and treatment to wellness information. Confidential services are provided by registered professional nurses. The centers also offer information on various health topics. Health counseling, immunization requirement information, medical referrals, and medication information are also provided.

Clinical services include first aid, physical examinations, blood pressure screening, tuberculosis skin testing, and physician ordered blood tests. Wellness services include flu vaccination clinics, smoking cessation, cholesterol, weight, and stress management plans, body composition analysis, and nutritional assessments.

The health centers are located in the Hamilton Collegiate Center on the Jamestown Campus and in College Center on the Cattaraugus County Campus.

Immunization Requirements

Two New York state public health laws currently affect college students. The first requires students to demonstrate proof of immunity against measles, mumps, and rubella. This law applies to all on-campus students born on or after January 1, 1957 who are enrolled for six or more credits.

The second law requires JCC to provide students with information about meningococcal meningitis and also requires the student to acknowledge receipt of this information and indicate his or her choice regarding vaccination. (Meningitis vaccination is not mandatory). This law affects all students taking six or more credits.

A student’s high school does not automatically forward these records to JCC. Failure to comply will result in a $25 fine and disenrollment from classes.

Student Information Policies Records and Registration

Access to Student Records

In conformance with the Family Educational Rights and Privacy Act (FERPA), JCC maintains the confidentiality of all student educational records. JCC accords all the rights under the law, regardless of age, to individuals who are in attendance at the college and have educational records. No one outside the institution shall have access to, nor will the institution disclose any information from a student’s educational record without the consent of the student.

Within JCC, only those members acting in the student’s educational interest are allowed access to student educational records. These members include administrative personnel and faculty, within the limits of their need to know.

Additionally, FERPA does permit the release of directory type information without the written consent of students. JCC reserves the right to disclose, at its discretion, the following information: names, permanent address, e-mail address, enrollment status, dates of attendance, class, previous institution(s) attended, major field of study, awards, honors, degree(s) conferred (including dates), and past and present participation in college activities. Students who wish the college to withhold such information must notify the registrar, in writing, prior to the start of each semester. Note: JCC considers students’ name and whether he/she is enrolled at the college as public information, essential to its operation. This, therefore, may be disclosed without restriction.

A copy of the FERPA document is on file in the registrar’s office and is available for review by students. Students who believe their privacy rights have been violated may file a complaint concerning alleged failure of the college to comply with the requirements of FERPA by contacting the Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Ave., SW, Washington, DC 20202-5920.

Official records are kept by JCC for the time limits as designated by state and federal mandates. After that time, they are destroyed. The registrar’s record of a student’s academic performance is retained permanently.

Review of Student Records

FERPA provides students with the right to inspect and review information contained in their educational records; to challenge the contents of their educational records; to have a hearing if the outcome of the challenge is unsatisfactory; and to submit explanatory statements for inclusion in their files. Students wishing to review their educational records must make a written request to the appropriate dean listing the item or items of interest and following the process as outlined in the “Student rights, Responsibilities, Regulations” appendix of the JCC Constitution of the Student Body.

Students may not inspect and review the following as outlined by law: financial information submitted by their parents; confidential letters and recommendations associated with admission; records of instructional and administrative personnel which are in sole possession of the maker; records of someone employed by the institution; and records of a person after he/she no longer attends JCC, i.e., alumni records.

Web Access for Student Records and Registration

Credit students at JCC can access their individual student records on the web (self-service information) from a personal computer at home or a student lab on campus. Any computer that provides Internet access with the required browser specifications will link you to your JCC student records. Details on browser specifications, the web address, and personal access and PIN information are available from the registrar’s office.

Currently, the items accessible by students includes: general student information (view/change address and phone number, e-mail address, directory profile, PIN, etc.); holds (library, immunization, academic, financial, FSA, accounts receivable); mid-semester (six-week grades) and final grades; unofficial academic transcript; registration status and add/drop courses; online registration; degree evaluation and “what if” analysis (“What if I changed my major?”); student tuition and fees account; enrollment certifications via a link to the National Student Clearinghouse; and placement test scores.

Student Affairs Committee

The Student Affairs Committee, comprised of JCC staff, faculty, and students, acts as an advisory board to the vice president and dean of student development on matters related to the student development division, student governance, campus life, and student welfare. The committee’s functions include interpretation and effective communication of college policy, procedure, and practice as they pertain to students as well as to act as a conduit between student governance and administration in matters of student concern.

The committee strives to increase connections between student resources across campus and works in conjunction with other standing committees to provide seamless resources and programs. Responsibilities of the Student Affairs Committee include, but are not
Faculty Student Association  
The Faculty Student Association (FSA) is an independent non-profit organization and the primary sponsor of co-curricular activities at JCC. FSA is financed entirely by fees paid by all JCC students and faculty. The corporation is managed by a board of directors consisting of representatives of JCC’s administration, faculty, staff, and student body. Funds are allocated annually to departments and committees across campus to provide enriching activities and enjoyable experiences which add to the total college experience.

Campus partners which receive their funding from FSA include Student Senate, the college program committee, campus life, arts, music, theatre, residence life, and athletics, including recreation, intramurals, and the Total Fitness program.

Campus Stores  
Located in the Hamilton Collegiate Center on the Jamestown Campus, in the College Center on the Cattaraugus County Campus, and in the North County Center, the campus stores offer a variety of products and services. Numerous selections of new, used, and reference textbooks are sold, and if a book cannot be found on the shelves, it can be special ordered.

The campus stores carry an assortment of JCC, Jayhawk, and Jaguar merchandise, including imprinted clothing, giftware, and school supplies. In addition, the campus stores stock greeting cards, stationery, art supplies, computer supplies, snacks and drinks, and residence hall room supplies.

Services also include box office ticket sales, check cashing, fax and copy service, meal plans, parking registration, student ID cards, textbook buyback, sales, and rentals, and postage stamps.

Dining and Vending Services  
FSA partners with food service companies to provide a variety of breakfast items, wraps, sandwiches, pizza, soup, and full hot meals that are both nutritional and pleasing to the palate. Food service hours vary by campus; each location accepts cash or credit cards. The Jamestown and Cattaraugus campuses offer meal plans as well as debit card programs.

For additional meal plan information, visit the campus store. Vending machines, available on all campuses, accept coins and dollar bills. Some machines accept credit cards.

Campus Life Offices  
The campus life offices on the Jamestown and Cattaraugus County campuses coordinate leadership development opportunities, service projects, and a variety of student activities and events each semester in collaboration with the Campus Activity Board and other campus partners. The college-wide student activity hour (Mondays and Wednesdays from noon to 1:15 p.m.) enables JCC students to participate in these activities, which include guest speakers, comedians, musicians, and intramural sports, and involvement in club and student organization activities.

Orientation  
New and transfer students are invited to participate in orientation prior to each fall semester. Orientation is designed to connect incoming students with college resources, other new students, and JCC administration, faculty, and staff. Workshops are offered to ease new students’ transition into collegiate academic and co-curricular life, and interactive activities are incorporated to help new students meet each other and become familiar with the campus.

Student Government  
The Student Senate is the officially recognized student governing body on the Jamestown and Cattaraugus County campuses and at the North County Center. These governing bodies meet regularly with meetings open for any student to attend. Student Senate operates on funding allocated by the FSA and may, in turn, allocate funds to student clubs which present appropriate budget requests.

The Student Senate also serves as an advisory board to the president of the college, bringing matters of student concern to his/her attention and making recommendations which it believes will aid JCC in meeting its commitment to students. Representation is through a general student election on the Jamestown Campus and by petition on the Cattaraugus County Campus. Student government also serves as a vehicle to select students for service on various college-wide committees.

More information about the structure of Student Senate can be accessed in the Student Constitution available on the JCC website.

Clubs & Student Organizations  
Student clubs and organizations provide opportunities for leader-
Campus Activity Board

The Campus Activity Boards (CAB) on the Jamestown and Cattaraugus County campuses and at the North County Center serve as advisory boards to the campus life directors on social and cultural programming at JCC. Primarily utilizing student activity hour on Monday and Wednesday, CAB sponsors a variety of live performances and interactive activities throughout the academic year. Students interested in the experience of planning and implementing programs which fulfill the social, cultural, and educational needs of the student body, faculty, staff, and administration should contact the campus life office on the Jamestown or Cattaraugus County campuses.

College Program Committee

To enrich the quality of the college experience for students, the College Program Committee sponsors events that will be attractive to the college community in as many areas of academic and curricular interests as possible. Speakers, performers, events, touring exhibitions, demonstrations, and films are brought to JCC annually. Membership on the committee is open to students, staff, and faculty with designated representatives coming from each group.

All events are offered free or at a reduced charge to FSA members, and at a nominal fee to the general public. Those wishing to obtain more information about the College Program Committee should contact the campus life office on the Jamestown or Cattaraugus County campuses.

Arts at JCC

The Campus Life Office sponsors events in the Center Gallery at the Cattaraugus County Campus. The purpose of intramural sports at JCC is to provide a comprehensive and varied program of both competitive and recreational experiences designed to meet the needs and interests of enrolled students and faculty/staff members. These programs also help develop lifelong interests and recreational habits. Intramural competition is offered in men’s, women’s, and coed sports and is provided in the form of leagues, tournaments, and/or special events each semester.

Team and individual sports activities are designed to accommodate all individuals, regardless of skill level and experience. Programs are based on student interest and availability of resources and facilities. Some popular activities include flag football, basketball, volleyball, and badminton. Many activities are structured so students, faculty, and staff members can participate together. Awards are presented to winning teams or individuals. Details on eligibility requirements and intramural and recreational activities are available at the Physical Education Complex on the Jamestown Campus and the campus life office on the Cattaraugus County Campus. The JCC Total Fitness program on the Jamestown Campus provides an outstanding opportunity to participate in a multitude of activities. The Physical Education Complex houses 40,000 square feet of playing space with 11,950 square feet of multipurpose flooring to accommodate basketball, volleyball, and other activities. Other facilities include a free weight room; cardiovascular machines; complete Life Fitness center; batting cage and golf area; tumbling mats; racquetball court; 1/10 mile indoor running track; diving pool and swimming pools; two whirlpools; and a steam room. Recreation schedules are available at the campus store, Physical Education Complex front desk, and online.

Cattaraugus County Campus students are entitled to use the fitness and recreational facilities at the Olean Family YMCA/JCC Physical Education Center. Located on Wayne Street, the center includes weight rooms, aerobic equipment, gymnasium, pool, and men’s and women’s locker rooms. North County Center students are eligible to use fitness equipment in the gymnasium located in the main building and also have free access to Darwin’s Fitness Center in Fredonia with their student ID card.

Music

The music department presents numerous concerts each year featuring JCC students and/or regional artists. Various instrumental and vocal groups are available for credit each semester on the Jamestown Campus. These non-audition ensembles are directed by music faculty members. Music groups include jazz ensemble, concert band, college chorus, and rock ensemble.

Theatre

The Uncommoners present musicals and drama productions with auditions open to all JCC students. Students interested in dramatics or in any of the crafts associated with the theatre will find an opportunity to explore those avenues at the Jamestown Campus. The theatre program encourages those who show a curiosity about the world of theatre to become involved in its activities. The Uncommoners present two major productions a year. Students wishing to mount their own theatre pieces are supported and encouraged to reach their objectives. Students involved in the theatre program may be eligible for the Robert Lee Scharmann Award.

Recreation, Intramurals, and Total Fitness

At JCC, the purpose of intramural sports is to provide a comprehensive and varied program of both competitive and recreational experiences designed to meet the needs and interests of enrolled students and faculty/staff members. These programs also help develop lifelong interests and recreational habits. Intramural competition is offered in men’s, women’s, and coed sports and is provided in the form of leagues, tournaments, and/or special events each semester.

Team and individual sports activities are designed to accommodate all individuals, regardless of skill level and experience. Programs are based on student interest and availability of resources and facilities. Some popular activities include flag football, basketball, volleyball, and badminton. Many activities are structured so students, faculty, and staff members can participate together. Awards are presented to winning teams or individuals. Details on eligibility requirements and intramural and recreational activities are available at the Physical Education Complex on the Jamestown Campus and the campus life office on the Cattaraugus County Campus. The JCC Total Fitness program on the Jamestown Campus provides an outstanding opportunity to participate in a multitude of activities. The Physical Education Complex houses 40,000 square feet of playing space with 11,950 square feet of multipurpose flooring to accommodate basketball, volleyball, and other activities. Other facilities include a free weight room; cardiovascular machines; complete Life Fitness center; batting cage and golf area; tumbling mats; racquetball court; 1/10 mile indoor running track; diving pool and swimming pools; two whirlpools; and a steam room. Recreation schedules are available at the campus store, Physical Education Complex front desk, and online.

Cattaraugus County Campus students are entitled to use the fitness and recreational facilities at the Olean Family YMCA/JCC Physical Education Center. Located on Wayne Street, the center includes weight rooms, aerobic equipment, gymnasium, pool, and men’s and women’s locker rooms. North County Center students are eligible to use fitness equipment in the gymnasium located in the main building and also have free access to Darwin’s Fitness Center in Fredonia with their student ID card.

Athletics

JCC believes that education involves body and spirit as well as the mind. Students at JCC participate in athletics for a variety of reasons which gives each student athlete an opportunity to take a real measure of himself or herself and to pursue a goal of excellence through personal discipline, striving, and hard work.

The Jamestown Campus Jayhawk program participates in intercollegiate competition in men’s and women’s basketball, soccer, golf, and swimming, women’s volleyball, and men’s baseball and wrestling. Jayhawk teams have gained regional and national recognition and a reputation for fielding well-coached squads.

The Cattaraugus County Campus Jaguar program provides opportunities for students to participate in intercollegiate competition.
in men’s basketball and golf and women’s soccer and softball.

JCC is a member of the Western New York Athletic Conference and Region III of the National Junior College Athletic Association.

Further details are available from the athletics director.

Residential Life

JCC has three residence halls located on the Jamestown Campus. Hillside Suites provide housing for 340 students, and include suite style living and accommodations for students with disabilities. Each fully furnished suite consists of four or five bedrooms, a common kitchen with dining area, common living space, and two bathrooms. Most bathrooms have a separate vanity area and bathroom/shower space. All bedrooms and common living areas within the suites are equipped for cable television and wireless Internet.

Utilities are included with the cost of the suites and residents are able to control their own heat and air conditioning within each suite. Each building provides coin-operated laundry, vending machines, and recycling areas and features a common space for activities. Hillside Suites are alcohol-, drug-, and tobacco-free.

Each building has secure access as well as live-in professional and para-professional staff members who provide support and unique opportunities that enrich residential students’ experiences. Through personal interaction, programming, and connectivity to campus resources, staff members provide opportunities that develop citizenship and personal growth for the members of the residential community. As students pursue academic challenges they can also avail themselves of many support services, social activities, physical education facilities, and performances in close proximity to Hillside Suites.

Student Responsibility & Expectations

JCC is committed to creating and maintaining an effective community of learners in which all can grow and develop. We look forward to interacting with you in a civil and respectful classroom environment that encourages dialogue, supports the acquisition of knowledge, and assists all students in meeting their academic and personal goals.

Civility and Student Responsibility Statements

JCC is committed to the highest standards of academic and ethical integrity, acknowledging that respect for self and others is the foundation of educational excellence. As such, we will cultivate an environment of mutual respect and responsibility. Whether we are students, faculty, or staff, we have a right to be in a safe environment, free of disturbance and civil in all aspects of human relations.

All JCC students are expected to take an active role in their learning by recognizing they are accountable for their academic success. Student responsibility is demonstrated when students make choices and take actions which lead them toward their educational goals. Responsible students take ownership of their actions by exhibiting the following behaviors. They:

- demonstrate academic integrity and honesty.
- attend and participate in classes, labs, and seminars, prepared and on time.
- complete the assigned work in a timely manner with attention to quality of work.
- avoid making excuses for their behavior.
- communicate in a careful and respectful manner with professors, peers, and other members of the college community.
- are engaged learners who dedicate sufficient time outside of class to college work.
- act in a civil manner that respects the college learning/social environment and complies with college policies outlined in the student constitution and college catalog.
- utilize college resources and seek help when needed.
- respect diverse ideas and opinions.
- identify, develop, and implement a plan to achieve their educational goals.

Expectations of Students in the Classroom

Your academic attitude is a major factor in your success at JCC. You share responsibility, along with your professor and other students, for creating a productive learning environment. This responsibility includes behaving courteously and respectfully toward your professors and your classmates and becoming self-disciplined in your learning. To create a productive college experience for you and all students, you should:

- **Attend class and pay attention.** Do not ask the instructor to go over material you missed by skipping class or not concentrating. If you have difficulty understanding the presented material, ask the instructor to assist you.
- **Not come to class late or leave early.** If you must enter late, do so quietly and do not disrupt the class by walking between the class and the instructor. Do not leave class early unless it is an absolute necessity. If you know you need to leave class early, sit near an exit and inform the instructor prior to class.
- **Not talk with other classmates while the instructor or another student is speaking.** If you have a question or comment, please raise your hand, rather than start a conversation with your neighbor. Others in the class may have the same question.
- **Show respect and concern for others by not monopolizing class discussion.** Allow others time to give their input and ask questions. Do not stray from the topic of class discussion.
- **Turn off electronic devices, including but not limited to: cell phones, pagers, beeping watches.** If, due to work or family obligations, you need to remain in contact, inform your instructor ahead of time and set the devices to be as unobtrusive as possible.
- **Avoid audible and visible signs of restlessness.** These are both rude and disruptive to the rest of the class.
- **Focus on class material during class time.** Sleeping, talking to others, doing work for another class, checking email, exploring the Internet, etc., are unacceptable and can be disruptive.
- **Not pack bookbags or backpacks to leave until the instructor has dismissed the class.**
- **Clear any visitors you would like to bring to class with your instructor ahead of time.**
Your Rights as a Student

As a student, you have the right to a learning environment free from distractions. If others in your classroom are engaging in behavior that interferes with your learning, bring the situation to the attention of your instructor. He or she is responsible for managing the classroom environment and determining the action that should be taken.

Consequences of Inappropriate Classroom Behavior

The instructor has the right and the responsibility to take appropriate action when he or she observes inappropriate classroom behavior. The form of intervention taken by the instructor will depend on the nature of the misconduct observed. The student constitution outlines the process to be followed and sanctions that may be placed on students who engage in various forms of misconduct.

Student Complaint Process

JCC has an internal complaint system available to students who believe they have a grievance with the institution. For more information on the process, consult with the vice president and dean of student development on the Jamestown Campus, the vice president of human resources and college-wide safety also maintains information on the process, consult with the vice president and dean of administration depending on campus or extension center location.

Campus Safety

Minor crime incidents are investigated by the executive director of human resources and college-wide safety or designee and followed up with local law enforcement as appropriate. Serious crime incidents and felonies are reported to the appropriate police department depending on campus or extension center location.

Crime Awareness and Campus Security

The Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act is the landmark federal law, originally known as the Campus Security Act, that requires colleges and universities across the United States to disclose information about crime on and around their campuses. JCC complies with these regulations by providing information relating to crime statistics automatically to all current students and employees. Prospective students and employees are notified of its existence and afforded an opportunity to request a copy. JCC’s crime statistics can also be accessed at www.sunyjcc.edu.

During the 2010-2011 academic year, approximately 3,004 full-time and 1,178 part-time students were enrolled at JCC’s Jamestown and Cattaraugus County campuses and North County and Warren extension centers. JCC employs approximately 600 people across all locations. JCC does not currently request information from employees concerning involvement in criminal offenses. JCC’s executive director of human resources and college-wide safety will provide, upon request, all campus crime statistics as reported to the U.S. Department of Education. Further details about campus safety and security can be obtained from JCC’s executive director of human resources and college-wide safety in the human resources office or at www.sunyjcc.edu/safety.

Security Policies and Procedures

During open hours, students, faculty and employees at JCC have access to academic, recreational, and administrative facilities at each campus and extension center. The buildings are closed from approximately 10 p.m. to 7 a.m. The general public can attend cultural and recreational events on campus, as well as access the libraries. Many events are advertised for the public at large and athletic facilities are periodically open to the general public. JCC offers a truly open campus experience within its facilities at all locations.

JCC does not employ a security force. Security services are provided through a joint effort between staff and faculty and coordinated by the executive director of human resources and college-wide safety. The building and grounds department maintains college buildings and grounds with a concern for safety and security. They inspect campus facilities regularly, promptly make repairs affecting safety and security, and respond immediately to reports of potential safety and security problems.
Students’ And Employees’ Responsibilities

The cooperation and involvement of students and employees in a campus safety program is absolutely necessary. Students and employees must assume responsibility for their own personal safety and the security of their personal belongings by taking simple, common sense precautions. For example, although the campus is well-lighted, any student or employee, male or female, may feel more comfortable walking with a friend or contacting a member of the buildings and grounds department for an escort to their cars at night. Valuables should not be left where they can be seen in the vehicle, but should be locked in the trunk. Bicycles should be left in designated areas and locked. Students and employees should report any suspicious activity or unusual incident or individuals whom they feel do not belong on campus to the executive director of human resources and college-wide safety as soon as possible.

Sexual Offense Policy Statement

JCC’s administration fully supports all local, state, and federal laws governing harassment, rape, and sexual assault and will prosecute violators to the fullest extent possible. Students violating this policy are subject to judicial procedures and sanctions, up to and including expulsion, which are outlined in the student constitution. Employees violating this policy shall be subject to disciplinary actions as defined in their respective labor contracts or human resource policies.

JCC is committed to providing prompt and compassionate support services to any victims of such assaults. If you or anyone you know has been a victim of a sexual offense on a JCC campus, you are urged to report the incident to JCC authorities as well as the police. If you are a victim of a sexual assault, you have the right to:

• report the incident to the executive director of human resources and college-wide safety for internal reporting and/or to pursue criminal charges;
• access support services, including free and confidential counseling, provided by JCC and/or the community.

For additional information and a list of campus and other community support resources concerning sexual offenses, contact the executive director of human resources and college-wide safety.

Title IX of the Education Amendment

Title IX of the Education Amendment and JCC policy prohibits discrimination in the provision of services or benefits offered by JCC based upon gender.

Sexual harassment is a form of gender discrimination and therefore prohibited under Title IX. As defined by the Equal Employment Opportunity Commission, and the Office of Civil Rights Department of Education, sexual harassment is defined as unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature.

The following are examples of types of conduct that may constitute sexual harassment:

• Inappropriate touching, patting, or pinching
• Physical assault or coerced sexual activity
• Demands or subtle pressure for sexual favors
• Obscene phone calls, email, or gestures

Any person (student, faculty, or staff) who believes that discriminatory practices have been engaged in based upon gender may discuss their concerns and file informal or formal complaints of possible violations of Title IX with JCC’s Title IX coordinator.

Jacob Wetterling Crimes Against Children and Sexually Violent Offender Registration Act

This law sets the requirements for sexual offender registration and community notification. The Campus Sex Crimes Prevention Act of 2000 provides for the tracking of convicted sex offenders enrolled at, or employed by, institutions of higher education. It requires sex offenders, already required to register in a state, to provide notice of each institution of higher education in that state at which that person is employed, carries on a vocation, or is a student.

The Act amends the Family Educational Rights and Privacy Act of 1974 (FERPA) to clarify that nothing in the act can prohibit an educational institution from disclosing information provided to the institution concerning registered sex offenders. This registration is to be made available to law enforcement agencies with jurisdiction where the institutions of higher education are located. Law enforcement agency information provided by the state concerning registered sex offenders can be obtained at www.officeofthesheriff.com. Click on the “additional information” link and choose “Chautauqua County sex offenders.” You can access the New York Department of Criminal Justice Services’ Sex Offender Registry at www.criminaljustice.state.ny.us/nsor, or you may also contact the New York Division of Criminal Justice Services’ DCJS Sex Offender Registry at 518.457.6236 or 1.900.288.3838.

NY-ALERT

JCC is a member of NY-ALERT, the New York State All-Hazards Alert and Notification web-based portal created and maintained by the State Emergency Management Office. NY-ALERT is designed to send notifications through e-mail, phone (traditional, voice over Internet protocol, or cell), text messaging (cell or pager), or fax in situations where your personal safety may be at risk.

To keep you informed during a campus emergency, it is critical that you enter your preferred e-mail, text messaging, and phone numbers into the NY-ALERT system. You also may provide contact information for other interested parties such as your family.

Visit www.sunyjcc.edu, click on MyJCC Online Services, and click the Banner link. Sign in to the secure area of Banner (web) self-service. The Emergency Alert Contact Information screen will display. Carefully review the message and options that display.

Subscription to NY-ALERT is free and, while highly encouraged, completely voluntary. This information will not be shared with any outside parties, nor will JCC use the system for any purpose other than a true emergency.

Privacy and Security of Personal Information

JCC complies with all privacy and security provisions of the Gramm-Leach-Bliley Act of 1999 (GLB) and the New York State Information Security Breach Notification Act of 2005 (NYSISBA). JCC has taken appropriate measures to ensure the security and confidentiality of our customers’ personal/private information.

JCC complies with the Family Educational Rights and Privacy Act (FERPA). By doing so, JCC is in compliance with the privacy requirements of the GLB. Measures have been taken to protect against any anticipated threats to the security or integrity of such information.

JCC has put into place an information security program (ISP) that guards against the unauthorized access to or use of such information that could result in substantial harm or significant inconvenience to any customer. The ISP covers administrative, technical, or physical safeguards used to access, collect, distribute, process, protect, store, use, transmit, dispose of, or otherwise handle customer information. For further information, contact JCC’s executive director of human resources and college-wide safety.
Other Student Services

Library Services

JCC has two full-service libraries - the Hultquist Library on the Jamestown Campus and the Cattaraugus County Campus Library in Olean. In addition, the North County Center has a library lab. Networked workstations in each campus library as well as the library lab at the North County Center provide easy access to the libraries' resources, the Internet, and the Microsoft Office Suite.

JCC’s libraries are committed to supporting the mission of JCC as a student-centered institution which embraces academic excellence and meets the learning needs of the college and greater community. As a full partner in the teaching/learning process of the college community, the libraries work with students, faculty, and the community to develop critical thinking and lifelong learning skills.

The goals of JCC’s libraries are to:

• Acquire, produce, organize, and provide access to a collection of high quality resources which address the information needs of the college.
• Provide instruction and services to students, faculty, staff and the greater community in the effective use of learning resources.
• Seek and maintain partnerships that increase access to information, cultivate support for library collections and services, and strengthen the greater community.
• Provide an easily accessible, user-friendly, and safe environment that fosters teaching and learning for both library users and library employees.
• Contribute to the intellectual, cultural, and recreational pursuits of the college beyond the classroom.
• Evaluate on a continuing basis all library services and activities.

The JCC libraries share a commitment to “acquire, produce, organize, and provide access to a collection of materials which reflect the needs of the college.” The present print collections exceed 80,000 book and media titles. In addition, the libraries maintain a growing collection of online resources available through www.sunyjcc.edu/library.

Classrooms located in each campus library include workstations for hands-on instruction and research activities. Wi-fi connections enable students to work from laptops and other portable devices, adding flexibility to the use of library resources.

Students attending the college’s extensions centers in Dunkirk, NY and Warren, PA are provided with library services and instruction through the Hultquist Library and the JCC libraries’ website. When visiting other SUNY campuses, all JCC students, faculty, administration, and staff are entitled to the same use of the campus library collection, and the same library services and facilities, as the library offers its own community, including borrowing privileges simply by showing their JCC student ID. This service is part of SUNY’s Open Access program. In addition, JCC students attending the Warren Center may take advantage of the resources and services at the Warren Public Library.

Through participation in SUNYConnect, a joint initiative of the Office of Library and Information Services and the libraries of the 64 SUNY campuses, the JCC libraries are able to provide access to databases spanning the academic disciplines. Participation in SUNYConnect, as well as other consortial groups, allows JCC to provide a broader collection of information resources than would otherwise be possible.

A core component of SUNYConnect is ALEPH, a library management system that is used for both the administrative and research needs of each of the SUNY libraries. The JCC libraries adopted ALEPH in 2003. Its web-based catalog provides a simple searchable interface for identifying resources available in the JCC libraries’ collections.

The Hultquist Library and the Cattaraugus County Campus Library maintain periodical collections in both print and electronic formats. JCC’s libraries currently subscribe to more than 65 cross-disciplinary databases that provide full-text access to nearly 20,000 journals, magazines, trade publications, newspapers, and eBooks. Using their JCC logins, JCC students, faculty, administration, and staff can connect to the JCC libraries’ online resources from any Internet-connected computer, regardless of time or location.

In addition to providing access to a broad collection of print and online resources, the JCC libraries provide interlibrary loan services (ILL) via the OCLC Resource Sharing and Delivery network. ILL allows library users to borrow materials not owned by the JCC libraries from libraries throughout the world.

JCC’s libraries provide full reference service to assist all patrons with research, database searching, and in locating materials on the library shelves. The reference staff provides assistance through one-on-one instruction, classroom instruction, workshops, and via e-mail or telephone. The reference librarians also maintain a growing collection of instructional guides on the JCC libraries’ website and LibGuide collection (sunyjcc.libguides.com).

The JCC libraries actively participate in a number of college-wide events as well as host several library-related events throughout the academic year. Students are encouraged to follow the JCC libraries’ blogs and Facebook page for announcements about upcoming library events and activities.

Manufacturing Technology Institute

The Manufacturing Technology Institute, located on the Jamestown Campus, is a partnership between JCC and the Manufacturers Association of the Southern Tier. MTI focuses on the development and provision of training to support advanced manufacturing in the region. MTI houses several of the college’s accredited educational programs such as mechanical technology, machine tool technology, and welding technology, as well as non-credit industry specific customized training programs.

MTI Mission

The mission of the Institute is to provide services to businesses and individuals in the region in the form of hands-on manufacturing technical training and technology assistance.

MTI Vision

MTI is the premier manufacturing skills training provider in the region. MTI is “the place” manufacturers think of first when they have a training need. MTI is a leader, working in cooperation with the public and private education system to define and implement a clear pathway of manufacturing technology training from grade school to a graduate degree. MTI builds partnerships with both public and private sectors to support this vision.
**Continuing Education**

JCC’s Center for Continuing Education, with full service offices in Jamestown, Dunkirk, Olean, and Warren, offers a broad spectrum of programs and services that JCC offers to its communities. It provides the public with an open door to lifelong learning opportunities in higher education, professional and vocational advancement, personal development, and cultural enrichment.

Through its Center for Continuing Education, JCC administers a diversified program that includes professional certifications, job-related skill development, and personal enrichment opportunities. Modestly priced seminars and workshops of varying lengths are open to people of all ages. Programs are offered year-round at times convenient for adults. Numerous online courses and programs are also available.

In addition to regularly scheduled public offerings, the Center for Continuing Education at JCC’s campuses and extension centers administers numerous programs designed to serve specialized groups in the community. These are offered in cooperation with and often at the request of industries, governmental agencies, businesses, labor, and professional associations.

**Continuing Education Units**

JCC offers Continuing Education Units (CEUs) for approved professional credit-free courses offered through the Center for Continuing Education. The CEU is a nationally recognized unit of measure for professional development used for career advancement. Each CEU is defined as 10 contact hours in an organized continuing education experience.

**Customized Training**

The Center for Continuing Education acts as a liaison between JCC and area businesses bringing both college and community resources together to meet the needs of business for training and technical assistance. Training needs assessment and customized skills development programs are provided to employees at all levels from entry to upper management. Technical assistance is available to help companies improve processes to remain competitive. Staff also assists companies to secure grant funds to support costs for training and technical services.

**Extension Centers**

JCC offers credit and credit-free courses at its extension centers. Registration for these classes is by phone or by visiting the sites. The North County and Warren centers have “full service” offices where students can receive counseling, financial aid information, placement testing, and register for any JCC course regardless of where it is offered. Customized training is provided at both locations. Small business counseling services are available at the North County Center.

**Kids’ College**

Courses oriented to youth are available through the Kids’ College program. Individual courses and an all-day camp are available, depending on the site.

**Wee College**

Wee College, designed for ages 5-7, provides programs and activities during the summer.

**Personal and Professional Enrichment Courses**

Throughout the year JCC offers many short, non-credit courses in subject areas that include professional development, customer service, computer applications, basic skills, technology, and personal enrichment. Online courses are also available. Contact the Center for Continuing Education at any of its locations or visit www.sunyjcc.edu/continuing-education for a current course listing.

**Small Business Assistance**

The Small Business Development Center provides management and technical assistance to start-up and small businesses. For additional information contact the SBDC at 1.800.522.7232 or visit www.sunyjcc.edu/continuing-education/small-business-development-center.

**Upper Division Courses**

**The Communiversity at JCC**

The Communiversity at JCC is an alliance of regional colleges and universities making select associate, bachelor’s, and master’s degrees accessible to individuals in Chautauqua and Cattaraugus counties while providing the caring environment and individualized attention that has been a hallmark of JCC for over 60 years. Programs are delivered online, through interactive television, or face-to-face at a JCC location.

Current Communiversity programs and partners include:
- Alfred State College: B.B.A. in technology management, B.S. in nursing, A.A.S. in court reporting
- Edinboro University: B.A. in criminal justice
- Empire State College: bachelor’s degrees in 11 areas of study
- Houghton College: B.S. in management
- Medaille College: B.B.A. in information systems

Complete information is available at www.sunyjcc.edu/communiversity.
Note: The term “military service” means full-time active duty in the Army, Navy (including Marine Corps), Air Force, Coast Guard of the United States, or qualifying National Guard duty during a war, other military operation, or national emergency as defined in Section 5 of the Higher Education Relief Opportunities for Students (HEROES) Act (Public Law 108-76).

Enlistment under a delayed enlistment plan does not constitute “full-time duty” until the student is required to leave school on the effective date of active duty as stated in the student’s or family member’s orders.

A student who is a member of a National Guard, Army, Navy, or Air Force Reserve unit who is not called up for duty as defined above, is entitled to a refund only, if in the judgment of the college’s business office, the student is unable to attend classes due to hardship beyond the student’s control and the student has made bona fide efforts to permit continued class attendance. Documentation of membership on active duty in the military service shall be provided to and retained by the business office as part of the appeal process. In the event that a refund is granted to a student in National Guard or reserve status, documentation of the reasons for such action shall be in writing and retained by the campus.

Military personnel withdrawing from any program or term because of changes of assignment beyond their control and upon proper certification of such change from a base education service officer or other appropriate military official shall be deemed to have incurred no liability for tuition and fees due from the student, as opposed to tuition and fees paid by the federal government on the student’s behalf (to which federal regulations on return of such funds apply.)

A student who is called for short-term deployment should discuss how course work will be completed with his/her faculty before leaving for duty. The option of an I (incomplete) grade, which is given at the end of the semester, can be discussed at this time. The student must not be forced to withdraw from the course or be given a failing grade because of the time missed. The student has the option to withdraw from the course without financial penalties.

Credit/Fail

Students may elect to take one course per semester graded on credit/fail basis (in addition to those courses normally graded on a credit/fail basis). No more than 16 credit hours taken on a CR/F basis may be applied toward an associate degree. Students should avoid using the CR/F option in their major field of study. The student must inform the registrar’s office at the beginning of each semester of his/her desire to take the course on this basis. Upon the completion of the proper form, the registrar will notify the instructor of the student’s choice.

The student will have a period of up to 33% of individual class meetings to decide on the credit/fail option. The student retains the right to return to the standard letter grade system in that course at any time up to and through 57% of individual class meetings.

The “F” grade is reflected in the computed grade point average while the “CR” grade is not.

General Policies

Courses and programs listed in this catalog are offered whenever there is evidence of sufficient student enrollment. Since some courses require highly specialized faculty and facilities, scheduling may be limited by their availability.

Students are considered to be full-time when they are registered for 12 or more credit hours per semester. Students will be permitted to register for more than 19 credit hours only with special permis-
sion of the vice president and dean of academic affairs, the vice president and dean of student development, the vice president and dean of the Cattaraugus County Campus, or the appropriate assistant academic dean.

A credit hour is normally equivalent to one hour per week of lecture or two hours or three hours per week of laboratory/studio work taken during a 16-week semester (inclusive of final exam work). Students are advised to plan an average of two hours of preparation per week for each credit hour of course work. Students registered for 12 or more credit hours are strongly urged not to consider outside employment requiring more than 15 hours per week.

Sophomore status has been achieved when the student has accrued 26 college level credits.

Issuance of Official Transcripts
At any time, a student may request in writing that the registrar’s office send an official transcript of his/her record directly to another college or to a prospective employer. All official transcript requests must be signed by the student. Students may request unofficial copies of their transcripts for personal use at any time from the registrar’s office. Allow up to 48 hours for processing of an official transcript. Students requesting six or more transcripts at one time should allow at least five business days for processing. No fee is charged for transcripts.

Repeating a Course
When a student wishes to raise his/her grade and average by repeating a course, his/her highest grade will be used in the computation of his/her grade point average. Only the number of credit hours offered in that course for one particular semester will be used in the computation of total hours and GPA for graduation. Repeating coursework may impact financial aid eligibility. Students who anticipate repeating a course should check with the financial aid office.

Senior Tuition Waivers
The chancellor of the State University of New York has delegated to the campus president authority to determine who may attend courses as auditors and to establish rules and regulations concerning such course auditors.

JCC’s senior tuition waiver procedure is consistent with the established SUNY rules and regulations concerning course auditors. Protocol for senior audits is as follows:
• Senior audits must be 60 years old or older.
• They may begin registering the day the class begins.
• Senior audits are accomplished on a space available basis. In some cases, instructor permission cards may be used.
• No tuition is charged, but the auditor must pay all fees associated with the course(s). The fees are non-refundable.

While senior citizens are permitted to audit courses on a space available basis, persons taking the course for credit will receive priority. Senior auditors will not receive college credit or formal recognition nor will they be required to meet the requirements of the course.

Grading
Grading System
The following grading system is in effect at the time of publication of this catalog:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Meaning</th>
<th>Quality Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Excellent</td>
<td>4.0</td>
</tr>
<tr>
<td>B+</td>
<td>Above Average</td>
<td>3.5</td>
</tr>
<tr>
<td>B</td>
<td>Above Average</td>
<td>3.0</td>
</tr>
<tr>
<td>C+</td>
<td>Average</td>
<td>2.5</td>
</tr>
<tr>
<td>C</td>
<td>Average</td>
<td>2.0</td>
</tr>
<tr>
<td>D+</td>
<td>Below Average</td>
<td>1.5</td>
</tr>
</tbody>
</table>

D  Below Average  1.0
F  Failure    0.0
I  Incomplete  0.0
CR  Credit
W  Withdrawal
X  Administrative Withdrawal
AU  Audit

Other historic grades may appear on a student’s transcript. Contact the registrar’s office for an explanation of any grade that does not appear in this catalog or on the transcript legend.

AU - Audit - 0 Quality Points (Q.P.) A student wishing to audit a course must obtain permission from the instructor to do so. Students may enroll to audit a course at the time of registration or change from regular grading system to audit by the last day of the fifth week (33% of individual class meetings) of the semester with permission of the instructor. The instructor sets the expectations for the audit grade. Generally, the student is expected to attend all classes, but is not required to complete examinations, papers, and other class projects. No credit is awarded for the audit grade and the grade of AU will be recorded on the student’s transcript. An X grade can be assigned if the student fails to meet the instructor’s expectations. Audit forms are available at the registrar’s office on the Jamestown Campus, the Counseling and Career Planning Center on the Cattaraugus County Campus, and at JCC’s extension sites.

CR- Credit (see Credit/Fail Policy) - 0 Q.P.
I - Incomplete - The “I” grade is a student initiated grade subject to the approval of the instructor, taking into account the circumstances under which the Incomplete is requested. Arrangements to make up incompletes will be contracted between students and faculty, and the student must complete course requirements within a mutually agreed upon time, which may not exceed one calendar year. Failure to do so will result in an “F” grade. This student/faculty agreement must take place and be filed with the registrar prior to the date listed on the student instructional calendar under “Grades Due.”

Students are not granted an incomplete grade in lieu of an “I” grade. The intention of the “I” grade is to allow for students to complete course requirements after the conclusion of a semester without attending subsequent offerings of the same course.

W - Official Withdrawal - 0 Q.P. - Students may officially withdraw from a course up to and through 66% of individual class meetings and receive a “W” grade. During a summer session, a student can withdraw through the last day of instruction and receive a “W” grade. All students have the privilege, through appropriate procedure (see below), of totally withdrawing from the college through the last day of instruction of the current semester and receiving a grade of “W.” A student may not withdraw from a course which has already ended.

X - Administrative Withdrawal - 0 Q.P. - The administrative ‘X’ grade will be used for financial dismissals, third week no-shows, non-compliance health dismissals, and failure to complete an ‘AU’ course. For third week no-shows, if a student returns to class, faculty will have the option of changing the ‘X’ to a standard grade by the end of the semester. A full-time student who receives all ‘Xs’ must reapply for admission to JCC.

Total Withdrawal - A full-time student desiring to withdraw totally from JCC may officially do so through the counseling center (without seeing each faculty member separately). A “W” grade and official withdrawal date will be recorded on the transcript.

Without withdrawing officially, an “F” grade will be recorded. Any full-time student who officially withdraws is withdrawing from JCC and must reapply for admission should he/she desire to return. Withdrawal forms are available online at www.sunyjcc.edu or at the registrar’s office on the Jamestown Campus, the Counseling and Career Planning Center on the Cattaraugus County Campus, and at JCC’s extension sites.
Grade Appeal
A student who believes that he/she has been graded unjustly or who wishes to present evidence of extenuating circumstances may appeal to the academic standings committee for review of his/her case within one year after the grade has been assigned. Grade appeals must first be considered at the instructor and division levels. Following a thorough review of all written documentation, it is at the committee’s discretion to request a meeting that includes the student and applicable members of the faculty and college.

Grade Point Average
Each student’s academic standing is based on the average of all grades earned, as determined by his/her Grade Point Average (GPA). The GPA is determined by dividing the total number of quality points by the number of credit hours undertaken in courses for which a letter grade has been assigned. No quality points are given for courses in which a grade of CR is received, although credit hours for such courses will be included in the compilation of hours needed for completion of degree or certificate requirements.

Neither credit hours nor quality points are earned for courses in which the grade “I” is recorded. Grades of “I” (incomplete) must be removed by the end of one calendar year, or earlier if specified by the instructor, or they will be replaced by an “F”. Neither credit hours nor quality points are earned for courses in which grades of I, AU, W, or X are recorded.

Academic Standing
The academic policies of the college are carried out by the academic standings committee which meets regularly to review student progress, recommend policy changes, and review students for probation or dismissal. Satisfactory Academic Progress
Because graduation from JCC requires 60 semester hours with a cumulative grade point index of 2.00, the academic standings committee directs the registrar to identify students who have attempted six credit hours or more and have a cumulative grade point average or number of hours completed which is less than those shown on Chart A on page 17.

Any student identified as not meeting these minimal standards will be considered as not making satisfactory progress and will be placed on academic or progress probation. Academic probation is deficiency in cumulative grade point average. Progress probation is deficiency in hours earned only. Academic probation supersedes progress probation. For students enrolled in credit courses spring 1997 and thereafter, whose last hour attempted at JCC were five or more years ago, the W, X, NC, or bankruptcy hours earned five or more years prior to the semester being reviewed will be excluded for progress probation. Once identified, these hours are permanently removed from progress probation consideration.

A student on academic probation will continue to be on academic probation or may be dismissed if either the semester GPA, or the cumulative GPA, remains below the required standards in subsequent semesters. Dismissal is at the discretion of the academic standings committee, which will consider the status of each student based upon current grades and academic history. A student on progress probation will continue to be on progress probation as long as hours earned remain below the required standards in subsequent semesters.

Students placed on progress probation because of a deficiency in “hours earned” have the opportunity to appeal their probation status to the academic standings committee.

Students have the right to appeal any academic standings decision. First, they may appeal in writing to the academic standings committee within a period of time specified in a letter that is sent to students when a decision is rendered. Following a thorough review of all written documentation, it is at the committee’s discretion to request a meeting that includes the student and applicable members of the faculty and college. After the committee decides on the appeal, students have the right to further appeal to the dean of academic affairs.

The first time a student is placed on either probation, the student retains federal financial aid eligibility. However, if the student fails to meet satisfactory quality point average standards or hours earned standards a second time, eligibility for federal financial aid is lost until the student can again demonstrate satisfactory academic progress in both areas. Students who lose financial aid eligibility may, under special circumstances, receive a waiver in order to receive federal aid. Information about the waiver process can be obtained in the financial aid office.

Upon review of records, the committee reserves the right to waive probation status when it deems the circumstances warrant such a waiver.

Warning Status
Warning status is defined as:

<table>
<thead>
<tr>
<th>Credit hours attempted</th>
<th>GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category I</td>
<td>1-23</td>
</tr>
<tr>
<td>Category II</td>
<td>24-41</td>
</tr>
</tbody>
</table>

A student will be warned if his/her semester or cumulative grade point average falls in the above range for a given semester.

Warning status denotes students who are above but close to the college’s minimum standards for satisfactory academic progress (see Satisfactory Academic Progress/Probation chart on page 17).

Appeal of Dismissal
A student who believes he/she has been dismissed unjustly or who wishes to present evidence of extenuating circumstances which may have contributed to his/her dismissal may appeal directly to the academic standings committee for a review of his/her case. Such appeal must be made in writing to the committee one week after notification of dismissal has been received. Following a thorough review of all written documentation, it is at the committee’s discretion to request a meeting that includes the student and applicable members of the faculty and college. A student readmitted to JCC is given one semester in which to satisfy the college’s policy of academic progress. Readmitted students may be limited in the number of credits in which they are permitted to enroll, and may also be required to participate in counseling or other educational assistance programs.

Imputed Credit
The faculty and administration have determined that some courses listed in this catalog may not be counted toward degree programs offered by JCC. These are developmental courses for students who need to prepare themselves for college level work. Courses in this category carry imputed credit and are designated as IC. Courses carrying imputed credit will count toward financial aid requirements.

The following imputed grade designations were in place at the time of the publication of this catalog:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Meaning</th>
<th>Quality Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>IA</td>
<td>Excellent</td>
<td>0.0</td>
</tr>
<tr>
<td>IB+</td>
<td>Above Average</td>
<td>0.0</td>
</tr>
<tr>
<td>IB</td>
<td>Above Average</td>
<td>0.0</td>
</tr>
<tr>
<td>IC+</td>
<td>Average</td>
<td>0.0</td>
</tr>
<tr>
<td>IC</td>
<td>Average</td>
<td>0.0</td>
</tr>
<tr>
<td>ID+</td>
<td>Below Average</td>
<td>0.0</td>
</tr>
<tr>
<td>ID</td>
<td>Below Average</td>
<td>0.0</td>
</tr>
<tr>
<td>IF</td>
<td>Failure</td>
<td>0.0</td>
</tr>
<tr>
<td>II</td>
<td>Imputed Incomplete</td>
<td>0.0</td>
</tr>
<tr>
<td>ICR</td>
<td>Imputed Credit</td>
<td>0.0</td>
</tr>
<tr>
<td>IW</td>
<td>Imputed Withdrawal</td>
<td>0.0</td>
</tr>
</tbody>
</table>
Graduation Requirements
To graduate with an associate degree from JCC all students must have earned a cumulative average of 2.0 or better in at least 60 credit hours of appropriate coursework as described by the Board of Regents of the State of New York and must have met the specific requirements of a degree program in place at the time of their first enrollment or any subsequent set of requirements. Requirements for subsequent degree requirements are based on matriculation date.

If a student transfers in appropriate credits toward an associate degree, a minimum of 30 JCC credits is required to complete a degree. Students graduating in a certificate must have earned a cumulative average of 2.0 or better in at least 60 credits.

If a student transfers in appropriate credits toward a certificate, a minimum of 15 JCC credits is required to complete a degree.

A student who is nearing completion of degree or certificate requirements must make formal application for the degree or certificate by completing the appropriate form at the registrar’s office. Failure to do so may result in not being included in the final review of candidates and in the awarding of degrees and certificates at commencement exercises.

Students follow the requirements that were in place at the time of their first matriculation or any subsequent set of requirements. All graduates of JCC who entered the college: 1) fall 1982 through spring 1991, must have successfully completed ENG 1530 (three credits), and ENG 1540 or ENG 1560 (three credits); 2) fall 1991 through spring 1996, must have successfully completed ENG 1530 (three credits), ENG 1540 (three credits), and MAT 1510 or above (three credits); 3) fall 1996 through spring 2007, must have successfully completed ENG 1530, ENG 1540, and any non-imputed, credit bearing mathematics course; and 4) fall 2007 and later, must have successfully completed six credit hours of non-imputed credit bearing English, as defined in the degree program. They must also successfully complete any non-imputed, credit bearing mathematics course.

Earning Additional Degrees and/or Certificates
A student interested in earning a second or subsequent degree must complete the admissions reapplication online at www.sunyjcc.edu. Students pursuing additional degrees will follow the degree requirements for the new degree program as listed in this catalog at the time of matriculation into the new program. For each additional degree, students must complete the minimum number of credit hours listed in the table below with an overall GPA of 2.0 or better. Additional certificates are earned upon the completion of the certificate requirements. For each additional degree or certificate, a $20 fee is charged to cover the cost of additional diplomas and diploma covers.

<table>
<thead>
<tr>
<th>Degree</th>
<th>Minimum hours and GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Second degree</td>
<td>90 hrs. with an overall GPA of 2.0 or better</td>
</tr>
<tr>
<td>Third degree</td>
<td>120 hrs. with an overall GPA of 2.0 or better</td>
</tr>
<tr>
<td>Fourth degree</td>
<td>150 hrs. with an overall GPA of 2.0 or better</td>
</tr>
</tbody>
</table>

Replacement Certificate, Degree Diploma Charges
To replace an original diploma for a certificate and/or degree, these charges apply: $5, diploma only, and $10, diploma and cover, plus a mailing charge.

JCC General Education Requirements
To be successful in work and life, graduates need a wide range of skills and knowledge in addition to those required for their chosen specialization. General Education equips students to think critically, communicate effectively, understand ideas that shape society, and develop a solid foundation for lifelong learning. General Education requirements are the foundation for all degrees offered at JCC.

Core Elements
JCC’s program of general education includes several distinct and important elements. Graduates of JCC must meet the following general education requirements in order to receive a degree:

- Completion of English 1530 (3 credits).
- Completion of three additional credits of college-level writing as specified for each degree.
- Completion of three credits of college-level mathematics.
- Completion of at least three additional hours of math/science beyond the required college-level math course.
- Completion of six credits of social sciences.

Graduates who matriculate for the first time beginning fall 2008 or thereafter are required to complete at least one course that has been designated as incorporating study of values, ethics and diverse perspectives (VEDP). This skill involves developing an awareness of the diversity of religious, political, ethical, and social perspectives in our society and world.

Graduates who matriculate for the first time beginning fall 2010 or thereafter are required to include in their degree programs at least one course that has been designated as incorporating study of scientific reasoning (SR). Scientific reasoning involves the ability to understand and appreciate the methods scientists use to explore natural and/or social phenomena, including observation, hypothesis development, measurement and data collection, experimentation, evaluation of evidence, and employment of mathematical analysis.

- Appropriate liberal arts and sciences courses for the degree sought, which may include courses listed above, distributed according to the chart on page 37:
  - Associate in Arts - minimum of 48 credit hours of liberal arts and sciences.
  - Associate in Science - minimum of 30 credit hours of liberal arts and sciences.
  - Associate in Applied Science - minimum of 20 credit hours of liberal arts and sciences.

The liberal arts and sciences requirements for the A.A. and A.S. degrees are intended to provide both breadth and depth in the liberal arts and sciences. The course of study for the A.A.S. degrees includes a balance between courses related to the career areas and the liberal arts and sciences.

VEDP and SR courses can be found in the master schedule of courses issued each semester and may be identified by using the list of attribute types when searching for courses online at https://banner.sunyjcc.edu.

Additional Competencies
In addition to the requirements listed above which are incorporated into specific courses, the college also expects each degree holder to demonstrate several other competencies which are infused across courses.

Information literacy/management skills - Students are expected to find, understand, evaluate, and use information in various forms. These skills are acquired in a variety of ways and in a range of courses.

Critical reasoning - Students will identify, analyze, and evaluate arguments as they occur in their own and others’ work and will learn to develop well-reasoned arguments.

Technological competency appropriate to the discipline - This competency requires students to possess the knowledge and skills
to successfully and efficiently apply computer and other discipline-
specific technology as individuals, students, employees, and
citizens. Some elements of technological competency are infused
across courses; in addition, each program of study determines what
additional technological skills are essential for graduates of its pro-
gram area, and incorporates those skills into required coursework.

SUNY General Education Requirements

Although SUNY General Education requirements are not
required of all JCC graduates, JCC students planning to transfer to
SUNY upper division programs will need to acquire coursework
that spans as many of the SUNY General Education categories as
possible. Students pursuing A.A. and A.S. degrees in particular will
find it possible to complete courses from at least seven of the SUNY
General Education categories within JCC degree requirements.
Consult the master schedule or https://banner.sunyjcc.edu for the
current list of approved SUNY General Education courses.

Writing Across the Curriculum

JCC’s faculty have long understood the mutual relationship be-
tween knowing and writing. This relationship is the basis for JCC’s
Writing Across the Curriculum policy, which calls for instructors to
use writing as a teaching tool in courses from all disciplines, includ-
ing those in nursing, psychology, Spanish, criminal justice, econom-
ics, and occupational therapy assistant, as well as in such traditional
writing courses as literature and philosophy.

Teachers respond to a student’s writing in many ways: face-
to-face conferences, referrals to the tutoring center, creation of
peer-editing sessions or discussions in class, and marginal notes.
Revision is taught as a way to reexamine the subject or to deepen
and enrich one’s understanding and expression.

JCC’s Writing Across the Curriculum policy commits students
and faculty to the most authentic and valuable kind of higher educa-
tion.

Awards & Honors

Dean’s List, Other Honors

In February and June of each year, the dean’s lists are issued to
recognize full- and part-time students who have achieved outstanding
academic success. The names of all full-time students who
have earned a GPA of 3.5 or better in 12 or more credit hours (not
counting imputed credits) of work completed during the preceding
semester are included on the dean’s list. The names of all part-time
students who have earned a GPA of 3.5 or better in 6-11 credit
hours of work completed during the preceding semester are in-
cluded on the part-time student dean’s list. CR and imputed credits
are excluded.

At commencement, the JCC board of trustees honors outstanding graduates who have been full-
or part-time students and who have achieved the highest scholastic standings in each of the three associ-
ate degree areas with 60 or more credits earned at JCC. Students
who have earned highest honors (4.0 GPA), high honors (3.5 to 3.99
GPA) and honors (3.25 to 3.49 GPA) in all courses at JCC have this
noted on their transcripts.

JCC also recognizes special achievements in scholarship, athlet-
ics, service, and leadership at annual awards ceremonies. Tradition-
ally, about 100 awards are presented at these events.

Phi Theta Kappa

Each year a number of students are nominated for membership
in Phi Theta Kappa, a national honor society for two-year colleges.
For many years Phi Theta Kappa has been the most prestigious
national honors group to which a community college student can
belong. Nominated students must have a GPA of at least 3.5, com-
pleted at least 15 credit hours which are applicable toward a degree
and contribute to a student’s GPA, and be recommended by at least
two faculty members.

Transfer Information

A majority of JCC graduates transfer as juniors to four-year col-
leges and universities throughout the United States. The Associate
in Arts and Associate in Science degrees are designed for transfer
and represent the first half of a baccalaureate education. While As-
sociate in Science degrees were not originally intended for transfer,
some are now transferable.

Students interested in transferring to another college or univer-
sity after completing a degree program at JCC are urged to engage
early in a planning process with a JCC counselor or advisor. Most
four-year schools require a minimum cumulative grade point aver-
age of 2.0 (C), and some schools and degree programs require a
higher average. Students should check the requirements of transfer
institution(s) prior to application.

During the past several years, graduates of JCC have successfully
transferred to colleges and universities including:

- Alfred University, Allegheny College, Armstrong Atlantic State,
  Becker College, College of Charleston, Continental School, Da-
  men College, Dobson University, Edinboro University, Embry-Rid-
  dle Aeronautical University, Erie Community College, Farmingdale
  State University, Florida Atlantic University, Franklin University,
  Gannon University, Grove City College, Hannibal-LaGrange Col-
  lege, Hilbert College, Houghton College-PACE, Indiana University
  of Pennsylvania, Ithaca College, Lake Erie College of Osteopathic
  Medicine, Liberty University, Loyola Marymount University, Mer-
  cyhurst College, Montclair State University, New York University-
  Stern School of Business, Niagara University, Ohio University,
  Pennsylvania State University-Behrend, Simmons Institute of
  Funeral Service, St. Bonaventure University, SUNY Albany, SUNY
  Binghamton, SUNY Brockport, SUNY Buffalo State, SUNY Cort-
  land, SUNY Empire State College, SUNY Environmental Science
  and Forestry, SUNY Fredonia, SUNY Geneseo, SUNY Oneonta,
  SUNY Plattsburgh, SUNY Potsdam, SUNY Stony Brook, SUNY
  University at Buffalo, Temple University, University of Maryland,
  University of North Carolina, and University of Pittsburgh.

Transfer Agreements

JCC has signed specific transfer articulation agreements with
numerous four-year colleges and universities for many of its degree
programs. The purpose of these agreements is to identify JCC
courses that meet degree requirements at the transfer institution, and
to facilitate the transfer process.

Most of the agreements guarantee acceptance of JCC students
who meet requirements specified by the various four-year schools.
Most also guarantee junior status and the opportunity to complete
a bachelor’s degree with four semesters at a transfer school, and
several are dual admission agreements that simultaneously admit
a student to JCC and to a bachelor’s, master’s, or doctoral degree
program at the transfer school.

These transfer agreements are too numerous and too detailed to
include in this catalog, and new agreements are negotiated each
year. All transfer agreements are on file in the counseling centers at
the Cattaraugus County and Jamestown campuses, Warren Center;
and in the office of the dean of academic affairs. Divisional offices
maintain files of transfer agreements appropriate to their disciplines,
and all transfer agreements are available online at http://www.
sunyjcc.edu/transfer/agreements.

Students are encouraged to examine those agreements in which
they have a specific interest. Transfer agreements are updated on
a regular basis to reflect changes made in the curriculum at JCC
or the transfer institutions. Transfer counselors at all JCC sites are
knowledgeable about these agreements and are fully prepared to
assist students in the transfer process.

JCC also has “one-plus-one” arrangements for transfer to several two-year degree programs at the SUNY College of Technology at Alfred (Alfred State) and the SUNY College of Environmental Science and Forestry - New York State Ranger School at Wanakena.

Academic Information

Academic Statistics

Adjunct Faculty

Of the total credit hours taken by students at JCC in fall 2011, 42.6% were taught by full-time faculty. The other 57.4% were taught by adjunct faculty.

Graduate Job Placement

A total of 64% of 2009-2010 JCC graduates with Associate in Applied Science degrees responding to a survey indicated they were employed full-time. Of those responding, 70% said their current occupation is highly related to their JCC degree area and 100% said JCC prepared them for their positions in the workforce (71% indicated “very well,” 29% noted “adequately”).

In the same survey, 94.3% of full-time transfer students responded that JCC prepared them for continuing their education. Of the respondents, 56.6% indicated JCC had prepared them “very well” and 37.7% said “adequately.” Also, 90.5% of the full-time transfer students are studying in a program related to their JCC program.

Retention and Graduation Rates

Current retention and graduation rates are published in the master schedule.

Special Academic Programs

Developmental Studies Program

Full-time students who place into the Developmental Studies Program will find a learning community to meet their unique needs. Selected English, mathematics, and human development faculty work closely with Developmental Studies students to help them attain the skills they need to succeed in college. Students will also find support in the connections they make with other students in the program.

College Connections: College Courses in High Schools

As part of its College Connections program, JCC offers courses in over 40 area high schools. High school students who qualify for the program are able to choose from among several courses that are completed for both high school and college credit. To date, thousands of students have received college credits prior to high school graduation. College Connections credits may be used at JCC or easily transferred to most other colleges and universities.

Courses are taught by high school teachers who meet JCC’s adjunct instructor qualifications. All courses are offered in high schools throughout Chautauqua, Cattaraugus, and Allegany counties, and some are available over the BOCES Interactive network as distance learning (DL) courses. JCC faculty oversee course development and ensure that a quality, college-level educational experience is provided. The program is accredited by the National Alliance of Current Enrollment Partnerships (NACEP).

For additional information, contact the College Connections program director.

College-Level Examination Program (CLEP)

CLEP is a national program of credit-by-examination sponsored by the College Entrance Examination Board. CLEP exams allow a person to receive college credits for knowledge gained in a wide range of subjects.

The 33 CLEP exams cover material that is taught in introductory level courses and specific subject areas at many colleges and universities across the country. Each institution determines the CLEP exams for which credit will be awarded. A list of the exams for which JCC awards credit is available in the Jamestown Campus admissions office and the counseling center on the Cattaraugus County Campus. Information on the exact number of credits that may be earned under CLEP and their transferability is also available from these offices.

CLEP tests are administered on a regularly scheduled basis. Information on time and place is available through JCC’s continuing education office on the Jamestown Campus.

Honors Program

JCC’s honors program provides a challenging curriculum, supportive services, and special enrichment opportunities for highly motivated students who have demonstrated their academic ability. Honors students work in a community of scholars, enrolling in honors-designated courses, engaging in co-curricular activities, and completing fieldwork that synthesizes academic and life experiences.

Honors courses may be targeted and reserved exclusively for honors students, or they may be “blended” in which honors students participate with other students while engaging in special activities designed to provide additional rigor and reward.

Program Eligibility and Maintenance Requirements

Students entering JCC for the first time with fewer than 12 college credits must have a high school grade point average of 85% or better, must be eligible to take college-level English and MAT 1540, and must have a reading score of 80 or better. Students with 12 or more college credits who are eligible to take college-level English and MAT 1540 and have a cumulative GPA of 3.5 or better are eligible for the program. Those required to take placement tests must do so before they can be considered fully eligible for the honors program.

To stay in the program, a student must earn a cumulative grade point average of 3.0 or better. Students will receive an honors designation on their transcripts if they do the following during their time at JCC:

• maintain and graduate with a cumulative grade point average of 3.0 or better,
• complete a minimum of nine hours of honors-designated coursework,
• complete at least one honors fieldwork or service-learning course, and
• attend at least four honors engagement activities.

Honors students are encouraged to enroll in one honors-designated course each semester during their JCC experience, and it is the responsibility of the student to monitor progress towards these requirements. A student who opts not to enroll in an honors-level course for two or more consecutive semesters (excluding summer) will no longer be considered an honors program participant and will relinquish program benefits.

Online Courses and Degree Opportunities

JCC is a member of a statewide consortium of campuses that offers graduate and undergraduate online courses called the SUNY Learning Network (SLN). SLN’s student-centered approach to teaching and learning eliminates the constraints of time and location for students. It utilizes an asynchronous learning model, which means students and teachers do not have to be online at the same time; rather, they logon when it is convenient for them.

Class activities are the same: students read course materials, write papers, do research, and communicate with their instructor and fellow students. What is unique is that courses are designed so that you can do everything online. The learning is both interactive with faculty and collaborative with other students. Even more, a
wealth of resources is readily available online. JCC offers six degrees and three certificates online:
A.A.S. Business - Business Administration
A.S.-Computer Science
A.S.-Computer Information Systems
A.A.S.-Information Technology
A.S.-Individual Studies
A.A.S.-Individual Studies
Certificate-Entrepreneurship
Certificate-Information Technology
Certificate-Individual Studies

Online courses are available in over 19 discipline areas. Students need not be enrolled in a degree program to take online courses. For more information regarding online courses, visit www.sunyjcc.edu/online.

Cooperative Education
Students who wish to be paid for work experience while attending JCC may earn one credit hour per semester for a total of no more than four credits. A student works with the coordinator of cooperative education who meets with him or her regularly and supervises a paper the student submits each semester. (See cooperative education course descriptions.)

Independent Study
A student who wants to participate in an independent study project must make arrangements directly with a faculty member who agrees to serve as his/her project advisor. With the assistance of the advisor, the student establishes a proposal covering the work and goals to be accomplished. The number of credits to be earned for completion of the project is determined and the appropriate assistant dean approves the project. The final grade is determined by the advisor. Credit for a single project is limited to 1-3 credit hours, and no more than six credit hours in independent study earned at JCC may be applied toward an associate degree.

Interdisciplinary Studies
Courses which cross the normal boundary lines between disciplines are listed under the common heading of Interdisciplinary Studies (INT). These courses draw upon the faculty from various academic areas and are often team taught. They are wide-ranging in their approach to important topics and are considered suitable electives in either a transfer or career program.

International Education and Study Abroad
JCC students have the opportunity to study abroad through the college’s membership in the College Consortium of International Studies (www.ccisabroad.org). The International Education and Study Abroad Program is open to sophomore students with a minimum GPA of between 2.5 and 3 (depending on the program) and to freshmen with exceptional academic credentials. Students may earn 15 credits while studying abroad, which are counted toward their degrees at JCC.

Students should consult with both financial aid and the coordinator of global education to determine the appropriate program in which to register. CCIS offers programs in North and South America, Africa, Europe, and Asia. Programs consist of courses taken at a college or university in the host country and credit hours earned vary by program and sessions.

Students can choose courses in the humanities, social sciences, and business as well as internships in service professions. Classes are conducted in English and other languages. Students may take a conventional semester abroad, studying at a university, or they may engage in service learning for 20 hours per week while attending a university abroad. Financial aid for which a JCC student is eligible applies to these programs also. Contact the coordinator of the study abroad program for application deadlines.

Details about study abroad opportunities are available from the coordinator of global education or the vice president and dean of academic affairs at the Jamestown Campus.

Internships
Internships are available to students who wish to acquire work experience related to a particular field of study while attending JCC.

Internships are intended for full-time sophomores who have at least a 2.0 GPA. (Disney internships require a minimum 2.5 GPA and successful completion of the application process.) Some certificate and degree programs require internships; students in other programs have the option of completing an internship to help them gain valuable work experience. Students may earn up to six college credits for internships and must fulfill 135 hours of work along with a satisfactory evaluation for each three credits awarded.

Students who wish to arrange an internship should speak to the assistant dean and/or designated faculty of the desired academic field or the director of academic initiatives. The faculty member involved with the internship will work with the business or agency and with the student to develop specific learning objectives. A sample of internship placement sites can be found at www.sunyjcc.edu/internships. Although many internships are non-paid work experiences, students may receive remuneration for the work. See course descriptions and eligibility at www.sunyjcc.edu for additional details.

Life Experience Credit Assessment
JCC believes that valuable and meaningful learning takes place for the individual in his/her personal world. Through work, training, and other experiences, learning occurs which can be complementary to short- or long-term educational goals. It is the desire of the college to help the individual focus on his/her life experiences and translate them into college credit if appropriate.

The assessment process is one of deciding on an educational objective, determining how the life experience to be evaluated supports this goal, and developing a portfolio to substantiate the involvement and learning from the experiences. The portfolio is then evaluated by JCC faculty to determine if and what credit can be awarded. Military experiences can be considered for life experience credit.

Additional information may be obtained at the counseling centers on the Jamestown and Cattaraugus County campuses and on JCC’s website.

Off-Campus Study Programs
Credit earned through a variety of non-traditional, off-campus study programs may be applied toward the requirements for an associate degree from JCC or may be used in combination with credit earned at JCC for fulfilling the requirements for higher academic degrees. Information regarding these programs, which include the New York External Degree Programs and Empire State College, is available at JCC’s Center for Continuing Education.
Degrees and Certificates

JCC, in affiliation with the State University of New York (SUNY), offers three types of degree programs:

Associate in Arts (A.A.)
Associate in Science (A.S.)
Associate in Applied Science (A.A.S.)

The college also offers certificate programs which are described in this catalog.

Associate in Arts (A.A.)

JCC is authorized to offer the Associate in Arts (A.A.) degree in Humanities and Social Science. The course of study for each consists primarily of courses in the liberal arts. The A.A. degrees are primarily intended to prepare students for transfer to a four-year college or university to enter a bachelor's degree program in a specialized area of the humanities and social sciences.

JCC graduates have successful transfer experiences in such disciplines as art, anthropology, criminal justice, economics, English, French, history, music, philosophy, psychology, secondary education, sociology, and related areas. JCC does not offer a major or specific degree in any of the above disciplines with the exception of art and music.

To earn the A.A. degree, a minimum of 48 credit hours of study must be taken in the liberal arts and sciences. These 48 hours must include both a breadth and depth in the liberal arts and sciences. The breadth requires a minimum of nine credit hours in each of three categories: humanities, mathematics and science, and social sciences. The depth requires a minimum of 24 credit hours in one of these three categories. The general degree requirements for the A.A. degrees are outlined in the program section of this catalog.

Associate in Science (A.S.)

JCC is authorized to award Associate in Science (A.S.) degrees in biotechnology, business administration, communication, computer science, criminal justice, engineering, fine arts, human services, individual studies, Liberal Arts & Sciences: Education, Liberal Arts & Sciences: Math/Science, Media Arts, and Physical Education Studies.

Intended as a transfer degree, the A.S. degree programs offered by JCC are designed to prepare students to enter a bachelor's degree program at a four-year college or university.

The A.S. degree programs provide a course of study which demonstrates a balance between the liberal arts and sciences and those courses related to specific professions. Students earning the A.S. degree are prepared to enter Bachelor of Science (B.S.) degree programs in such areas as art, engineering science, business, chemistry, biology, mathematics, geology, physics, computer science, communication, education, music, and human services.

To earn the A.S. degree, a minimum of 30 credit hours of study must be taken in the liberal arts and sciences and must include both breadth and depth. The breadth includes a minimum of six hours in each of three categories: humanities, social sciences, and mathematics and sciences. The depth includes a minimum of 18 credit hours in one of these categories or a career area where appropriate. The requirements of each A.S. degree program are outlined in the program section of this catalog.

Associate in Applied Science (A.A.S.)

JCC is authorized to offer Associate in Applied Science (A.A.S.) degrees in the following areas: accounting, business administration, criminal justice-police, computer information systems, early childhood, human services, information technology, mechanical technology, medical office technology, office technology, nursing, occupational therapy assistant, public safety technology-fire science, welding technology, and individual studies.

The course of study for these degree programs includes a balance between courses related to career areas and the liberal arts and social sciences. The sequence of courses in A.A.S. degrees is designed to prepare the student for proficiency in a specific career and provide a minimum of 20 credit hours in the liberal arts and sciences. These 20 credit hours must be distributed to include a minimum of six hours in each of three categories: humanities, social sciences, and mathematics and science. The remainder of each degree program consists of core courses related to a specific field and electives. Some A.A.S. degree programs require more than 60 credit hours for completion. The requirements for each A.A.S. degree are shown in the program section of this catalog.

Originally intended as career degrees, some A.A.S. degree programs are transferable to four-year colleges and universities. The development of new degree programs by four-year colleges and universities are designed to make it possible for some A.A.S. degree holders to transfer.

In recent years a growing number of JCC graduates with A.A.S. degrees transfer to bachelor's degree programs while others enter the work world after graduation. Specific information about the transferability of the A.A.S. degree is available from program faculty or at the counseling centers.

Certificate Programs

Any student who wishes to receive a certificate must complete all courses listed in the certificate with a minimum 2.0 cumulative average. If a student transfers in appropriate credits toward a certificate, a minimum of 15 JCC credits will be required to award the certificate. A student may only transfer back a maximum of three of the last credits toward a certificate.

Accreditation

JCC is a member of and fully accredited by the Middle States Association of Colleges and Secondary Schools. Its curricula are approved by the State University of New York and are registered by the New York State Department of Education. In addition, the nursing program is accredited by the National League for Nursing Accrediting Commission and the occupational therapy assistant program is accredited by the Accreditation Council for Occupational Therapy Education of the American Occupational Therapy Association.
Requirements By Degree

To complete any of the degrees, a student must complete a minimum of 60 credit hours of study. The following chart indicates the minimum distribution and depth requirements for liberal arts and sciences courses for each of the degrees. The remaining number of hours needed to fill the required 60 credit hours may be filled with additional liberal arts and sciences courses, electives, and/or career courses. A description of which courses are in each category is given on page 38.

To graduate with an associate’s degree a student must:
1. Complete at least 60 credit hours of study (at least 30 hours at JCC).
2. Meet the degree requirements in place at the time of their first enrollment or any subsequent set of requirements. Requirements for subsequent degree/requirements are based on matriculation date.
3. Earn a grade point average of 2.0 or better (2.0 is a ‘C’ average).
4. Apply at the registrar’s office for graduation at least 5 weeks prior to the end of the semester.
5. Must fulfill English requirements as stated on page 32 of this catalog.
6. Beginning fall 1996, complete a three- or four-credit mathematics course (imputed credit courses excluded).
7. Imputed credit courses (numbered 0990 or below) do not meet graduation requirements in any degree.
8. Students who matriculate for the first time beginning fall 2008 or thereafter will be required to include in their degree programs at least one course that has been designated as incorporating study of values, ethics, and diverse perspectives (VEDP).
9. Students who matriculate for the first time beginning fall 2010 or thereafter will be required to include in their degree programs at least one course that has been designated as incorporating study of scientific reasoning (SR).

### Associate in Arts

<table>
<thead>
<tr>
<th>Liberal Arts and Sciences</th>
<th>Additional Liberal Arts &amp; Sciences</th>
<th>Minimum Number of Liberal Arts &amp; Sciences</th>
<th>Program Core Requirements</th>
<th>Additional Liberal Arts &amp; Sciences Electives and/or Career Electives</th>
<th>Total Degree Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities</td>
<td>Social Sciences</td>
<td>Mathematics / Sciences</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAS - Humanities</td>
<td>24</td>
<td>9</td>
<td>6</td>
<td>48</td>
<td>12</td>
</tr>
<tr>
<td>LAS - Social Science</td>
<td>9</td>
<td>24</td>
<td>6</td>
<td>48</td>
<td>12</td>
</tr>
</tbody>
</table>

### Associate in Science

<table>
<thead>
<tr>
<th>Liberal Arts and Sciences</th>
<th>Additional Liberal Arts &amp; Sciences</th>
<th>Minimum Number of Liberal Arts &amp; Sciences</th>
<th>Program Core Requirements</th>
<th>Additional Liberal Arts &amp; Sciences Electives and/or Career Electives</th>
<th>Total Degree Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities</td>
<td>Social Sciences</td>
<td>Mathematics / Sciences</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biotechnology</td>
<td>6</td>
<td>6</td>
<td>11</td>
<td>30</td>
<td>21</td>
</tr>
<tr>
<td>Business Administration</td>
<td>6</td>
<td>6</td>
<td>9</td>
<td>30</td>
<td>24</td>
</tr>
<tr>
<td>Communications</td>
<td>9</td>
<td>9</td>
<td>3</td>
<td>30</td>
<td>24</td>
</tr>
<tr>
<td>Computer Science</td>
<td>6</td>
<td>6</td>
<td>9</td>
<td>30</td>
<td>24</td>
</tr>
<tr>
<td>Criminal Justice</td>
<td>9</td>
<td>9</td>
<td>3</td>
<td>30</td>
<td>18</td>
</tr>
<tr>
<td>Engineering Science</td>
<td>6</td>
<td>6</td>
<td>30-31</td>
<td>0</td>
<td>42-43</td>
</tr>
<tr>
<td>Environmental Science</td>
<td>6</td>
<td>6</td>
<td>18-19</td>
<td>0</td>
<td>30-31</td>
</tr>
<tr>
<td>Fine Arts: Music</td>
<td>15</td>
<td>9</td>
<td>9</td>
<td>0</td>
<td>33</td>
</tr>
<tr>
<td>Fine Arts: Studio Arts</td>
<td>18</td>
<td>9</td>
<td>9</td>
<td>0</td>
<td>36</td>
</tr>
<tr>
<td>Human Services</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>12</td>
<td>30</td>
</tr>
<tr>
<td>Individual Studies</td>
<td>6</td>
<td>18</td>
<td>6</td>
<td>0</td>
<td>30</td>
</tr>
<tr>
<td>or</td>
<td>6</td>
<td>18</td>
<td>6</td>
<td>0</td>
<td>30</td>
</tr>
<tr>
<td>or</td>
<td>6</td>
<td>18</td>
<td>6</td>
<td>0</td>
<td>30</td>
</tr>
<tr>
<td>LAS - Adolescence Education</td>
<td>15</td>
<td>9</td>
<td>6-8</td>
<td>12-18</td>
<td>33+</td>
</tr>
<tr>
<td>LAS - Childhood Education</td>
<td>15</td>
<td>9</td>
<td>6-8</td>
<td>12-18</td>
<td>33+</td>
</tr>
<tr>
<td>LAS - Early Childhood Education</td>
<td>15</td>
<td>9</td>
<td>6-8</td>
<td>12-18</td>
<td>33+</td>
</tr>
<tr>
<td>LAS - Mathematics &amp; Science</td>
<td>6</td>
<td>6</td>
<td>24</td>
<td>0</td>
<td>36</td>
</tr>
<tr>
<td>Media Arts</td>
<td>6</td>
<td>9</td>
<td>9</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>Physical Education Studies</td>
<td>6</td>
<td>9</td>
<td>18</td>
<td>0</td>
<td>33</td>
</tr>
</tbody>
</table>

### Associate in Applied Science

<table>
<thead>
<tr>
<th>Liberal Arts and Sciences</th>
<th>Additional Liberal Arts &amp; Sciences</th>
<th>Minimum Number of Liberal Arts &amp; Sciences</th>
<th>Program Core Requirements</th>
<th>Additional Liberal Arts &amp; Sciences Electives and/or Career Electives</th>
<th>Total Degree Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities</td>
<td>Social Sciences</td>
<td>Mathematics / Sciences</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounting</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Business Administration</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Computer Information Systems</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Criminal Justice-Police</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Human Services</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Individual Studies</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Information Technology</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Mechanical Technology</td>
<td>6</td>
<td>6</td>
<td>8</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>Medical Office Technology</td>
<td>9</td>
<td>6</td>
<td>6-7</td>
<td>0</td>
<td>21-22</td>
</tr>
<tr>
<td>Nursing</td>
<td>6</td>
<td>6</td>
<td>17</td>
<td>0</td>
<td>29</td>
</tr>
<tr>
<td>Occupational Therapy Assistant</td>
<td>6</td>
<td>9</td>
<td>11</td>
<td>0</td>
<td>26</td>
</tr>
<tr>
<td>Office Technology</td>
<td>9</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>21</td>
</tr>
<tr>
<td>Public Safety Technology-Fire Science</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Professional Piloting</td>
<td>6</td>
<td>6</td>
<td>7</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>Welding Technology</td>
<td>6</td>
<td>6</td>
<td>16</td>
<td>0</td>
<td>28</td>
</tr>
</tbody>
</table>

To graduate with an associate’s degree a student must:
1. Complete at least 60 credit hours of study (at least 30 hours at JCC).
2. Meet the degree requirements in place at the time of their first enrollment or any subsequent set of requirements. Requirements for subsequent degree/requirements are based on matriculation date.
3. Earn a grade point average of 2.0 or better (2.0 is a ‘C’ average).
4. Apply at the registrar’s office for graduation at least 5 weeks prior to the end of the semester.
5. Must fulfill English requirements as stated on page 32 of this catalog.
6. Beginning fall 1996, complete a three- or four-credit mathematics course (imputed credit courses excluded).
7. Imputed credit courses (numbered 0990 or below) do not meet graduation requirements in any degree.
8. Students who matriculate for the first time beginning fall 2008 or thereafter will be required to include in their degree programs at least one course that has been designated as incorporating study of values, ethics, and diverse perspectives (VEDP).
9. Students who matriculate for the first time beginning fall 2010 or thereafter will be required to include in their degree programs at least one course that has been designated as incorporating study of scientific reasoning (SR).
Course Information

The following list is designed to assist students in the selection of appropriate courses to meet the distribution requirements of a degree program. Students should also consult the current college master schedule for a list of courses approved as State University of New York general education requirements.

Current course, degree, and certificate information can also be found at www.sunyjcc.edu.

**Liberal Arts & Sciences**
The liberal arts and sciences are comprised of all courses in the humanities, social sciences, and math/sciences, as well as other liberal arts and sciences electives.

**Humanities**
- Art
- Communication - CMM (except 2500)
- Dance - DAN
- English - ENG (except 0190, 0410, 0430, 2010)
- International Education - INE
- Modern Languages (ARA, ASL, FRE, GER, RUS, SPA)
- Music -MUS (except 1650)
- Philosophy - PHL
- Religion - REL (except 1650)
- Theatre - THE
- INT 1750: Arts in the Apple
- INT 2530-2540: Humanities I & II

**Mathematics/Sciences**
- Astronomy - AST
- Biology - BIO (except 1450)
- Chemistry - CHE
- Computer Science - CSC (including only 1510, 1530, 1570, 1580, 1590, 1600, 1720, 2330, 2410, 2450, 2510, 2540, 2650, 2660, 2670, 2680)
- Engineering - ENR (except 2010, 2020)
- Geology - GLG
- Mathematics - MAT (except 0300, 0400, 0500, and 0600)
- Meteorology -MET
- Physics - PHY (except 2010-2020)
- CRI 2540: Criminalistics
- INT 2800: Science Connection

**Social Sciences**
- Anthropology - ANT
- Economics - ECO
- Geography - GEO
- History - HIS
- Political Science - POL
- Psychology - PSY
- Sociology - SOC
- CRI 1510: Introduction to Criminal Justice
- CRI 1520: Introduction to Corrections
- CRI 1540: Introduction to Legal Systems
- CRI 2570: Organized Crime in the United States
- HUS 2370: Introduction to Gerontology
- REL 1530: Comparative Religion

**Other Liberal Arts/Sciences Electives**
- Library - LIB
- Physical Education - PHE
- CMM 2500: Interpersonal Communications
- ENG 2010: Internship
- HUM 1510: Achievement and Self
- HUM 1550: Life/Career Planning
- HUM 1650: Leadership Development
- INT 1500: Becoming a Master Student
- INT 1520: Student Success Seminar
- MUS 1650: Business of Music
- PHY 2010 and 2020: Internship

**Career**
- Aviation - AVN
- Business - BUS
- Computer Science (except 1510, 1530, 1570, 1580, 1590, 1600, 1720, 2330, 2410, 2450, 2510, 2540, 2650, 2660, 2670, 2680)
- Cooperative Education - CED
- Criminal Justice - CRI (except 1510, 1520, 1540, 2570, 2540)
- Culinary Arts - CUL
- Digital/Computer Technology - DCT
- Education - EDU
- Engineering - ENR (including only 2010, 2020)
- Human Services - HUS
- Interdisciplinary Studies - INT (including only 2010, 2020)
- Land Agent - LND (including only 2010)
- Mathematics for Education - MAE
- Mechanical Technology - MCT
- Medical Office Technology - MOT
- Nursing - NUR
- Occupational Therapy Assistant - OTA
- Protective Service Technology - PST
- Welding Technology - WLD
- BIO 1450: Emergency Medical Technology

**Selected Studies**
Each academic division may occasionally elect to offer courses of a topical or experimental nature which draw upon the special interests and expertise of the faculty members. These courses are listed in the master schedule and are numbered within the appropriate discipline at 7000-7999 (freshman level) or 8000-8999 (sophomore level); i.e. CMM 8503: Selected Studies - Public Relations.

Selected Studies courses count as electives in JCC programs or may meet depth, distribution, or core requirements. Consult your faculty advisor or counselor for details.

**Frequency of Course Offerings**
All courses required to earn a specific associate degree are normally offered with such frequency that a full-time student can earn the degree in a two-year period.

Each course description has designations indicating during which semester and on which campus (Jamestown - J, Cattaraugus County Campus - C, and Online) the college intends to offer the course.

Certain courses do not have a designation indicating which semester they are offered. These courses may or may not be offered on the specified campus(es) during the period 2010-2012. The college reserves the right to cancel course offerings if enrollment is insufficient.

**Course Numbering**
Credit hours to be earned in each course are shown following the course title. Course numbers are designated as: 0000-0990 - imputed and developmental courses, 1000-1990 - freshman level courses, and 2000-2990 - sophomore level courses.
### Academic Program Summary

While the programs in this section meet the graduation requirements of the college, the needs of individual students may dictate modification or substitution. Students should develop their degree programs with the help of faculty advisors. Students planning to transfer to four-year institutions following graduation should take care in planning programs which conform to the requirements of those institutions. Those in career programs may find, in many cases, that their A.A.S. degrees are also transferable. Students who are undecided about their abilities and objectives are encouraged to meet with the college's counselors for assistance in career decision-making.

Enrollment in other than registered or otherwise approved programs may jeopardize a student's eligibility for state student financial assistance.

#### Degrees and Certificates Offered By Jamestown Community College

**Associate in Arts Degree (A.A.)**

<table>
<thead>
<tr>
<th>Degree Area</th>
<th>Hegis Code</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liberal Arts &amp; Sciences: Humanities</td>
<td>5649</td>
<td>48</td>
</tr>
<tr>
<td>with preparation to continue studies in:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modern Languages</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philosophy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Theatre</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liberal Arts &amp; Sciences: Social Science</td>
<td>5649</td>
<td>49</td>
</tr>
<tr>
<td>with preparation to continue studies in:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anthropology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>History</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sociology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Associate in Science Degree (A.S.)**

<table>
<thead>
<tr>
<th>Degree Area</th>
<th>Hegis Code</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biotechnology</td>
<td>5604</td>
<td>40</td>
</tr>
<tr>
<td>Business - Business Administration</td>
<td>5004</td>
<td>41</td>
</tr>
<tr>
<td>Communication</td>
<td>5008</td>
<td>42</td>
</tr>
<tr>
<td>Computer Science (Teacher Education)</td>
<td>5101</td>
<td>42</td>
</tr>
<tr>
<td>Criminal Justice</td>
<td>5505</td>
<td>43</td>
</tr>
<tr>
<td>Engineering Science*</td>
<td>5609</td>
<td>43</td>
</tr>
<tr>
<td>Environmental Science*</td>
<td>5604</td>
<td>44</td>
</tr>
<tr>
<td>Fine Arts: Music*</td>
<td>5610</td>
<td>44</td>
</tr>
<tr>
<td>Fine Arts: Studio Arts*</td>
<td>5610</td>
<td>45</td>
</tr>
<tr>
<td>Human Services</td>
<td>5501</td>
<td>46</td>
</tr>
<tr>
<td>Individual Studies</td>
<td>5699</td>
<td>46</td>
</tr>
<tr>
<td>Liberal Arts &amp; Sciences: Adolescence Education</td>
<td>5649</td>
<td>47</td>
</tr>
<tr>
<td>(Teacher Education Transfer)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liberal Arts &amp; Sciences: Childhood Education (Teacher Education Transfer)</td>
<td>5649</td>
<td>47</td>
</tr>
<tr>
<td>Liberal Arts &amp; Sciences: Early Childhood Education (Teacher Education Transfer)</td>
<td>5649</td>
<td>48</td>
</tr>
<tr>
<td>Liberal Arts &amp; Sciences: Math/Science</td>
<td>5649</td>
<td>49</td>
</tr>
<tr>
<td>with preparation to continue studies in:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemistry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health-Related Occupations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Technology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-Environmental Sciences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Media Arts*</td>
<td>5012</td>
<td>50</td>
</tr>
<tr>
<td>Physical Education Studies*</td>
<td>5299</td>
<td>52</td>
</tr>
</tbody>
</table>

**Associate in Applied Science Degree (A.S.)**

<table>
<thead>
<tr>
<th>Degree Area</th>
<th>Hegis Code</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business-Accounting*</td>
<td>5002</td>
<td>40</td>
</tr>
<tr>
<td>Business-Business Administration**</td>
<td>5004</td>
<td>41</td>
</tr>
<tr>
<td>Computer Information Systems**</td>
<td>5103</td>
<td>42</td>
</tr>
<tr>
<td>Criminal Justice-Police</td>
<td>5505</td>
<td>43</td>
</tr>
<tr>
<td>Early Childhood</td>
<td>5503</td>
<td>43</td>
</tr>
<tr>
<td>Human Services</td>
<td>5501</td>
<td>45</td>
</tr>
<tr>
<td>Individual Studies**</td>
<td>5699</td>
<td>46</td>
</tr>
<tr>
<td>Information Technology**</td>
<td>5101</td>
<td>46</td>
</tr>
<tr>
<td>Mechanical Technology*</td>
<td>5315</td>
<td>49</td>
</tr>
<tr>
<td>Medical Office Technology**</td>
<td>5214</td>
<td>50</td>
</tr>
<tr>
<td>Nursing</td>
<td>5208.1</td>
<td>51</td>
</tr>
<tr>
<td>Occupational Therapy Assistant*</td>
<td>5210</td>
<td>51</td>
</tr>
<tr>
<td>Office Technology</td>
<td>5505</td>
<td>52</td>
</tr>
<tr>
<td>Professional Piloting</td>
<td>5302</td>
<td>53</td>
</tr>
<tr>
<td>Public Safety Technology-Fire Science*</td>
<td>5507</td>
<td>60</td>
</tr>
<tr>
<td>Welding Technology*</td>
<td>5308</td>
<td>53</td>
</tr>
</tbody>
</table>

**Certificate Programs**

<table>
<thead>
<tr>
<th>Degree Area</th>
<th>Hegis Code</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer-Aided Design &amp; Computer Numerical Control*</td>
<td>5303</td>
<td>54</td>
</tr>
<tr>
<td>Corrections Officer Technology*</td>
<td>5505</td>
<td>60</td>
</tr>
<tr>
<td>Digital Audio Production*</td>
<td>5008</td>
<td>54</td>
</tr>
<tr>
<td>Digital Graphic Design and Publishing*</td>
<td>5012</td>
<td>54</td>
</tr>
<tr>
<td>Early Childhood Development</td>
<td>5503</td>
<td>55</td>
</tr>
<tr>
<td>Entrepreneurship</td>
<td>5304</td>
<td>55</td>
</tr>
<tr>
<td>General Studies</td>
<td>5699</td>
<td>55</td>
</tr>
<tr>
<td>Individual Studies**</td>
<td>5699</td>
<td>56</td>
</tr>
<tr>
<td>Industrial Equipment Technology</td>
<td>5312</td>
<td>56</td>
</tr>
<tr>
<td>Information Technology</td>
<td>5101</td>
<td>56</td>
</tr>
<tr>
<td>Law Enforcement Technology**</td>
<td>5505</td>
<td>60</td>
</tr>
<tr>
<td>Machine Tool Technology*</td>
<td>5315</td>
<td>56</td>
</tr>
<tr>
<td>Medical Office Technology**</td>
<td>5214</td>
<td>57</td>
</tr>
<tr>
<td>Multimedia Production*</td>
<td>52012</td>
<td>57</td>
</tr>
<tr>
<td>Network Administration</td>
<td>5103</td>
<td>57</td>
</tr>
<tr>
<td>Office Technology</td>
<td>5505</td>
<td>58</td>
</tr>
<tr>
<td>Public Safety Technology-Fire Science*</td>
<td>5507</td>
<td>60</td>
</tr>
<tr>
<td>Special Studies</td>
<td>5699</td>
<td>58</td>
</tr>
<tr>
<td>Web Design</td>
<td>5104</td>
<td>58</td>
</tr>
<tr>
<td>Welding Technology*</td>
<td>5308</td>
<td>58</td>
</tr>
</tbody>
</table>

**One-Plus-One Programs***

<table>
<thead>
<tr>
<th>Degree Area</th>
<th>Hegis Code</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological Science</td>
<td></td>
<td>59</td>
</tr>
<tr>
<td>Forest Technology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Information Technology/Medical Records</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land Surveying Technology</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Unless otherwise noted, programs may be completed at either the Jamestown or Cattaraugus County Campus.

* Program completion will require students to attend some classes on the Jamestown Campus.

** Program completion will require students to attend some classes on the Cattaraugus County Campus.

*** Students spend their first year at JCC and then transfer to other colleges to complete their degree program.

** Program is also available online.
Academic Programs - Degree

Important Points
Students are advised that some certificates and all degree programs share the following common points:

- All graduates must meet both program and graduation requirements, which are outlined throughout the Academic Information section of the catalog.
- First time, full-time students are also required to take INT 1520: Student Success Seminar.
- Some courses have prerequisites. Students should check course descriptions to be sure course prerequisites have been met.
- Not all courses are offered on all campuses every semester. The master schedule for each semester lists current offerings. See the Course Descriptions section for frequency of offerings.
- Physical education is optional but may be required by some transfer colleges.
- Students who matriculate for the first time beginning fall 2008 or thereafter will be required to include in their degree programs at least one course that has been designated as incorporating study of values, ethics, and diverse perspectives (VEDP).
- Students who matriculate for the first time beginning fall 2010 or thereafter will be required to include in their degree programs at least one course that has been designated as incorporating study of scientific reasoning (SR).

Current course, degree, and certificate information can be found at www.sunyjec.edu.

ASSOCIATE IN SCIENCE

BIOTECHNOLOGY

Curriculum code: 1211 | Hegis code: 5604
Minimum credit hours required: 61-62

This degree prepares students for transfer to four-year colleges and universities to major in biology, molecular genetics, biochemistry, biotechnology and related fields. It provides a strong background in liberal arts and the comprehensive, interdisciplinary, and robust training required for bachelor's degree programs in the modern biological sciences. Students interested in fields such as medical, veterinary, agricultural, environmental, and pharmaceutical sciences should consider a biotechnology degree to prepare them for their professional studies. Genetics, molecular biology, cell biology, immunology, microbiology are incorporated into the biotechnology degree, and students learn laboratory techniques such as tissue culture, DNA and RNA isolation and evaluation, and instrumental analysis. They can also participate in biomedical and environmental undergraduate research in state-of-the-art classrooms and laboratories.

General Degree Requirements 16 credit hours

- Humanities 6
  - ENG 1530: English Composition II 3
  - ENG 1540: Writing About Literature 3
- Social Science Electives 6
  - MAT 1600: PreCalculus 4
  - BUS 1510: Principles of Accounting 2

Program Core Requirements 34-38 credit hours

- BIO 1570: Principles of Biology 4
- BIO 1580: Principles of Biology II or BIO 2660: Zoology and BIO 2670: Botany 4-8
- BIO 2560: Genetics 4
- BIO 2800: Cell and Molecular Biology 4
- BIO 2810: Biotechnology Research 2
- CHE 1550: College Chemistry I 4
- CHE 1560: College Chemistry II 4
- CHE 2530: Organic Chemistry I 4
- CHE 2540: Organic Chemistry II 4

Additional Science Electives* 4-8 credit hours

Choose carefully from the following list depending on your desired transfer destination and intended area of concentration.

- BIO 1700: Immunology
- BIO 1820: SURI: Biotechnology I
- BIO 2510: Anatomy and Physiology I
- BIO 2520: Anatomy and Physiology II
- BIO 2820: SURI: Biotechnology II
- CHE 1610: General Physics I or PHY 1710: Analytical Physics I
- CHE 1620: General Physics II or PHY 2710: Electricity and Magnetism

*It is intended that the program core requirements and the additional science electives total a minimum of 42 credit hours.

Additional Liberal Arts & Sciences or Career Elective 3-4 credit hours

By choosing carefully from the Additional Liberal Arts & Sciences category, a student may be able to add a seventh SUNY General Education course to his/her curriculum.

IMPORTANT POINTS (Refer to top of page)

ASSOCIATE IN APPLIED SCIENCE

BUSINESS-ACCOUNTING

Curriculum code: 0630 | Hegis code: 5002
Minimum credit hours required: 60

This degree program prepares students for entry level accounting careers such as junior accountant, payroll accountant, receivables/payables clerk, or bookkeeper. It combines application courses in accounting, computer science, law, and management with liberal arts courses to develop communication and computation skills. With this background, the students will be readily employable and have the skills necessary for further development. Students interested in professional careers in public accounting (CPA) or management accounting (CMA) that require a bachelor's degree are encouraged to refer to the Associate in Science in business administration degree on page 41.

General Degree Requirements 20 credit hours

- Humaneities 6
  - ENG 1530: English Composition II 3
  - English elective (college level) 3
- Social Sciences Electives 6
  - MAT 2510: Microcomputer Applications I 4
- Mathematics/Sciences 6
  - BUS 2270: Introduction to Taxation 3
  - BUS 2530 or BUS 2540: Business Law I or II 3
- Liberal Arts & Sciences Elective 2
  - BUS 1510: Principles of Financial Accounting 4
- Program Core Requirements 33 credit hours

- BUS 2110: Principles of Accounting 3
- BUS 2270: Introduction to Accounting 3
- BUS 1520: Principles of Managerial Accounting 4
- BUS 2530 or BUS 2540: Business Law I or II 3
- BUS 2550: Marketing or BUS 2570: Principles of Management or BUS 2630: Human Resource Management 3
- BUS 2580: Management and Organizational Behavior 3
- BUS 2590: Advanced Managerial Accounting 3
- CSC 1560: Microcomputer Applications II 4

IMPORTANT POINTS (Refer also to top of page):

- To maximize student success, it is strongly recommended that ENG 1530 be taken before registering for 2000-level business courses.
ASSOCIATE IN SCIENCE

BUSINESS-

BUSINESS ADMINISTRATION

curriculum code: 0671  |  Hegis code: 5004
minimum credit hours required: 60

This degree program prepares students for transfer into bachelor level programs in business and many business-related majors. This degree allows for flexibility in selecting major and elective courses, enabling students to match the requirements set by transfer institutions. Students who successfully complete this degree can transfer into programs that lead to professional careers including accounting (CPA or CMA), business administration, financial management, human resource management, industrial relations, international business, management science, marketing, production control, and others. Working with their faculty advisor, JCC students can create a program that will give them full junior status upon completion and transfer.

General Degree Requirements  30 credit hours
Humanities  6
ENG 1530: English Composition II  3
ENG 1540: Writing about Literature  3
Social Sciences  6
ECO 2610: Macroeconomic Principles  3
ECO 2620: Microeconomic Principles  3
Mathematics/Sciences  7
MAT 1540: Elementary Statistics  3
MAT 1590: College Algebra and Trigonometry or higher  4
Liberal Arts and Sciences Electives  11
Program Core Requirements  21 credit hours
BUS 1510: Principles of Financial Accounting  4
BUS 1520: Principles of Managerial Accounting  4
CSC 1560: Microcomputer Applications I  4
Additional business courses (six credits of which must be numbered 2500 or higher)  9
Liberal Arts and Sciences and/or Career Electives  9 credit hours

IMPORTANT POINTS (Refer also to page 40):
• Most bachelor’s degree programs in business administration require calculus for junior status.
• Students are strongly encouraged to begin a math sequence which will enable them to include MAT 1710: Calculus.
• For optimal sophomore year course selection, you are encouraged to select your transfer college by the second semester of your freshman year.

ASSOCIATE IN APPLIED SCIENCE

BUSINESS-

BUSINESS ADMINISTRATION

curriculum code: 0632  |  Hegis code: 5004
minimum credit hours required: 60

The A.A.S. degree program in business administration offers students the opportunity to obtain a broad business foundation and the knowledge, skills, and values necessary for a variety of entry level positions in business. This career program is designed to provide the student with the skills necessary to function in a professional, competent manner in business organizations. Students will take courses in accounting, management, law, computer applications, and courses that are related to business. Decision-making skills are stressed throughout the program as well as consensus-building skills that support working in team situations.

General Degree Requirements  20 credit hours
Humanities  6
ENG 1530: English Composition II  3
English elective (college level)  3
Social Sciences Electives  6
Mathematics/Sciences  6
Liberal Arts and Sciences Elective  2
Program Core Requirements  30 credit hours
BUS 1510: Principles of Financial Accounting  4
BUS 1520: Principles of Managerial Accounting  4
BUS 2530 or 2540: Business Law I or II  3
BUS 2580: Management and Organizational Behavior  3
CSC 1560: Microcomputer Applications I  4
Additional credits from the following list, 12 credits of which must be 2000-level courses:
• BUS 1430: Entrepreneurship I
• BUS 1500: Introduction to Business
• BUS 1610: Personal Finance
• BUS 1650: Introduction to Global Business
• BUS 2510: Corporate Finance
• BUS 2550: Marketing
• BUS 2570: Principles of Management
• BUS 2630: Human Resource Management
• CMM 1610: Public Speaking
• ECO 1530: Contemporary Economic Problems
Liberal Arts & Sciences and/or Career Electives  10 credit hours

IMPORTANT POINTS (Refer also to page 40):
• BUS 1500 is recommended to students who want to study general business activities and develop an understanding of the business environment.
• Business course electives should be selected with career goals in mind. Working closely with your academic advisor will help assure the correct mix of electives to optimize employment opportunities when you complete your degree program.
• To maximize student success, it is strongly recommended that ENG 1530 be taken before registering for 2000-level business courses.
• All courses required for this degree are available online.
ASSOCIATE IN SCIENCE

COMMUNICATION

course code: 1173  |  Hegis code: 5008
minimum credit hours required: 60

This general communication program is intended for students who wish to transfer to four-year institutions to pursue further study in human communication, public relations, communication management, broadcast journalism, intercultural communication, or other branch of communication not involving media production. This program can also serve the needs of students seeking entry level employment in those areas mentioned above, or of students who are currently employed in those areas who wish to continue their education and upgrade their skills.

General Degree Requirements 30 credit hours

<table>
<thead>
<tr>
<th>Humanities</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1530: English Composition II</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1540: Writing about Literature</td>
<td>3</td>
</tr>
<tr>
<td>One course chosen from the following:</td>
<td>3</td>
</tr>
<tr>
<td>CMM 2530: Writing for Electronic Media</td>
<td></td>
</tr>
<tr>
<td>ENG 2740: Newswriting and Editing</td>
<td></td>
</tr>
<tr>
<td>ENG 2840: Film Study and Appreciation</td>
<td></td>
</tr>
<tr>
<td>ENG 2890: Advanced Prose Writing</td>
<td></td>
</tr>
</tbody>
</table>

Social Sciences Electives 9

Students are encouraged to consult with their academic advisor prior to selecting electives (PSY 1510: General Psychology, SOC 1510: Introduction to Sociology, HIS 1520: World History Since 1500 or HIS 1540: US History Since 1865, or ANT 1520: Introduction to Cultural Anthropology are recommended).

Mathematics/Sciences 9

<table>
<thead>
<tr>
<th>Mathematics/Sciences Electives</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 1500 or higher</td>
<td></td>
</tr>
<tr>
<td>Students are encouraged to enroll in mathematics and science courses recommended by the college to which they wish to enroll.</td>
<td></td>
</tr>
</tbody>
</table>

Liberal Arts and Sciences Electives 3

Program Core Requirements 24 credit hours

<table>
<thead>
<tr>
<th>Program Core Requirements</th>
<th>24 credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMM 1510: Introduction to Communication</td>
<td>3</td>
</tr>
<tr>
<td>CMM 1610: Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>CMM 1750: The Rhetoric of Vision and Sound</td>
<td>3</td>
</tr>
<tr>
<td>CMM 2500: Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>CMM 2610: Mass Communication and Media Literacy</td>
<td>3</td>
</tr>
<tr>
<td>Core Electives (three of the following courses must be chosen in consultation with an academic advisor):</td>
<td>9</td>
</tr>
<tr>
<td>ANT 1520: Introduction to Cultural Anthropology</td>
<td></td>
</tr>
<tr>
<td>BUS 2550: Marketing</td>
<td></td>
</tr>
<tr>
<td>BUS 2570: Principles of Management</td>
<td></td>
</tr>
<tr>
<td>BUS 2580: Management and Organizational Behavior</td>
<td></td>
</tr>
<tr>
<td>BUS 2630: Human Resource Management</td>
<td></td>
</tr>
<tr>
<td>CMM 1630: Introduction to Television Production</td>
<td></td>
</tr>
<tr>
<td>CMM 1710: Digital Video Production</td>
<td></td>
</tr>
<tr>
<td>CMM 2510: Introduction to Public Relations</td>
<td></td>
</tr>
<tr>
<td>CMM 2530: Writing for Electronic Media</td>
<td></td>
</tr>
<tr>
<td>CMM 2560: Communication &amp; Media Arts Internship (up to 6 credit hours)</td>
<td></td>
</tr>
<tr>
<td>ENG 1560: English for Careers</td>
<td></td>
</tr>
<tr>
<td>ENG 2540: Creative Writing</td>
<td></td>
</tr>
<tr>
<td>HIS 1520: World History Since 1500</td>
<td></td>
</tr>
<tr>
<td>HIS 1540: US History Since 1865</td>
<td></td>
</tr>
<tr>
<td>HUM 1650: Leadership Development</td>
<td></td>
</tr>
<tr>
<td>PHL 1510: Introduction to Philosophy</td>
<td></td>
</tr>
<tr>
<td>PHL 1570: Critical Reasoning</td>
<td></td>
</tr>
<tr>
<td>PHL 2610: Introduction to Ethical Theory</td>
<td></td>
</tr>
<tr>
<td>PHL 2630: Contemporary Moral Problems</td>
<td></td>
</tr>
<tr>
<td>PSY 2500: Psychology of Personality</td>
<td></td>
</tr>
<tr>
<td>PSY 2530: Social Psychology</td>
<td></td>
</tr>
</tbody>
</table>

IMPORTANT POINTS (Refer also to page 40):
- Students are advised to select program electives after careful consultation with their advisors.

ASSOCIATE IN APPLIED SCIENCE

COMPUTER INFORMATION

SYSTEMS

course code: 0581  |  Hegis code: 5103
minimum credit hours required: 60

Graduates will gain an understanding of the foundation of the system development life cycle for business-oriented and computer-based information systems. The topics involve the study of systems analysis, systems design, database management, computer and web programming. Other technical and business areas of study, emphasizing database and web development, will focus on the implementation of information systems in a variety of operational settings.

General Degree Requirements 20 credit hours

<table>
<thead>
<tr>
<th>Humanities</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1530: English Composition II</td>
<td>3</td>
</tr>
<tr>
<td>English Elective (college level)</td>
<td>3</td>
</tr>
<tr>
<td>Social Sciences Electives</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics/Sciences Electives (MAT 1590 or higher)</td>
<td>6</td>
</tr>
<tr>
<td>Liberal Arts and Sciences Elective</td>
<td>2</td>
</tr>
</tbody>
</table>

Program Core Requirements 33 credit hours

<table>
<thead>
<tr>
<th>Program Core Requirements</th>
<th>33 credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS course numbered 1500 or higher</td>
<td></td>
</tr>
<tr>
<td>CSC 1530: Web Publishing</td>
<td></td>
</tr>
<tr>
<td>CSC 1560: Microcomputer Applications I</td>
<td></td>
</tr>
<tr>
<td>CSC 1570: Programming Concepts and Applications</td>
<td></td>
</tr>
<tr>
<td>CSC 1590: Computing Programming</td>
<td></td>
</tr>
<tr>
<td>CSC 1760: Microcomputer Applications II</td>
<td></td>
</tr>
<tr>
<td>CSC 2410: Web Programming</td>
<td></td>
</tr>
<tr>
<td>CSC 2450: CIT Capstone</td>
<td></td>
</tr>
<tr>
<td>CSC 2540: Introduction to Systems Analysis</td>
<td></td>
</tr>
<tr>
<td>CSC 2660: Database Management</td>
<td></td>
</tr>
</tbody>
</table>

Liberal Arts & Sciences Electives 7 credit hours

IMPORTANT POINTS (Refer also to page 40):
- All courses required for this degree are available online.
- Some upper level computer science courses are only offered online.

ASSOCIATE IN SCIENCE

COMPUTER SCIENCE

course code: 0532  |  Hegis code: 5101
minimum credit hours required: 60

The A.S. in computer science program is designed for students who plan to transfer to a four-year college or university to major in computer science.

General Degree Requirements 30 credit hours

<table>
<thead>
<tr>
<th>Humanities</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1530: English Composition II</td>
<td></td>
</tr>
<tr>
<td>ENG 1540: Writing about Literature</td>
<td></td>
</tr>
<tr>
<td>Social Sciences Electives</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics/Sciences</td>
<td>9</td>
</tr>
<tr>
<td>MAT 1670: Discrete Mathematics</td>
<td></td>
</tr>
<tr>
<td>Additional mathematics courses numbered 1540 or higher</td>
<td>6</td>
</tr>
</tbody>
</table>

Liberal Arts and Sciences Electives 3

Program Core Requirements 24 credit hours

<table>
<thead>
<tr>
<th>Program Core Requirements</th>
<th>24 credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 1540: Systems I</td>
<td></td>
</tr>
<tr>
<td>CSC 1550: Systems II</td>
<td></td>
</tr>
<tr>
<td>CSC 2540: Introduction to Public Relations</td>
<td></td>
</tr>
<tr>
<td>CSC 2530: Writing for Electronic Media</td>
<td></td>
</tr>
<tr>
<td>CSC 2560: Communication &amp; Media Arts Internship (up to 6 credit hours)</td>
<td></td>
</tr>
<tr>
<td>ENG 1560: English for Careers</td>
<td></td>
</tr>
<tr>
<td>ENG 2540: Creative Writing</td>
<td></td>
</tr>
<tr>
<td>HIS 1520: World History Since 1500</td>
<td></td>
</tr>
<tr>
<td>HIS 1540: US History Since 1865</td>
<td></td>
</tr>
<tr>
<td>HUM 1650: Leadership Development</td>
<td></td>
</tr>
<tr>
<td>PHL 1510: Introduction to Philosophy</td>
<td></td>
</tr>
<tr>
<td>PHL 1570: Critical Reasoning</td>
<td></td>
</tr>
<tr>
<td>PHL 2610: Introduction to Ethical Theory</td>
<td></td>
</tr>
<tr>
<td>PHL 2630: Contemporary Moral Problems</td>
<td></td>
</tr>
<tr>
<td>PSY 2500: Psychology of Personality</td>
<td></td>
</tr>
<tr>
<td>PSY 2530: Social Psychology</td>
<td></td>
</tr>
</tbody>
</table>

IMPORTANT POINTS (Refer also to page 40):
- Students are advised to select program electives after careful consultation with their advisors.
- MAT 1710-1720 will probably be required at your transfer institution.
- Students may elect to take these courses at JCC.
- Students who do not place in college level mathematics may need more than two years to complete this degree.

Additional Liberal Arts & Sciences and/or Career Electives 6 credit hours

IMPORTANT POINTS (Refer also to page 40):
- Students are initially placed in a mathematics course based on their mathematics background and placement test score. Students who do not place in college level mathematics may need more than two years to complete this degree.
- Students may elect to take these courses at JCC.
- Students who do not place in college level mathematics may need more than two years to complete this degree.
- Students who do not place in college level mathematics may need more than two years to complete this degree.
### CRIMINAL JUSTICE

**ASSOCIATE IN APPLIED SCIENCE**

#### CRIMINAL JUSTICE POLICE

**Curriculum Code: 0640 | Hegis Code: 5505**

**Minimum Credit Hours Required: 60**

This career program provides the pre-service student (no previous employment in the field) with the occupational skills and background necessary for entering employment with law enforcement agencies; upgrades skills and background knowledge of in-service personnel; and provides both pre-service and in-service students with a broader understanding of human nature through general education.

### General Degree Requirements

**20 credit hours**

- **Humanities:**
  - ENG 1530: English Composition II
  - ENG 1540: Writing about Literature
- **Social Sciences Electives:**
  - **6 credit hours**
- **Mathematics/Sciences Electives:**
  - **6 credit hours**
- **Liberal Arts and Sciences Elective:**
  - **2 credit hours**

### Program Core Requirements

**25 credit hours**

- **CRI 1320: Introduction to Law Enforcement**
- **CRI 1420: Report Writing in Criminal Justice**
- **CRI 1510: Introduction to Criminal Justice**
- **CRI 2330: Criminal Procedural Law or CRI 2530: Criminal Law**
- **CRI 2370: Criminal Investigation**
- **CRI 2550: Ethics in Criminal Justice**
- **CRI 1290: Physical Fitness for Criminal Justice**
- **15 credit hours**

### Liberal Arts & Sciences and/or Career Electives

**15 credit hours**

- **Recommended electives include:** BIO 1510: Health Science; BIO 1710: Personal Health & Safety; CHE 1500: Introduction to Chemistry; CHE 1550-1560: College Chemistry I or II; or a mathematics course appropriate to the student’s background.
- **CMM 1610: Public Speaking** is strongly recommended as an elective.
- **Credit for criminal justice courses may be given to those students who have successfully completed an accredited Basic Recruit School for Police. Arrangements for this corresponding credit must be made through the criminal justice coordinator or admissions director.**

### IMPORTANT POINTS (Refer also to page 40):

- A credit-bearing mathematics course is a graduation requirement.
- Recommended math/science electives include MAT 1540, CSC 1510, and CRI 2540.
- Criminal justice electives should be selected with career goals in mind. Working closely with the academic advisor will help assure the correct mix of electives.

### CRIMINAL JUSTICE

**Curriculum Code: 1100 | Hegis Code: 5505**

**Minimum Credit Hours Required: 60**

The A.S. program in criminal justice is intended for students interested in fields such as law enforcement, corrections, probation, investigations, and other criminal justice related fields. In addition, this program is intended to prepare students for transfer to a four-year college or university to earn a baccalaureate degree in an area of criminal justice.

### General Degree Requirements

**30 credit hours**

- **Humanities:**
  - ENG 1530: English Composition II
  - ENG 1540: Writing about Literature
  - Humanities Electives
  - Social Sciences Electives
  - Mathematics/Sciences Electives
  - Liberal Arts and Sciences Electives
- **18 credit hours**

#### Program Core Requirements

**12 credit hours**

- **CRI 1510: Introduction to Criminal Justice**
- **Additional CRI electives (at least 9 credit hours at 2000 or higher)**
- **5 credit hours**

### IMPORTANT POINTS (Refer also to page 40):

- A credit-bearing mathematics course is a graduation requirement.
- Recommended math/science electives include MAT 1540, CSC 1510, and CRI 2540.
- Criminal justice electives should be selected with career goals in mind. Working closely with the academic advisor will help assure the correct mix of electives.

### ASSOCIATE IN SCIENCE

#### ENGINEERING SCIENCE

**Curriculum Code: 0530 | Hegis Code: 5609**

**Minimum Credit Hours Required: 65³**

The A.S. in engineering science program is designed to prepare students to transfer with full junior status to a four-year college or university to earn a bachelor's degree in engineering. This degree program provides appropriate preparation for continued study toward careers in mechanical, chemical, civil, electrical, industrial, ceramic, aerospace, nuclear, environmental, or metallurgical engineering.

### General Degree Requirements

**42-43 credit hours**

- **Humanities:**
  - ENG 1530: English Composition II
  - ENG 1540: Writing about Literature
- **Social Sciences Electives:**
  - **6 credit hours**
- **Mathematics/Sciences Electives:**
  - **6 credit hours**

#### Program Core Requirements

**19 credit hours**

- **CSC 1720: Numerical Analysis I**
- **CSC 2650: Numerical Analysis II**
- **CSC 2680: Numerical Analysis III**
- **ENR 1560: Introduction to Engineering and Engineering Design**
- **ENR/PHY 2510: Thermodynamics**

---

³ Certain students may be given credit for courses taken at another institution.
ENR 2550: Mechanics-Statics 3
ENR 2560: Mechanics-Dynamics 3
ENR 2740: Analysis of Linear Electrical Circuits 3

Program Electives 4-8 credit hours
Choose one or two from the following.*
CHE 1560: College Chemistry II 4
CHE 2540: Organic Chemistry II 4
ENR 2580: Strength of Materials 4
PHY 2720: Modern Physics 4

Suggested first semester
CHE 1550: College Chemistry I 4
ENG 1530: English Composition II 3
ENR 1560: Introduction to Engineering and Engineering Design 3
INT 1520: Student Success Seminar 4
MAT 1710: Calculus and Analytic Geometry I 4
Social Science Elective 3

18

IMPORTANT POINTS (Refer also to page 40):
* Students routinely elect to take up to 70 credit hours to enhance transferability.
* Recommended social sciences electives are ECO 2610: Macroeconomic and/or Principles and ECO 2620: Microeconomic Principles.
* It is recommended that students planning to pursue a degree in chemical engineering replace the MAT 2670 (3 hours) requirement with CHE 2530 (4 hours), choose CHE 1560 and CHE 2540 as program electives, therefore earning 70 credit hours.
* Students are encouraged to consult with a discipline advisor prior to registering for any courses in engineering science.

ASSOCIATE IN SCIENCE

ENVIRONMENTAL SCIENCE

curriculum code: 2061 | Hegis code: 5604

minimum credit hours required: 60

It is critically important to the sustainability and viability of human society, the biodiversity of the natural world, and the life support systems of our planet that humans more closely examine, understand, and appreciate the complex interdependencies among all living things, and address the human-environment interactions which have so threatened essential natural processes. As we seek to create a more sustainable world which nurtures healthier ecosystems, vibrant human communities, and stronger economies, there is great urgency in addressing these issues and a corresponding critical need for well-trained environmental scientists and citizen-scientists at every level. This degree features key explorations and scientific tools essential for well-trained scientists and others to address the emerging environmental challenges and opportunities of today's world, and prepares students to comprehend and critically evaluate contemporary problems at the interface of nature, human institutions, and scientific study. Additionally, it engages students in the interdisciplinary examination of decisions and actions associated with being responsible citizens in a more sustainable world.

Students are well-prepared for transfer into four-year college and university baccalaureate programs such as environmental science, environmental biology, natural resource management, conservation science, forest ecosystem science, fisheries and wildlife biology, natural history, ecology, ethnobotany, soil science, biology education, sustainable agriculture, biology, and related fields. The program is housed in the new environment-friendly Science Center on the Jamestown Campus, featuring energy efficiency, resource conservation, habitat restoration, social responsibility, and sustainability.

General Degree Requirements 30-31 credit hours

| Humanities | 6 |
| ENG 1530: English Composition II | 3 |
| ENG 1540: Writing about Literature | 3 |
| Social Science | 6 |
| ECO 1530: Contemporary Economic Problems or ECO 2610: Macroeconomic Principles or ECO 2620: Microeconomic Principles | 3 |
| Social Science Elective | 3 |
| Mathematics/Sciences | 18-19 |
| MAT 1600: Precalculus (or higher) | 4 |
| Science/Math Electives | 14-15 |

Choose carefully from the math/science elective list depending on your desired transfer destination and intended area of concentration.

BIO 1830: SURI Environmental I 4
BIO 2531: Microbiology* 3
BIO 2532: Microbiology Lab 1
BIO 2560: Genetics 4
BIO 2620: Tropical Biology Seminar 3
BIO 2630: SURI Environmental II 4
CHE 2530: Organic Chemistry I 4
CHE 2540: Organic Chemistry II 4
GLG 1550: Earth Science or GLG 1510: Physical Geology 3-4
GLG 1810: Introduction to Oceanography 3
PHY 1610: General Physics I or PHY 1710: Analytical Physics I 4
PHY 1620: General Physics II or PHY 2710: Analytical Physics II 4
MAT 1540: Elementary Statistics 3

Program Core Requirements 22 credit hours

BIO 1570: Principles of Biology I 4
BIO 1580: Principles of Biology II or BIO 2660: Zoology or BIO 2670: Botany 4
BIO 2550: Conservation Biology 3
BIO/PHL 2570: Environmental Issues & Ethics or ANT/BIO/CMN 2600: Planet Earth: Connecting Critical Topics 3
CHE 1550: College Chemistry I 4
CHE 1560: College Chemistry II 4

Liberal Arts and Sciences or Career Electives 7-8 credit hours

By choosing elective courses carefully, a student may be able to include additional SUNY General Education courses to his/her curriculum.

* Students are encouraged to consult with an advisor about whether to take BIO 2532: Microbiology Lab along with BIO 2531: Microbiology.

IMPORTANT POINTS (Refer to page 40)

ASSOCIATE IN SCIENCE

FINE ARTS: MUSIC

curriculum code: 0682 | Hegis code: 5610

minimum credit hours required: 63

The A.S. in fine arts: music program is designed to prepare students for transfer to a four-year baccalaureate degree in music or a music-related field. It includes a strong core component of mathematics/science, social sciences, and humanities. The program also serves the student interested in an associate's degree as a terminal degree before pursuing employment in music or a music-related career. Students from other areas of study such as communications, multimedia, theatre, education, arts management, sound recording, audio engineering, and therapy find JCC's course offerings useful. Full- and part-time students are welcome to participate in music courses and ensembles.

General Degree Requirements 33 credit hours

| Humanities | 15 |
| ENG 1530: English Composition II | 3 |
| ENG 1540: Writing about Literature | 3 |
| MUS 1570: Music Theory I | 3 |
| MUS 1580: Music Theory II | 3 |
| MUS 2570: Music Theory III | 3 |
| Social Sciences Electives | 9 |
| Mathematics/Sciences Electives | 9 |

Program Core Requirements 30 credit hours

MUS 1510: Introduction to Music 3
MUS 1610, 2610, 2610, 2620: Applied Music: Private Lessons 3
MUS 1630: Beginning Voice 3
MUS 1670: Beginning Piano 3
MUS 1690: Piano II 3
Music Ensembles (four semesters): choose from the following: 8
MUS 1750, 1760, 2750, 2760: Chorus
MUS 1830, 1840, 2830, 2840: Jazz
MUS 1850, 1860, 2850, 2860: Rock
MUS 1870, 1880, 2870, 2880: Concert Band
MUS 1930: Aural Skills I 1
MUS 1940: Aural Skills II 1
MUS 2930: Aural Skills III 1

Music Electives 3
Choose from the following list:
MUS 1510: Introduction to Music
MUS 1590: American Music: Classical/Popular
MUS 1680: Beginning Guitar
MUS 1700: Guitar II
MUS 1710: Audio Recording
MUS 1730: Music and the Digital Studio
MUS 1890: Guitar Maintenance/Repair
MUS 2630, 2640: Applied Music: Private Lessons
MUS 2580: Music Theory IV
MUS 2890: Digital/Audio Studio Seminar
MUS 2940: Aural Skills IV

**IMPORTANT POINTS (Refer also to page 40):**
- Successful completion of a credit-bearing mathematics course is a graduation requirement.
- At the discretion of the college, a limited number of JCC music courses may be made available to multiple JCC campuses as traditional or distance learning courses. Courses delivered in the DL format will be indicated in the master schedule.
- Although the JCC program is endorsed by specific four-year colleges, schools of music will audition all entering freshman and transfer students from any other school in the following areas: solo performance, aural skills, written theory, and, often, piano skills. JCC students should consult with their advisor and prospective transfer school(s) to ensure that they are covering these important areas as required.
- Students should consult with their advisor in their choice of additional music electives to better prepare for transfer or employment.

**ASSOCIATE IN APPLIED SCIENCE**

**FINES ARTS: STUDIO ARTS**

**curriculum code: 1445 | Hegis code: 5610**

**minimum credit hours required: 60**

The A.S. in fine arts: studio arts degree program requires a strong liberal arts component of humanities, social sciences, and math/science courses. The visual arts courses begin with a thorough foundation in drawing, design, and historical survey material and permit further study in a variety of media. The program prepares the graduate to enter the workplace or transfer to art schools or four-year institutions to pursue degrees in such areas as graphic design, photography, computer graphics, fine arts, communication design, illustration, environmental design, interior design, architecture, art therapy, and art education.

**General Degree Requirements** 36 credit hours

**Humanities** 18
- ART 1500: Introduction to Art 3
- ART 1550: Survey of Visual Art (Prehistoric through Medieval) 3
- ART 1560: Survey of Visual Art (Renaissance through Contemporary) 3
- ENG 1530: English Composition II 3
- ENG 1540: Writing about Literature 3
- Any humanities elective except visual arts 3

**Social Sciences Electives** 9

**Mathematics/Sciences Electives** 9

**Program Core Requirements** 18 credit hours

- ART 1510: Drawing I 3
- ART 1520: Drawing II 3
- ART 1530: 2-D Design & Color 3
- ART 1540: 3-D Design, Concepts, Materials 3
- ART 1730: Introduction to Computer Art and Design 3

**Fine Arts Electives** 3

Choose from the following list:
- ART 1570: Basic Black and White Photography
- ART 1590: Ceramics I
- ART 1600: Creative Ceramics
- ART 1610-1623, 2610-2623: Studio Problems
- ART 1740: Graphic Design, Layout, and Publishing Basics
- ART 1750: Graphic Design Applications
- ART 2500: Watercolor
- ART 2510: Painting I
- ART 2520: Painting II
- ART 2570: Intermediate Black and White Photography

**ASSOCIATE IN APPLIED SCIENCE**

**HUMAN SERVICES**

**curriculum code: 0604 | Hegis code: 5501**

**minimum credit hours required: 60**

This degree program is designed for students seeking immediate employment after graduation in early care and education, such as Head Start, preschools, and home- or center-based care. Students may prepare for entry level positions in private or public agencies, working in individual and group settings, by completing two semesters of internship experience, and through elective course offerings.

**General Degree Requirements** 20 credit hours

- Humanities 6
  - ENG 1530: English Composition II 3
  - English elective (college level) 3
- Social Sciences Electives** 6
- Mathematics/Sciences Electives 2

**Program Core Requirements** 31 credit hours

- HUS 1210: Introduction to Human Services 3
- HUS 1280: Family Systems 3
- HUS 1410: Generalist Practice Skills 3
- HUS 2210: Field Placement I or EDU 2210: Field Placement I 4-5
- HUS 2220: Field Placement II 5
- HUS 2230: Interviewing and Counseling 3
- Human services required electives 9-10** (*Students taking HUS 2210 choose 9 credit hours. Students taking EDU 2210 choose 10 credit hours of human services or education electives.)

**Liberal Arts & Sciences and/or Career Electives** 9 credit hours

**IMPORTANT POINTS (Refer also to page 40):**
- The core requirements in this human services program include two field placements. Students currently employed in an approved human services agency may, under certain circumstances, use employment experiences to partially fulfill the field placement requirement. Permission of the instructor and the agency is required. Details must be worked out prior to registration for the course with their human services advisor.
- Students must be willing to obtain and pay for any necessary physical or medical examinations or tests which are required by some internship agencies.
- Enrollment in the human services program does not guarantee acceptance into field placements in the human services program.
- Students must complete an application for internship and approval of the application is required for all field placement courses in human services. Some internship agencies require FBI or Child Abuse Registry checks. These processes can be lengthy and may require up to four months in order for approval to be obtained prior to placement.
- PSY 1510 is a prerequisite for many HUS courses.
- PSY 1510: General Psychology I or SOC 1510: Introduction to Sociology are recommended social sciences electives.
- EDU 1250, EDU 1260, EDU 1290, EDU 1300, EDU 2150, EDU 2440, EDU 2450, EDU 2510, PSY 1550, PSY 2510, PSY 2520, and PSY 2540, and SOC 2580 can be used to fulfill HUS elective requirements.
ASSOCIATE IN SCIENCE

HUMAN SERVICES

curriculum code: 1175   |   Hegis code: 5501
minimum credit hours required: 60

This program is designed to prepare students for transfer into baccalaureate programs in social work, human services, counseling, psychology, early care and education, and other related fields. While providing a foundation of knowledge in human services, students will choose electives that match their career goals in fields such as mental health; early care and education; gerontology; alcohol and chemical dependency; and developmental, cognitive, and physical disabilities and rehabilitation services. Students will prepare for transfer and employment by completing a one-semester internship and additional liberal arts and sciences electives.

General Degree Requirements 30 credit hours

| Humanities | 6 |
| ENG 1530: English Composition II | 3 |
| ENG 1540: Writing about Literature | 3 |
| Social Sciences Electives | 6 |
| Liberal Arts and Sciences Electives | 12 |
| HUS 1210: Introduction to Human Services | 3 |
| HUS 1410: Generalist Practice Skills | 3 |
| HUS 2210: Field Placement I | 5 |
| HUS 2230: Interviewing and Counseling | 3 |
| HUS 2250: Policy and Organization | 3 |
| Human services required electives | 6 |

(Choose 6 credit hours of human services electives.)

 Liberal Arts & Sciences and/or Career Electives 7 credit hours

 IMPORTANT POINTS (Refer also to page 40):
• The core requirements in this human services program include one field placement. Students currently employed in an approved human services agency may, under certain circumstances, use employment experiences to partially fulfill the field placement requirement. Permission of the instructor and the agency is required. Details must be worked out prior to registration for the course with their human services advisor.
• Students must be willing to obtain and pay for any necessary physical or medical examinations or tests required by some internship agencies.
• Enrollment in the human services program does not guarantee acceptance into field placements in the human services program.
• Students must complete an application for internship and approval of the application is required for all field placement courses in human services. Some internship agencies require FBI or Child Abuse Registry checks. These processes can be lengthy and may require up to four months in order for approval to be obtained prior to placement.
• PSY 1510 is a prerequisite for many HUS courses.  
• PSY 1510: General Psychology I or SOC 1510: Introduction to Sociology are recommended social sciences electives.
• MAT 1540: Elementary Statistics and BIO 1500: Human Biology are recommended.

ASSOCIATE IN APPLIED SCIENCE

INDIVIDUAL STUDIES

curriculum code: 0688   |   Hegis code: 5699
minimum credit hours required: 60

The A.S. in individual studies degree is designed for students who are pursuing a transfer degree but are undecided about a career path. This degree may be completed with 18 credit hours in one of the following liberal arts and science areas: humanities, social sciences, or mathematics/sciences.

General Degree Requirements 30 credit hours

| Humanities | 6 |
| ENG 1530: English Composition II | 3 |
| ENG 1540: Writing about Literature | 3 |
| Social Sciences Electives | 6 |
| Mathematics/Sciences Electives | 6 |
| Liberal Arts and Sciences Electives | 12 |
| Liberal Arts & Sciences and/or Career Electives | 30 credit hours |

 IMPORTANT POINTS (Refer also to page 40):
• At least 30 hours in liberal arts and sciences must be present to graduate with this degree.
• Arrangements for the A.S. in individual studies degree should be done carefully and with the assistance of a counselor.
• All courses required for this degree are available online.

ASSOCIATE IN SCIENCE

INFORMATION TECHNOLOGY

curriculum code: 1492   |   Hegis code: 5101
minimum credit hours required: 60

Graduates earning the A.A.S. in information technology degree will have both an in-depth understanding of computing technology fundamentals and the skills necessary for implementation in selected environments. Students in the IT program complete several core courses and then select from a number of liberal arts and career electives. The wide range of electives provides flexibility for students as they select courses that further their technology related career goals. Graduates are able to identify technology needs and specify appropriate systems. They have the skills to perform installation, configuration, maintenance, troubleshooting, and documentation services. Depending on their choice of electives, students are directly employable in the areas of computer support, application support, along with help desk, network and database support.

General Degree Requirements 20 credit hours

| Humanities | 6 |
| ENG 1530: English Composition II | 3 |
| ENG 1540: Writing about Literature | 3 |
| Social Sciences Electives | 6 |
| Mathematics/Sciences Elective | 6 |
| Liberal Arts and Sciences Electives | 2 |
| Program Core Requirements | 25 credit hours |
| CSC 1530: Web Publishing | 3 |
| CSC 1560: Microcomputer Applications I | 4 |
| CSC 1570: Programming Concepts and Applications | 3 |
| CSC 1580: Microcomputer Hardware/Systems Software | 3 |
| CSC 1760: Microcomputer Applications II | 3 |
| CSC 2450: CIT Capstone | 3 |
| CSC 2470: Network Administration | 3 |
| CSC 2510: Introduction to Networks | 3 |
| Liberal Arts & Sciences and/or Career Electives | 15 credit hours |

 IMPORTANT POINTS (Refer to page 40):
• All courses required for this degree are available online.
• Some upper level computer science courses are only offered online.
LIBERAL ARTS AND SCIENCES: ADOLESCENCE EDUCATION

(TEACHER EDUCATION TRANSFER)

JCC's teacher education transfer degree programs provide students with knowledge, skills, theory, and hands-on educational experiences that will prepare them for transfer to a four-year institution with New York state teacher certification authority. Graduates will be able to transfer with full credit and junior status into participating SUNY four-year teacher education programs. Students will begin fulfilling their liberal arts concentration requirements along with courses in education theory and practice. Concentration areas include: biology, chemistry, earth science, English, foreign language, general science, history/social studies, mathematics, and physics.

Curriculum Code: 1804 | Hegi Code: 5649

Minimum credit hours required: 60
This program is designed to prepare students for transfer to classroom teacher preparation programs in the areas of adolescence education (grades 7-12 subject area) at four-year institutions with New York state teacher certification authority. Students who plan carefully can normally be expected to transfer to a four-year institution as juniors. The transfer institutions may have differing requirements. Students should plan their programs with a transfer counselor and an academic advisor as soon as possible and preferably before beginning their first semester at JCC.

General Degree Requirements* minimum 33 credit hours

| Humanities | 6
| ENG 1530: English Composition II | 3
| ENG 1540: Writing about Literature | 3
| Social Sciences | 3
| PSY 1510: General Psychology I | 3
| SUNY General Education Requirements* | 24-28
| Mathematics | 3-4
| Natural Sciences (lab science recommended) | 3-4
| Other World Civilizations | 3
| The Arts | 3
| American History | 3
| Western Civilization | 3
| Foreign Language | 6-8

Liberal Arts Concentration Area 12-18 credit hours
All New York state registered teacher education programs require the completion of a liberal arts concentration. Students should determine concentration areas prior to transferring to begin fulfilling concentration requirements. These courses should be selected with a transfer counselor or academic advisor and reflect the transfer institution’s requirements and the student’s area of academic concentration.

Program Core Requirements 6 credit hours
| EDU 1510: Foundations of Education | 3
| PSY 2550: Psychology of Adolescence | 3

Career Electives** 3-8 credit hours
| EDU 2210: Field Placement I | 4
| EDU 2450: Introduction to Exceptional Children | 3
| EDU 2460: Exceptional Children Field Experience | 1

IMPORTANT POINTS (Refer also to page 40):

- Students planning to transfer should work closely with a transfer counselor and an academic advisor. The degree requirements may be modified depending on the requirements of the specific transfer institution. Many transfer institutions also have specific overall GPA requirements.
- Students planning to transfer to a four-year SUNY institution to complete their teacher education baccalaureate degree must complete the entire SUNY General Education Requirements (SUNY-GER) plus an additional three credits of foreign language. Students must work closely with an academic advisor when choosing the courses to fulfill SUNY-GER.

** EDU 1510, 2210, and 2460 all include a field component. The number of field hours varies by course. It is possible to achieve a total of 165 field hours through JCC coursework.

ASSOCIATE IN SCIENCE

LIBERAL ARTS AND SCIENCES: CHILDHOOD EDUCATION

(TEACHER EDUCATION TRANSFER)

JCC's teacher education transfer degree programs provide students with knowledge, skills, theory, and hands-on educational experiences that will prepare them for transfer to a four-year institution with New York state teacher certification authority. Graduates will be able to transfer with full credit and junior status into participating SUNY four-year teacher education programs. Students will begin fulfilling their liberal arts concentration requirements along with courses in education theory and practice. Concentration areas include: art, biology, chemistry, earth science, English, foreign language, general science, history/social studies, mathematics, music, and physics.

Curriculum Code: 1802 | Hegi Code: 5649

Minimum credit hours required: 60
This program is designed to prepare students for transfer to classroom teacher preparation programs in the areas of childhood education (grades 1-6) with middle school extension (grades 7-9 subject area) at four-year institutions with New York state teacher certification authority. Students who plan carefully can normally be expected to transfer to a four-year institution as juniors. The transfer institutions may have differing requirements. Students should plan their programs with a transfer counselor and an academic advisor as soon as possible and preferably before beginning their first semester at JCC.

General Degree Requirements* minimum 33 credit hours

| Humanities | 6
| ENG 1530: English Composition II | 3
| ENG 1540: Writing about Literature | 3
| Social Sciences | 3
| PSY 1510: General Psychology I | 3
| SUNY General Education Requirements* | 24-28
| Mathematics | 3-4
| Natural Sciences (lab science recommended) | 3-4
| Other World Civilizations | 3
| The Arts | 3
| American History | 3
| Western Civilization | 3
| Foreign Language | 6-8

Liberal Arts Concentration Area 12-18 credit hours
All New York state registered teacher education programs require the completion of a liberal arts concentration. Students should determine concentration areas prior to transferring to begin fulfilling concentration requirements. These courses should be selected with a transfer counselor or academic advisor and reflect the transfer institution’s requirements and the student’s area of academic concentration.

Program Core Requirements 6 credit hours
| EDU 1510: Foundations of Education | 3
| PSY 2520: Child Development | 3

Career Electives** 3-11 credit hours
| EDU 2210: Field Placement I | 4
| EDU 2440: Children’s Literature | 3
| EDU 2450: Introduction to Exceptional Children | 3
| EDU 2460: Exceptional Children Field Experience | 1

IMPORTANT POINTS (Refer also to page 40):

- Students planning to transfer should work closely with a transfer counselor and an academic advisor. The degree requirements may be modified depending on the requirements of the specific transfer institution. Many transfer institutions also have specific overall GPA requirements.
- Students planning to transfer to a four-year SUNY institution to complete their teacher education baccalaureate degree must complete the entire SUNY General Education Requirements (SUNY-GER) plus an additional three credits of foreign language. Students must work closely with an academic advisor when choosing the courses to fulfill SUNY-GER.

** EDU 1510, EDU 2210, and EDU 2460 all include a field component. The number of field hours varies by course. It is possible to achieve a total of 165 field hours through JCC coursework.
ASSOCIATE IN SCIENCE

LIBERAL ARTS AND SCIENCES:
EARLY CHILDHOOD EDUCATION
(TEACHER EDUCATION TRANSFER)

JCC’s teacher education transfer degree programs provide students with knowledge, skills, theory, and hands-on educational experiences that will prepare them for transfer to a four-year institution with New York state teacher certification authority. Graduates will be able to transfer with full credit and junior status into participating SUNY four-year teacher education programs. Students will begin fulfilling their liberal arts concentration requirements along with courses in education theory and practice. Concentration areas include: art, biology, chemistry, earth science, English, foreign language, general science, history/social studies, mathematics, music, and physics.

curriculum code: 1803  |  Hegis code: 5649
minimum credit hours required: 60

This program is designed to prepare students for transfer to classroom teacher preparation programs in the areas of early childhood education (birth through grade 2) at four-year institutions with New York state teacher certification authority. Students who plan carefully can normally be expected to transfer to a four-year institution as juniors. The transfer institutions may have differing requirements. Students should plan their programs with a transfer counselor and an academic advisor as soon as possible and preferably before beginning their first semester at JCC.

General Degree Requirements*  minimum 33 credit hours

| Humanities | 6 |
| ENG 1530: English Composition II | 3 |
| ENG 1540: Writing about Literature | 3 |
| Social Sciences | 3 |
| PSY 1510: General Psychology I | 3 |
| SUNY General Education Requirements* | 24-28 |
| Mathematics | 3-4 |
| Natural Sciences (lab science recommended) | 3-4 |
| Other World Civilizations | 3 |
| The Arts | 3 |
| American History | 3 |
| Western Civilization | 3 |
| Foreign Language | 6-8 |

Liberal Arts Concentration Area  12-18 credit hours

All New York state registered teacher education programs require the completion of a liberal arts concentration. Students should determine concentration areas prior to transferring to begin fulfilling concentration requirements. These courses should be selected with a transfer counselor or academic advisor and reflect the transfer institution’s requirements and the student’s area of academic concentration.

Program Core Requirements  6 credit hours

| EDU 1510: Foundations of Education | 3 |
| PSY 2520: Child Development | 3 |

Career Electives**  3-14 credit hours

<table>
<thead>
<tr>
<th>Early Childhood Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDU 2150: Infant/Toddler Development and Education</td>
</tr>
<tr>
<td>EDU 2210: Field Placement I</td>
</tr>
<tr>
<td>EDU 2440: Children’s Literature</td>
</tr>
<tr>
<td>EDU 2450: Introduction to Exceptional Children</td>
</tr>
<tr>
<td>EDU 2460: Exceptional Children Field Experience</td>
</tr>
</tbody>
</table>

IMPORTANT POINTS (Refer also to page 40):

- Students planning to transfer should work closely with a transfer counselor and an academic advisor. The degree requirements may be modified depending on the requirements of the specific transfer institution.
- Many transfer institutions also have specific overall GPA requirements.
- Students planning to transfer to a four-year SUNY institution to complete their teacher education baccalaureate degree must complete the entire SUNY General Education Requirements (SUNY-GER) plus an additional three credits of foreign language. Students must work closely with an academic advisor when choosing the courses to fulfill SUNY GER.
- EDU 1510, EDU 2150, EDU 2210, and EDU 2460 all include a field component. The number of field hours varies by course. It is possible to achieve a total of 185 field hours through JCC coursework.

ASSOCIATE IN ARTS

LIBERAL ARTS AND SCIENCES:
HUMANITIES

curriculum code: 0201  |  Hegis code: 5649
minimum credit hours required: 60

This program leads to the Associate in Arts degree and is designed to prepare students for transfer to a four-year college or university to earn a baccalaureate degree in an area of the humanities. Humanities is one of the broadest of the academic disciplines and offers students a great deal of flexibility and significant freedom in course selections. Working with their faculty advisors, JCC students can create academic concentrations in art, English, philosophy, modern language, music, and theatre as a preparation for the completion of the associate degree and eventually the baccalaureate degree. Students in this liberal arts program can study abroad as JCC students and earn credits toward their associate degree.

General Degree Requirements  48 credit hours

| Humanities | 24 |
| ENG 1530: English Composition II | 3 |
| ENG 1540: Writing About Literature | 3 |
| Humanities Electives* | 15 |
| Modern Language | 3 |
| Social Sciences Electives | 9 |
| Mathematics/Sciences Electives** | 9 |
| Liberal Arts and Sciences Electives*** | 6 |

Liberal Arts & Sciences and/or Career Electives  12 credit hours

IMPORTANT POINTS (Refer also to page 40):

- Students are required to take at least 12 hours of upper division (2000-level) coursework in humanities electives.
- Students are required to take MAT 1500: Problem Solving with Mathematics or higher.
- Must be upper division (2000-level) coursework.
- Students are required to take a 3-4 credit hour modern language course, excluding sign language courses. This requirement is waived for students who have successfully completed the Regents Foreign Language III exam with a score of 85% or above.
- If students know the area they would like to major in at their transfer institution, they could choose to concentrate in a field such as philosophy, literature, or writing.

48
ASSOCIATE IN SCIENCE

LIBERAL ARTS AND SCIENCES:

MATH & SCIENCE

curriculum code: 0645  |  Hegis code: 5649
minimum credit hours required: 60

With an emphasis on the study of mathematics, science, or both, this program parallels the first two years of course content for the Bachelor of Science or Bachelor of Arts degrees offered by many four-year colleges or universities. Working with faculty advisors, students can carefully select courses at JCC which will prepare them for transfer into baccalaureate programs in mathematics, biology, chemistry, geology, physics, and environmental science and forestry. Many students interested in careers in pharmacy, medicine, dentistry, veterinary medicine, medical technology, and related areas begin their studies in this degree program. It is very important for a student to learn the requirements of the first two years of any college to which he or she may wish to transfer.

General Degree Requirements

| Humanities | 6 credit hours |
| ENG 1530: English Composition II | 3 |
| ENG 1540: Writing about Literature | 3 |
| Social Sciences Electives | 3 |
| Mathematics/Sciences Electives* | 24 |

Liberal Arts and Sciences and/or Career Electives | 24 credit hours

IMPORTANT POINTS (Refer also to page 40):
* Math and computer sciences courses numbered below 1500 do not meet requirements for this degree.
• One course in mathematics at the level of MAT 1710: Calculus and Analytical Geometry I or higher is required.
• A two-semester sequence in laboratory science in biology, chemistry, geology, or physics is required, and four semesters of science is recommended.
• A GPA of at least 2.0 in math/science coursework is required for graduation.

ASSOCIATE IN ARTS

LIBERAL ARTS AND SCIENCES:

SOCIAL SCIENCE

curriculum code: 0212  |  Hegis code: 5649
minimum credit hours required: 60

This program is designed to prepare students for transfer to a four-year college or university to earn a baccalaureate degree in an area of the social sciences. The social and behavioral sciences are concerned primarily with the development and activity of human beings both as individuals and in society. Disciplines included in the broad area of the social sciences include anthropology, history, political science, economics, geography, criminal justice, psychology, and sociology. The social sciences curriculum offered by JCC is an excellent transfer program since it parallels the degree requirements of most baccalaureate liberal arts programs. Working closely with their faculty advisors, students can select their courses to meet degree requirements and be prepared to complete a baccalaureate degree at a transfer institution with two additional years of full-time study. Many graduates of four-year programs whose bases are in the social sciences seek careers in psychology, teaching, government, and social work.

General Degree Requirements

| Humanities | 48 credit hours |
| ENG 1530: English Composition II | 3 |
| ENG 1540: Writing about Literature | 3 |
| Social Sciences Electives | 3 |
| (courses numbered 1500-1990 or 2500-2990) | 24 |
| Mathematics/Sciences Electives | 9 |
| Liberal Arts and Sciences Electives | 6 |

Liberal Arts & Sciences and/or Career Electives | 12 credit hours

IMPORTANT POINTS (Refer also to page 40):
• Students are required to take courses in at least three different areas of social sciences.
• Students are required to take at least one 2000-level social science course.

ASSOCIATE IN APPLIED SCIENCE

MECHANICAL TECHNOLOGY

curriculum code: 0595  |  Hegis code: 5315
minimum credit hours required: 63

Machine Tool Specialization: 63
Design Specialization: 63

This career program is for students desiring employment in the field of mechanical or industrial engineering technology. Graduates may qualify for positions such as machine, tool, and product designer; industrial laboratory technician; inspector; production control technician; sales, field, or safety technician; CAD operator; and other related positions. Graduates also have the option of transferring to four-year institutions offering the bachelor’s degree in mechanical technology.

General Degree Requirements

| Humanities | 20 credit hours |
| ENG 1530: English Composition II | 3 |
| English Elective (college level) | 3 |
| Social Sciences Electives | 6 |
| Mathematics/Sciences | 8 |
| MAT 1220: Applied Mathematics for Technology* or MAT 1590: College Algebra & Trigonometry | 4 |
| PHY 1250: Technical Physics I* | 4 |

Program Core Requirements

| CSC 1310: Introduction to the World Wide Web* | 1 |
| CSC 1320: Introduction to Electronic Word Processing* | 1 |
| MCT 1240: Engineering Drawing with AutoCAD | 3 |
| MCT 1270: Machine Theory and Operations | 3 |
| MCT 1280: Computer Numerical Control of Machine Tools | 3 |
| MCT 1380: Introduction to Solid Modeling | 3 |
| MCT 2390: Advanced Solid Modeling | 3 |
| MCT 2420: Manufacturing Processes I | 3 |

Machine Tool Specialization specific degree requirements

| Specialty Core Requirements | 22 credit hours |
| MCT 1300: Machine Tool Technology II | 4 |
| MCT 1340: Manufacturing Drawings/Geometric Dimensioning & Tolerancing | 3 |
| MCT 2280: Advanced CNC Programming | 3 |
| MCT 2300: Machine Tool Technology III | 4 |
| MCT 2340: Dimensional Metrology | 2 |
| MCT 2410: Computer-Aided Manufacturing | 3 |
| WLD 2370: Metallurgy | 3 |

Suggested Technical Electives

| MAT 1250: Applied Technical Calculus* | 4 |
| MCT 1250: Fundamentals of Mechanics | 3 |
| MCT 2230: Mechanics of Materials | 4 |
| PHY 1260: Technical Physics II* | 4 |

Design Specialization specific degree requirements

| Specialty Core Requirements | 22 credit hours |
| MCT 1250: Statics for Technology | 3 |
| MCT 2230: Mechanics for Materials | 4 |
| MCT 2270: Mechanics of Energy Systems | 4 |
| Mathematics/Sciences | 4 |
| CSC 1570: Programming Concepts Applications | 3 |
| MAT 1250: Applied Technical Calculus or MAT 1600: Precalculus | 4 |
| PHY 1260: Technical Physics II | 4 |

Suggested Technical Electives

| DCT 1210: Electrical/Electronic Concepts | 3 |
| DCT 1220: Programmable Logic Controllers | 3 |
| MCT 1290: AutoCAD | 2 |

IMPORTANT POINTS (Refer also to page 40):
• To complete the program in two years, students must begin in a fall semester at the appropriate levels of math.
* CSC 1310-1330 are 5-week courses that represent a full three-credit hour course.
• With the appropriate mathematical background students may elect to take MAT 1600 and/or MAT 1710.
† Students with appropriate background may opt for PHY 1610 or 1710.
‡ Students who plan to transfer should consider taking this course to prepare them for their transfer institution.
• MAT 1220 and MAT 1590 have a prerequisite of MAT 0600 or two years of high school algebra/geometry and placement exam.
ASSOCIATE IN SCIENCE

MEDIA ARTS

curriculum code: 1732  |  Hegis code: 5012
minimum credit hours required: 60

This general media arts curriculum is intended for students who wish to transfer to four-year institutions to pursue further study in media and/or multimedia production. This program can also serve the needs of students seeking entry level employment in those areas, or for students currently employed in those areas who wish to upgrade their skills and continue their education.

General Degree Requirements

<table>
<thead>
<tr>
<th>Humanities</th>
<th>30 credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1530: English Composition II</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1540: Writing about Literature</td>
<td>3</td>
</tr>
<tr>
<td>One sophomore level humanities course chosen from the following:</td>
<td></td>
</tr>
<tr>
<td>CMM 2530: Writing for Electronic Media</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2740: News Writing and Editing</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2840: Film Study and Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>Social Sciences Electives</td>
<td>9</td>
</tr>
<tr>
<td>Mathematics/Sciences Electives</td>
<td>9</td>
</tr>
<tr>
<td>Liberal Arts and Sciences Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

Program Core Requirements

<table>
<thead>
<tr>
<th>Program Core Requirements</th>
<th>27 credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMM 1510: Introduction to Communication</td>
<td>3</td>
</tr>
<tr>
<td>CMM 1610: Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>CMM 1750: The Rhetoric of Vision and Sound</td>
<td>3</td>
</tr>
<tr>
<td>CMM 2610: Mass Communication and Media Literacy</td>
<td>3</td>
</tr>
<tr>
<td>One production course chosen from the following:</td>
<td></td>
</tr>
<tr>
<td>ART 1730: Introduction to Computer Art and Design</td>
<td>3</td>
</tr>
<tr>
<td>CMM 1710: Digital Video Production</td>
<td></td>
</tr>
</tbody>
</table>

Required Electives*

Chosen from the following:

| ART 1510: Drawing I | 3 |
| ART 1530: 2-D Design and Color | 3 |
| ART 1570: Basic Black and White Photography | 3 |
| ART 1611/2611: Studio Problems in Computer Graphics | 3 |
| ART 1613/2613: Studio Problems in Photography | 3 |
| ART 1670: Introduction to Digital Photography | 3 |
| ART 1730: Introduction to Computer Art and Design | 3 |
| ART 1740: Graphic Design, Layout, and Publishing Basics | 3 |
| ART 1750: Graphic Design Application | 3 |
| ART 2570: Intermediate Black and White Photography | 3 |
| ART 2730: Web Design and Animation | 3 |
| ART 2800: Interactive Design | 3 |
| CMM 1630: Introduction to Television Production | 3 |
| CMM 1650: Introduction to Broadcasting | 3 |
| CMM 1710: Digital Video Production | 3 |
| CMM 2560: Communication/Media Arts Internship | 3 |
| CSC 1530: Internet and Web Publishing | 3 |
| MUS 1710: Audio Recording | 3 |
| MUS 1730: Music and the Digital Studio | 3 |

Additional Liberal Arts & Sciences and/or Career Electives | 3 credit hours

IMPORTANT POINTS (Refer also to page 40):
* Students are advised to select program electives after careful consultation with their advisors.

ASSOCIATE IN APPLIED SCIENCE

MEDICAL OFFICE TECHNOLOGY

curriculum code: 1664  |  Hegis code: 5214
minimum credit hours required: 60-61

This career program provides students with the skills necessary to prepare for employment in today’s medical office. The program offers an education that will prepare a student in automated medical office communications, medical terminology, medical coding, medical transcription and medical insurance, along with a broad background in liberal arts that will add to students’ ability to develop decision-making skills. Upon completion of this program, students will be able to enter the job market or transfer to a four-year institution.

General Degree Requirements

<table>
<thead>
<tr>
<th>Humanities</th>
<th>21-22 credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1530: English Composition II</td>
<td>3</td>
</tr>
<tr>
<td>English Electives (college level)</td>
<td>3</td>
</tr>
<tr>
<td>CMM 1510: Introduction to Communication or</td>
<td></td>
</tr>
<tr>
<td>CMM 1610: Public Speaking</td>
<td></td>
</tr>
<tr>
<td>Social Sciences Electives</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics/Sciences</td>
<td>6-7</td>
</tr>
<tr>
<td>BIO 1500: Human Biology or</td>
<td>4</td>
</tr>
<tr>
<td>BIO 1510: Health Science</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

Program Core Requirements

<table>
<thead>
<tr>
<th>Program Core Requirements</th>
<th>36 credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 1220: College Keyboarding</td>
<td>3</td>
</tr>
<tr>
<td>BUS 1320: Word Processing</td>
<td>3</td>
</tr>
<tr>
<td>BUS 1410: Accounting Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2420: Professional Development/Internship</td>
<td>5</td>
</tr>
<tr>
<td>CSC 1560: Microcomputer Applications I</td>
<td>4</td>
</tr>
<tr>
<td>MOT 1410: Medical Terminology</td>
<td>3</td>
</tr>
<tr>
<td>MOT 1420: Medical Office Procedures</td>
<td>3</td>
</tr>
<tr>
<td>MOT 2430: Medical Transcription</td>
<td>3</td>
</tr>
<tr>
<td>MOT 2440: Medical Coding I (CPT)</td>
<td>3</td>
</tr>
<tr>
<td>MOT 2450: Medical Coding II (ICD-9-CM)</td>
<td>3</td>
</tr>
<tr>
<td>Business Electives* (to complement the program)</td>
<td>3</td>
</tr>
</tbody>
</table>

Liberal Arts and Sciences and/or Career Electives

<table>
<thead>
<tr>
<th>Liberal Arts and Sciences and/or Career Electives</th>
<th>3 credit hours</th>
</tr>
</thead>
</table>

IMPORTANT POINTS (Refer also to page 40):
* Students are encouraged to consult with an advisor prior to selecting electives.
* All courses required for this degree are available online.
ASSOCIATE IN APPLIED SCIENCE

NURSING
curriculum code: 0622  |  Hegis code: 5208.1
minimum credit hours required: 71
Upon completion of the nursing program, the graduate will be educationally prepared to provide patient-centered care to individuals across the lifespan with diverse cultures who are experiencing disruptions in biophysical and psychosocial dimensions in a variety of healthcare settings. The graduate will provide care utilizing the National League for Nursing (NLN) Association Degree (AD) competencies, Quality and Safety Education for Nurses (QSEN) competencies, and practice within the three roles of the AD nurse. The graduate will be prepared to take the National Council of State Boards for Licensure Examination (NCLEX-RN) to become a nurse.

General Degree Requirements
29 credit hours

Humanities
ENG 1530: English Composition II 6
English Electives (college level) 3

Social Sciences
PSY 1510: General Psychology I 3
PSY 2510: Life Span Development 3

Mathematics/Sciences
BIO 2510: Anatomy and Physiology I* 4
BIO 2520: Anatomy and Physiology II* 4
BIO 2531: Microbiology 3
BIO 2760: Nutrition 3
MAT 1500: Problem Solving with Mathematics 3
(or a higher level mathematics course; MAT 1540 is required by most baccalaureate programs)

Program Core Requirements
40 credit hours
NUR 1500: Basic Pharmacology & Dosage Calculations 1
NUR 1510: Foundations of Nursing* 6
NUR 1520: Health Restoration 7
NUR 2350: Pharmacology for Nurses 3
NUR 2510: Health Restoration and Maintenance I* 8
NUR 2520: Health Restoration and Maintenance II* 8
NUR 2550: Pathophysiology I 2
NUR 2560: Pathophysiology II 2
NUR 2970: Health Assessment 3

Liberal Arts and Sciences and/or Career Electives
2 credit hours
NUR 1510 may not progress to NUR 1520 with a grade lower than a “C.” Students will be administratively dropped from the nursing program and will be required to reapply for admission.

NUR 2520: Anatomy and Physiology II must be taken concurrently with or prior to NUR 2510 and must be completed with a minimum grade of “C.” Students in NUR 2510 may not progress to NUR 2520 with a grade lower than a “C” in NUR 2510. Students will be administratively dropped from the nursing program and will be required to reapply for admission.

A minimum grade of C is required in each nursing core course. A student will be permitted to repeat one nursing core course (NUR 1510, NUR 1520, NUR 2510, and NUR 2520) one time. Should the student be unsuccessful in more than one nursing core course, he/she will be ineligible to continue in the nursing program. Students who are unsuccessful in more than one nursing core course and have already repeated one core course will not be eligible to repeat a second nursing core course. Withdrawal from a core nursing course after the first 30 calendar days will be considered a failure of the course for reapplication purposes. In case of illness or other extreme circumstances, the faculty may consider a one-time exception.

Students entering the nursing program may only have two opportunities to successfully complete Anatomy and Physiology I and/or II with a “C” grade or better. Students who have taken Anatomy and Physiology I or II more than twice will not be permitted to enter or continue in the nursing program.

Prior to entrance into NUR 1510, students are required to present evidence of completion of a course in Basic Life Support (BLS) that includes infant, child, and adult CPR.

See pages 10-13 for nursing program admission information.

ASSOCIATE IN APPLIED SCIENCE

OCCUPATIONAL THERAPY ASSISTANT
curriculum code: 0665  |  Hegis code: 5210
minimum credit hours required: 66
Upon completion of the occupational therapy assistant program, the associate degree graduate will be educationally prepared to provide service to individuals having difficulties in living due to developmental deficits, physical injury and illness, psychological and social disabilities; and the aging process. The occupational therapy assistant works with, and under the direction of, a registered occupational therapist, and assists with the processes of client evaluation, goal setting, implementation of care, and documentation of occupational therapy services. The coursework includes a series of general education courses with an emphasis on the biological and psychological sciences. Professional studies focus on how human occupational development is affected by illness and injury, and how function can be facilitated.

General Degree Requirements
26 credit hours

Humanities
ENG 1530: English Composition II 6
ENG 1540: Writing about Literature 3

Social Sciences
PSY 1510: General Psychology I 3
SOC 1510: Introduction to Sociology 3
PSY 2560: Abnormal Behavior 3

Mathematics/Sciences
MAT 1500: Prob. Solving Math 3
BIO 2510: Anatomy and Physiology I 4
BIO 2520: Anatomy and Physiology II 4
MAT 1500: Problem Solving with Mathematics 3
(or a higher level mathematics course; MAT 1540: Elementary Statistics, is recommended)

Program Core Requirements
40 credit hours
OTA 1510: Foundations of Occupational Therapy 3
OTA 1520: Medical Specialties 3
OTA 1530: Fundamental Skills of OTA I 1
OTA 1620: Psychosocial Concepts and Techniques 2
OTA 1630: Fundamental Skills of OTA II 1
OTA 1640: Therapeutic Groups 2
OTA 1650: The Growing Years: Birth to Young Adult 3
OTA 1700: Fieldwork I A 1
OTA 2520: Adulthood and Aging 2
OTA 2540: Fieldwork I B 1
OTA 2550: Technology & Environmental Apps for Living 3
OTA 2560: OT Intervention Across the Lifespan 1
OTA 2570: Classroom to Clinic: Preparation for Practice 2
OTA 2620: Physical Rehabilitation 3
OTA 2700: Fieldwork IIA: Principles of Practice 6
OTA 2720: Fieldwork IIB: Service Management 6

IMPORTANT POINTS (Refer also to page 40):
• To be admitted into the OTA program, students must have successfully completed high school chemistry, CHE 1500, or CHE 1530 and must be eligible for ENG 1530.
• Students must have online computer access to successfully meet course requirements.
• Students are responsible for meeting the screening requirements for each facility and incurring screening expenses.
• Fingerprints and criminal background checks must be completed prior to second semester OTA coursework and Level I and Level II fieldwork placement.
• Health physicals and Mantoux tests must be updated annually.
• The four-semester sequence of OTA courses begins each fall semester.
• OTA courses are only offered one on the Jamestown Campus. All other required courses are scheduled so they may be taken at either the Jamestown or Cattaraugus County campuses.
• All OTA courses, other than fieldwork, are only offered one time per year and must be taken sequentially starting in the fall.
• Transfer options are available and require additional coursework.
• BIO 2510 and BIO 2520: Anatomy and Physiology I and II must be completed with a minimum grade of “C.”
• All students must successfully pass each OTA course with a minimum
grade of “C” and a GPA of 2.5 or better to enroll in OTA 2700 and OTA 2720. A student will be permitted to repeat two OTA core courses one time. Should the student be unsuccessful in repeating any OTA course, he/she would be ineligible to continue in the OTA program. Should a student be required to repeat more than two OTA core courses he/she will be ineligible to continue in the OTA program.

- Both course and fieldwork levels I and II experiences require travel. Students must have transportation to participate and successfully meet all course and fieldwork requirements. Special housing may be needed for one or both Level II fieldwork experiences.
- All students will take OTA 1700 either concurrently with OTA 2520 and OTA 1650 or during the summer following completion of OTA 2520 and OTA 1650.
- All OTA students must complete the full-time Level II Fieldwork within 12 months following completion of OTA 2510, 2530, 2550, and 2620.
- CPR certification through the American Red Cross or the American Heart Association (Basic Life Support for Health Care Providers) is required prior to registering for OTA 2700 or OTA 2720.
- JCC’s OTA program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, Suite 200, Bethesda, MD 20814-3449. ACOTE’s telephone number is 301.652.AOTA.

ASSOCIATE IN APPLIED SCIENCE

OFFICE TECHNOLOGY

curriculum code: 0667   |   Hegis code: 5005
minimum credit hours required: 60

The A.A.S. degree in office technology provides the student with skills necessary to prepare for employment in an office position. Training is available for those who have had no office preparation and for students with limited office skills who desire to enhance or update present skills. The program may also offer short-term training and development to those seeking a career change or return to the job market. Students who value lifelong learning may also be attracted to this program. The program focus is skill building in the areas of keyboarding, word processing, office communications, and office procedures. Courses in business management, computer courses, and a broad background in liberal arts will add to the student’s ability to develop decision-making skills. The ability to solve problems will be stressed throughout the program. Upon completion of the program, students will be able to enter the workplace or transfer credits to a four-year institution.

General Degree Requirements

21 credit hours

| Humanities | 9 |
| ENG 1530: English Composition II | 3 |
| English Electives (college level) | 3 |
| CMM 1510: Introduction to Communications or CMM 1610: Public Speaking | 3 |

| Social Sciences Electives | 6 |
| Mathematics/Sciences | 6 |
| Mathematics Elective | 3 |
| Mathematics/Sciences Elective | 3 |

Program Core Requirements

39 credit hours

| BUS 1220: College Keyboarding | 3 |
| BUS 1320: Word Processing | 3 |
| BUS 1410: Accounting Fundamentals | 3 |
| BUS 1420: Office Procedures | 3 |
| BUS 1500: Introduction to Business | 3 |
| BUS 2320: Word Processing Production | 3 |
| BUS 2420: Professional Development/Internship | 5 |
| BUS 2480: Business Electronic Communications | 3 |
| Business Electives* (to complement the program) | 9 |
| CSC 1560: Microcomputer Applications I | 4 |

IMPORTANT POINTS (Refer also to page 40):

- Students are encouraged to consult with an advisor prior to selecting electives.

ASSOCIATE IN SCIENCE

PHYSICAL EDUCATION STUDIES

curriculum code: 1659   |   Hegis code: 5299
minimum credit hours required: 60

The program is designed to provide students with knowledge, physical skills, theory, and educational experiences which will prepare them for transfer to an accredited baccalaureate program in physical education, health studies, or related area. Graduates will be prepared to pursue a degree program in physical education teaching, athletic training, sports management, adaptive physical education, coaching, exercise science, sports medicine, and/or health education.

General Degree Requirements

33 credit hours

| Humanities | 6 |
| ENG 1530: English Composition II | 3 |
| ENG 1540: Writing About Literature | 3 |
| Social Sciences Electives* | 9 |
| Mathematics/Sciences | 18 |
| Sciences Elective | 15 |
| Mathematics Elective | 3 |

Program Core Requirements

12 credit hours minimum

PHE 1670: Introduction to Physical Education | 3 |
Physical Education Electives* | 9 |

Liberal Arts and Sciences and/or Career Electives* | 15 credit hours

IMPORTANT POINTS (Refer also to page 40):

* Requirements for bachelor’s degrees in this field vary widely. Selection of electives should be made in close consultation with an advisor and should be based on student career concentration and transfer college requirements.
ASSOCIATE IN APPLIED SCIENCE

PROFESSIONAL PILOTING
curriculum code: 1494   |   Hegis code: 5302
minimum credit hours required: 60
This program is designed to prepare students to enter the field of aviation as a professional pilot. Students successfully completing the program will have earned the Federal Aviation Administration (FAA) certifications of Private and Commercial Pilot, with Instrument Rating, and be a Certified Flight Instructor - Airplane. All instruction occurs under Part 141 of the Federal Aviation Regulations (FARs). Students may also elect to obtain the multi-engine and the Certified Flight Instructor - Instrument ratings. Graduates may choose to work as a Certified Flight Instructor which will allow them to log the same hours as their students, earn pay, and not pay airplane rental fees. Students planning to work for the commercial airlines are encouraged to earn a four-year degree.

General Degree Requirements 20 credit hours
Humanities 6
ENG 1530: English Composition II 3
English Elective (college level) 3
Social Sciences 6
GEO 1520: World Regional Geography 3
Social Sciences Elective 3
Mathematics/Sciences 7
MAT 1590: College Algebra and Trigonometry 4
MET 1510: Introduction to Meteorology 3
Liberal Arts and Sciences Elective 1

Program Core Requirements 28.5-31 credit hours
AVN 1100: Aircraft Powerplants and Systems 3
AVN 1140: Private Pilot Ground School 3
AVN 1150: Private Pilot Flight 1.5
AVN 1200: Survey of Air Traffic Control 3
AVN 1240: Instrument Pilot Ground School 3
AVN 1250: Instrument Pilot Flight 1.5
AVN 1340: Commercial Pilot Ground School I 1.5
AVN 1350: Commercial Pilot Flight I 1.5
AVN 2100: Aviation Safety 3
AVN 2140: Commercial Pilot Ground School II 1.5
AVN 2150: Commercial Pilot Flight II 2.5
AVN 2200: Advanced Aircraft Systems 3
AVN 2250: Certified Flight Instructor I - Airplane or AVN 2350 3 or 5

Liberal Arts & Sciences and/or Career Electives 9-11.5 credit hours

IMPORTANT POINTS (Refer also to page 40):
• Ground school and flight instruction are offered at Dunkirk Aviation, Jamestown Aviation, Prior Aviation, Rochester Air Center, Hirsch Aviation, and other approved fixed-base operators (FBOs).

ASSOCIATE IN APPLIED SCIENCE

WELDING TECHNOLOGY
curriculum code: 1643   |   Hegis code: 5308
Minimum credit hours required: 63
This career program is for students desiring employment in the expanding field of welding and welding technology engineering. Graduates will have the opportunity to pursue careers such as welding technician, welding supervisor, inspector, and sales engineer, qualifying for technician level positions involved in testing and improving welding processes, procedures, and equipment. Graduates also have the option of transferring to four-year institutions offering the bachelor’s degree in welding engineering technology.

General Degree Requirements 28 credit hours
Humans 6
ENG 1530: English Composition II 3
English Elective (college level) 3
Social Science Electives 6
Mathematics/Sciences 16
MAT 1220: Applied Mathematics for Technology** or MAT 1590: College Algebra & Trigonometry 4
MAT 1250: Technical Calculus† or MAT 1600 4
PHY 1250: Technical Physics I † 4
PHY 1260: Technical Physics II † 4

Program Core Requirements 35 credit hours
CSC 1310: Introduction to Word Processing* 1
CSC 1320: Introduction to Spreadsheets* 1
WLD 1350: Shielded Metal Arc Welding 3
WLD 1360: Gas Metal Arc Welding 3
WLD 1370: Gas Tungsten Arc Welding 3
WLD 2250: Advanced SMAW 3
WLD 2260: Advanced GMAW 3
WLD 2270: Advanced GTAW 3
WLD 2350: Fabrication 3
WLD 2360: Alternate Processes 3
WLD 2370: Metallurgy 3
WLD 2450: Capstone Project 2

Suggested first semester
INT 1520: Student Success Seminar 1
MAT 1220: Applied Math for Technology or MAT 1590: College Algebra & Trigonometry 4
WLD 1200: Safety and Cutting Processes 3
WLD 1350: Shielded Metal Arc Welding 3
WLD 1360: Gas Metal Arc Welding 3
WLD 1370: Gas Tungsten Arc Welding 3

IMPORTANT POINTS (Refer to page 40):
Notes: If a student enters the program requiring ENG 0430 and ENG 0410, the student should delay CSC 1310-1330 modules until later in the program.
* CSC 1310-1330 are five-week courses that represent a time commitment of 15 weeks equivalent to a full three-credit hour course.
** MAT 1220 and MAT 1590 have a prerequisite of MAT 0600 or two years of high school algebra/geometry and placement exam.
† With the appropriate mathematical background students may elect to take MAT 1710.
‡ Students with appropriate background may opt for PHY 1610/1620 or PHY 1710/1720.
§ Students who plan to transfer to Ferris State University must take this course to ensure being accepted into the fifth semester of the welding engineering technology program at Ferris State University.
• To complete the program in two years, students must begin in a fall semester at the appropriate levels of math.
• Students should discuss selection of mathematics courses with their advisor.
Academic Programs - Certificate

The college offers certificate programs to persons who desire to take college courses but who do not wish as extensive a program as those leading to degrees. The selection of college courses is a unique task for each student, since needs, objectives, and tastes differ from one individual to another. The certificate in special studies may be awarded upon completion of courses listed in the certificates in special studies areas found below. The certificate in individual studies may be awarded upon completion of 30 credit hours which meet half of the liberal arts and science requirements of the Associate in Arts, the Associate in Science, or the Associate in Applied Science Degree. Students interested in earning the certificate in special studies or individual studies should consult their faculty advisors to insure the proper selection of courses.

CERTIFICATE PROGRAM:

COMPUTER-AIDED DESIGN & COMPUTER NUMERICAL CONTROL

Curriculum code: 1681 | Hegis code: 5303
Minimum credit hours required: 27-28

This certificate prepares students for entry level manufacturing positions requiring skills in engineering drawing, computer-aided design, and computer numerical control. Students will receive instruction on systems including SolidWorks, AutoCAD, a three-axis machining center and a CNC turret lathe. Upon completion of this certificate, students will be prepared to assume job titles including CAD operator, CAD designer, CNC operator, and CNC programmer.

General Certificate Requirements

<table>
<thead>
<tr>
<th>Humanities</th>
<th>10 credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Sciences Elective</td>
<td></td>
</tr>
<tr>
<td>Mathematics/Sciences Elective</td>
<td></td>
</tr>
<tr>
<td>MAT 1220: Applied Mathematics for Tech or MAT 1590</td>
<td></td>
</tr>
</tbody>
</table>

Program Core Requirements

| MCT 1240: Engineering Drawing with AutoCAD | 17-18 credit hours |
| MCT 1270: Machine Theory and Operations   | 3                |
| MCT 1280: CNC/Machine Tools               | 3                |
| MCT 1380: Introduction to Solid Modeling  | 3                |
| MCT 2380: Advanced Solid Modeling         | 3                |
| Engineering elective (MCT 1390: AutoCAD is recommended) | 2-3            |

IMPORTANT POINTS (Refer also to page 40):

- Due to prerequisite requirements for some courses, the minimum completion time of this certificate is three semesters (beginning with the fall semester).

CERTIFICATE PROGRAM:

DIGITAL AUDIO PRODUCTION

Curriculum code: 1781 | Hegis code: 5008
Minimum credit hours required: 31

The primary goal of the certificate in digital audio production is to provide students a sequence of study that will offer them artistic and technical skills vital to the contemporary media design workplace. The coursework is intended to provide suitable preparation for entry level employment in computer design and publishing; it also enables people currently employed in computer design and publishing a means to upgrade and expand their skills.

General Certificate Requirements

<table>
<thead>
<tr>
<th>Humanities</th>
<th>9 credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1510: English Composition (or above)</td>
<td></td>
</tr>
<tr>
<td>Social Sciences Elective</td>
<td></td>
</tr>
<tr>
<td>HIS 1540: US History Since 1865 or PSY 1510: General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics/Sciences Elective</td>
<td></td>
</tr>
<tr>
<td>CSC 1510: Introduction to Computer Science is recommended</td>
<td>3</td>
</tr>
</tbody>
</table>

Program Core Requirements

| MUS 1510: Introduction to Music         | 22-23 credit hours |
| MUS 1570: Music Theory I               | 3                |
| MUS 1670: Beginning Piano              | 3                |
| MUS 1710: Audio Recording              | 3                |
| MUS 1730: Music and the Digital Studio | 3                |
| MUS 2890: Digital/Audio Studio Seminar | 3                |
| One course chosen from the list below  |                 |
| MUS 1590: American Music: Classic Popular | 1-2            |

IMPORTANT POINTS (Refer also to page 40):

- Students are advised to select program electives after careful consultation with their advisors.

CERTIFICATE PROGRAM:

DIGITAL GRAPHIC DESIGN & PUBLISHING

Curriculum code: 1782 | Hegis code: 5012
Minimum credit hours required: 33

The primary goal of the certificate in digital design and publishing is to provide students a sequence of study that will offer them artistic and technical skills vital to the contemporary media design workplace. The coursework is intended to provide suitable preparation for entry level employment in computer design and publishing; it also enables people currently employed in computer design and publishing a means to upgrade and expand their skills.

General Certificate Requirements

<table>
<thead>
<tr>
<th>Humanities</th>
<th>9 credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Sciences Elective</td>
<td></td>
</tr>
<tr>
<td>HIS 1540: US History Since 1865 or PSY 1510: General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics/Sciences Elective</td>
<td></td>
</tr>
<tr>
<td>CSC 1510: Introduction to Computer Science is recommended</td>
<td>3</td>
</tr>
</tbody>
</table>

Program Core Requirements

| ART 1510: Drawing                      | 24 credit hours |
| ART 1530: 2-D Design and Color         | 3                |
| ART 1730: Introduction to Computer Art and Design | 3 |
| ART 1740: Graphic Design, Layout and Publishing | 3 |
| ART 1750: Graphic Design Applications | 3                |
| ART 2730: Digital Video/Animation, 3-D and Internet | 3 |
| One course chosen from the list below  |                 |
| ART 1610: Studio Problems - Computer Graphics | 3 |
| ART 2610: Studio Problems - Digital Video/Animation | 3 |
| One course chosen from the list below  |                 |
| ART 1500: Introduction to Art          | 3                |
| ART 1550: Survey of Visual Art: Prehistoric through Medieval | 3 |
| ART 1560: Survey of Visual Art: Renaissance through Contemporary | 3 |
| ART 1570: Basic Black and White Photography | 3 |
| ART 2610: Studio Problems              | 3                |

IMPORTANT POINTS (Refer also to page 40):

- Students are advised to select program electives after careful consultation with their advisors.
**EARLY CHILDHOOD DEVELOPMENT**

**CERTIFICATE PROGRAM:**

curriculum code: 0968  |  Hegis code: 5503
minimum credit hours required: 35

This certificate program is designed to enable students to obtain the skills, values, and knowledge necessary to work at entry level positions in early childhood education/child care such as assistants in preschools, Head Start programs, child care centers and family day care homes, and in school-age child care. In addition, the program provides opportunities for those already employed in child care facilities, including family child care provider and those holding the Child Development Associate (CDA) credential, to update and refresh their knowledge and skills. The program also provides interested students the opportunity to continue their education beyond the level of a certificate to that of an Associate in Science degree with the added possibility of transferring to a bachelor’s level program in early childhood education. This certificate can be used as part of a more complete career ladder in early childhood education and care.

**General Certificate Requirements**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1530: English Composition II</td>
<td>3</td>
</tr>
<tr>
<td>Social Sciences Electives</td>
<td>3</td>
</tr>
<tr>
<td>PSY 1510: General Psychology I is recommended</td>
<td>3</td>
</tr>
</tbody>
</table>

**Program Core Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDU 1250: Early Childhood Development</td>
<td>1</td>
</tr>
<tr>
<td>EDU 1260: Health, Safety &amp; Nutrition in Early Childhood Development</td>
<td>3</td>
</tr>
<tr>
<td>EDU 1290: Introduction to Early Childhood Education &amp; Care</td>
<td>3</td>
</tr>
<tr>
<td>EDU 1300: Observation and Guidance of Young Children</td>
<td>3</td>
</tr>
<tr>
<td>EDU 2150: Infant/Toddler Development &amp; Education</td>
<td>3</td>
</tr>
<tr>
<td>EDU 2210: Field Placement I: Foundations of Education Focus*</td>
<td>4</td>
</tr>
<tr>
<td>EDU 2440: Children’s Literature</td>
<td>3</td>
</tr>
<tr>
<td>EDU 2510: Philosophy and Techniques of Early Childhood Education</td>
<td>3</td>
</tr>
<tr>
<td>HUS 1210: Introduction to Human Services</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2520: Child Development</td>
<td>3</td>
</tr>
</tbody>
</table>

**IMPORTANT POINTS (Refer also to page 40):**

- EDU 1250 and 1260 do not have an ENG 1530 eligibility prerequisite and are, therefore, ideal starting points for the student pursuing a certificate in early childhood development.
- Individuals who have earned the Child Development Associate (CDA) will receive these 9-10 JCC credits: EDU 1250, EDU 1260, EDU 1290, and EDU 2210.
- Early childhood development certificate courses are designed as a career ladder leading to the associate degree. They therefore change according to changes in New York state education requirements.
- Students must be willing to obtain and pay for any necessary physical or medical examinations or tests, which are required by some internship agencies.
- Enrollment in the program does not guarantee acceptance into field placements in the program.
- Students must complete an application for EDU 2210: Field Placement I; approval of the application is required for the field placement to commence. EDU 1290: Introduction to Early Education and Care with a grade of C or better is the prerequisite.
- Some internship agencies require FBI or Child Abuse Registry checks. These processes can be lengthy and may require up to four months in order for approval to be obtained prior to placement.
- Field placement will take place with children in an educational setting.

**ENTREPRENEURSHIP**

**CERTIFICATE PROGRAM:**

curriculum code: 2240  |  Hegis code: 5004
minimum credit hours required: 30

This certificate program will provide the student an opportunity to develop entrepreneurial skills with an understanding of accounting, marketing, business law, and management as they relate to business ownership. Through electives, the student will have the opportunity to explore various areas of business and add a more in-depth level of skill to be used in becoming a successful entrepreneur.

**General Certificate Requirements**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1510: English Composition I (or higher)</td>
<td>3 online</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3 online</td>
</tr>
<tr>
<td>Mathematics/Sciences</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics Elective* (MAT 1500, 1540)</td>
<td>3 online</td>
</tr>
</tbody>
</table>

**Program Core Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 1430: Entrepreneurship I</td>
<td>3 online</td>
</tr>
<tr>
<td>BUS 2540: Business Law II</td>
<td>3 online</td>
</tr>
<tr>
<td>CSC 1560: Microcomputer Applications I (or higher)</td>
<td>3-4 online</td>
</tr>
<tr>
<td>ENT 1440: Entrepreneurship Operations</td>
<td>3 online</td>
</tr>
<tr>
<td>ENT 1450: Entrepreneurship Finance</td>
<td>3 online</td>
</tr>
</tbody>
</table>

**Career Electives**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 1410: Accounting Fundamentals</td>
<td>3 online</td>
</tr>
<tr>
<td>BUS 1500: Introduction to Business</td>
<td>3 online</td>
</tr>
<tr>
<td>BUS 1650: Introduction to Global Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS 2270: Introduction to Taxes</td>
<td>3 online</td>
</tr>
<tr>
<td>CSC 1310: Introduction to World Wide Web</td>
<td>1</td>
</tr>
<tr>
<td>CSC 1530: Web Publishing</td>
<td>3 online</td>
</tr>
<tr>
<td>ENT 1480: Entrepreneurship Internship</td>
<td>3</td>
</tr>
<tr>
<td>ENT 1470: Retail Management and Franchise Ownership</td>
<td>3 online</td>
</tr>
<tr>
<td>ENT 1460: Family Owned Businesses</td>
<td>1 online</td>
</tr>
</tbody>
</table>

**IMPORTANT POINTS (Refer also to page 40):**

- Mathematics courses are selected based on a student’s background. MAT 1230: Mathematics of Business, MAT 1500: Problem Solving with Mathematics, or MAT1540: Elementary Statistics are recommended electives.
- **Students must complete five or six credits from this category in order to bring the minimum total for the categories listed above to 30 credits.**
- **All courses required for this certificate are available online.**

**GENERAL STUDIES**

**CERTIFICATE PROGRAM:**

curriculum code: 0986  |  Hegis code: 5699
minimum credit hours required: 30

The objective of this program is to offer a 30-credit certificate program that provides the student the opportunity to complete concentrated study in a particular field. First time, full-time students are also required to take INT 1520: Student Success Seminar. Students interested in earning the certificate in general studies should consult with their faculty advisors to insure proper selection of courses.

**General Certificate Requirements**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1530: English Composition II</td>
<td>3</td>
</tr>
<tr>
<td>Social Sciences Elective</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics/Sciences</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics Elective*</td>
<td>3</td>
</tr>
<tr>
<td>Liberal Arts and Sciences and/or Career Electives</td>
<td>21</td>
</tr>
</tbody>
</table>

**IMPORTANT POINTS (Refer to page 40)**
CERTIFICATE PROGRAM:

INDIVIDUAL STUDIES

curriculum code: 0987 | Hegis code: 5699
minimum credit hours required: 30
The object of this program is to offer a 30-credit certificate program that provides the student the opportunity to complete concentrated study in a particular area of their choice. First-time, full-time students are also required to take INT 1520: Student Success Seminar. Students interested in earning the certificate in individual studies should consult with their faculty advisors to insure proper selection of courses.

General Certificate Requirements

| Humanities | 9 credit hours |
| ENG 1510 (or higher) | 3 |
| Social Sciences Elective | 3 |
| Mathematics/Sciences Elective | 3 |

Liberal Arts and Sciences and/or Career Electives | 21 credit hours

IMPORTANT POINTS (Refer also to page 40):
• All courses required for this certificate are available online.

CERTIFICATE PROGRAM:

INDUSTRIAL EQUIPMENT TECHNOLOGY

curriculum code: 2382 | Hegis code: 5312
minimum credit hours required: 31
The certificate prepares students with the necessary interdisciplinary background to troubleshoot, repair, and maintain electrical, mechanical, hydraulic, and pneumatic equipment used in manufacturing or facilities environment. It will prepare students to obtain the necessary skills for entry level positions in industrial maintenance as well as entry level manufacturing jobs. Job titles may include: industrial electrician, industrial machinery mechanic, installation technician, industrial technician, and building maintenance mechanic. The certificate will also allow personnel presently employed by industry to obtain a credential showing basic competence in the skills necessary for advancement.

General Certificate Requirements

| Humanities | 7 credit hours |
| ENG 1510: English Composition I (or above) | 3 |
| Mathematics/Sciences Elective | 4 |
| MAT 1220: Applied Math for Technology or MAT 1590: College Algebra & Trigonometry (or above) | 4 |

Program Core Requirements

| ELC 1200: Fundamentals of Electricity | 3 |
| ELC 1220: Industrial Automation Using PLCs | 3 |
| ELC 1230: Electric Motors and Control Systems | 3 |
| MCT 1210: Applied Pneumatics and Hydraulics | 3 |
| MCT 1240: Engineering Drawing With AutoCAD | 3 |
| MCT 1270: Machine Theory and Operations | 3 |
| WLD 1240: Applied Welding | 3 |

IMPORTANT POINTS (Refer also to page 40)

CERTIFICATE PROGRAM:

INFORMATION TECHNOLOGY

curriculum code: 1498 | Hegis code: 5101
minimum credit hours required: 31
The certificate program in information technology provides the student with strong computer user skills and an understanding of fundamental IT concepts. Students who complete the IT certificate are ready for job responsibilities in areas of information processing and IT support such as help desk assistant, information processing support specialist, or in computer sales. This certificate also affords the student with a good foundation for further academic work in a wide range of computer-related degree programs.

General Certificate Requirements

| Humanities | 6-7 credit hours |
| ENG 1510: English Composition I | 3 |
| Mathematics/Sciences Elective* | 3-4 |

Program Core Requirements

| BUS 1220: College Keyboarding | 3 |
| BUS 1320: Word Processing | 3 |
| BUS 1410: Accounting Fundamentals | 3 |

CERTIFICATE PROGRAM:

MACHINE TOOL TECHNOLOGY

curriculum code: 2027 | Hegis code: 5312
minimum credit hours required: 30
This program is designed to provide foundation skills necessary for workforce personnel whose jobs require knowledge of machine tools. It will provide a credential that indicates to employers that the student has completed fundamental coursework in machine tools. Students will become proficient in the operation of basic machine tools such as lathes, milling machines, grinders, drill presses and precision measurement equipment. Basic courses are designed to build and strengthen knowledge of machine tool theory. Courses in solid modeling and CNC programming are included to provide an introduction to two specific areas that are important for overall understanding of the field. Students will also develop skills in basic mathematics and writing appropriate to a machinist position.

General Degree Requirements

| Humanities | 10 credit hours |
| ENG 1510: English Composition I (or above) | 3 |
| Social Science Electives | 3 |
| Mathematics/Sciences | 4 |
| MAT 1220: Applied Math for Technology or MAT 1590: College Algebra & Trigonometry | 4 |

Program Core Requirements

| CSC 1330: Introduction to Electronic Spreadsheets | 3 |
| MCT 1240: Engineering Drawing With AutoCAD | 3 |
| MCT 1270: Machine Theory and Operations | 3 |
| MCT 1300: Machine Tool Technology II | 4 |
| MCT 1340: Manufacturing Drawings and GD&T | 3 |
| MCT 1380: Introduction to Solid Modeling | 3 |

IMPORTANT POINTS (Refer to page 40)

CERTIFICATE PROGRAM:

MEDICAL OFFICE TECHNOLOGY

curriculum code: 1665 | Hegis code: 5214
minimum credit hours required: 31
This program is designed to provide students with the specialized skills necessary to prepare them for employment in a medical office and to develop students' office skills along with specialization directed toward medical terminology, medical insurance and medical office procedures. The program may also offer short-term training to those seeking to increase their marketability or seeking a career change. The certificate provides students with the basic core of work and problem-solving abilities and constitutes the first half of the associate degree in medical office technology.

General Certificate Requirements

| Humanities | 12 credit hours |
| ENG 1530: English Composition II | 3 |
| English Electives (college level) | 3 |
| Mathematics/Sciences | 3 |
| Math Electives | 3 |
| Social Sciences Elective | 3 |

Program Core Requirements

| BUS 1220: College Keyboarding | 3 |
| BUS 1320: Word Processing | 3 |
| BUS 1410: Accounting Fundamentals | 3 |

IMPORTANT POINTS (Refer also to page 40):
• Mathematics courses are selected based on a student’s background.
  Note that CSC 1590 has a corequisite of MAT 1590.
• Due to course prerequisites, it may take more than one year to complete this certificate program.
• All courses required for this certificate are available online.
CERTIFICATE PROGRAM:

MULTIMEDIA PRODUCTION

Curriculum code: 1785  |  Hegis code: 5012
Minimum credit hours required: 33

The primary goal of the certificate in multimedia production is to provide students a sequence of study that will offer them artistic and technical skills vital to the contemporary media design workplace. The coursework is intended to provide suitable preparation for entry level employment in multimedia design and production, one of the most rapidly growing employment areas in the country. It also enables individuals currently employed in multimedia design and production a means to upgrade and expand their skills.

**General Certificate Requirements**  
9 credit hours
- **Humanities**: 3
  - ENG 1530: English Composition II
- **Social Sciences Elective**: 3
  - HIS 1540: US History Since 1865 or PSY 1510: General Psychology
- **Mathematics/Sciences Elective**: 3
  - CSC 1510: Introduction to Computer Science is recommended.

**Program Core Requirements**  
24 credit hours
- **ART 1730**: Introduction to Computer Art and Design 3
- **ART 2730**: Animation, Video, 3D, and Internet 3
- **ART 2610**: Studio Problems 3
- **CSC 1560**: Microcomputer Applications I 4
- **Certificate Specialization**: 6 credit hours
  - MOT 1410: Medical Terminology 3
  - MOT 1420: Medical Office Procedures 3

**IMPORTANT POINTS (Refer to page 40)**:
- Some upper level computer science courses are only offered online.
- Procedure Procedures 3
- Some upper level computer science courses are only offered online.

**CERTIFICATE PROGRAM:**

NETWORK ADMINISTRATION

Curriculum code: 1507  |  Hegis code: 5103
Minimum credit hours required: 36

The certificate program in network administration is one of four specialized certificates designed primarily as a focused concentration for students earning a degree in computer science, computer technology, information technology, or computer information systems, but may also be obtained independently of these degrees. Any of these certificates are also an excellent complement to a degree in business administration or communication and media arts. These certificate programs are built around a common set of core competencies and provide specialization through a minimum number of additional courses. Once the general education and core competency requirements are satisfied, students may earn additional certificates by taking only the specialization courses for the certificate of choice. Graduates of the certificate program in network administration are able to maintain the operation of a local area network (LAN), administer user accounts, implement and support LAN resources, monitor and track LAN activity, design network configuration modifications, maintain LAN documentation, optimize LAN performance, resolve LAN hardware and software issues, and integrate a LAN into business processes for enhanced operations.

**General Certificate Requirements**  
9 credit hours
- **Humanities**: 3
  - ENG 1530: English Composition II
- **Social Sciences Elective**: 3
  - PSY 1510: General Psychology
- **Mathematics/Sciences Elective**: 3
  - MAT 1540: Elementary Statistics

**Program Core Requirements**  
18 credit hours
- **ART 1610**: Studio Problems 3
- **ART 2610**: Studio Problems 3
- **CSC 1570**: Programming Concepts and Applications 3
- **CSC 2480**: Advanced Networking and Computer Security 3
- **CSC 2510**: Introduction to Networks 3

**Certificate Specialization**  
9 credit hours
- **CSC 2540**: Advanced Networking and Computer Security 3
- **CSC 2510**: Introduction to Networks 3
- **CSC 2480**: Advanced Networking and Computer Security 3
- **CSC 2540**: Introduction to Systems Analysis 3
- **BUS 2570**: Principles of Management 3
- **BUS 2580**: Management and Organizational Behavior 3

**IMPORTANT POINTS (Refer also to page 40):**
- Due to course prerequisites, it may take more than two semesters to complete this certificate program.
CERTIFICATE PROGRAM:

OFFICE TECHNOLOGY
curriculum code: 0981 | Hegis code: 5005
minimum credit hours required: 31
The office technology certificate is a 31-credit hour program designed to provide the student with skills necessary to prepare for immediate employment in an office position. Training is available for those who have had no office preparation and for students with limited office skills who desire to enhance or update present skills. The program may also offer short-term training and development to those who may be seeking a career change or return to the job market. The ability to solve problems will be stressed throughout the certificate program. This certification provides a basic core of work which may be applied toward the associate degree requirements. Students often combine this certificate with two-year associate degree programs from other areas. The combination enhances employment opportunities.

General Certificate Requirements
12 credit hours
- Humanities 6
- ENG 1530: English Composition II 3
- Social Sciences Elective 3
- Mathematics/Sciences 3
- Mathematics Electives 3

Program Core Requirements
19 credit hours
- BUS 1220: College Keyboarding 3
- BUS 1320: Word Processing 3
- BUS 1410: Accounting Fundamentals 3
- BUS 1420: Office Procedures 3
- BUS 1500: Introduction to Business 3
- CSC 1560: Microcomputer Applications I 4

IMPORTANT POINTS (Refer to page 40):

CERTIFICATE PROGRAM:

SPECIAL STUDIES
curriculum code: 0038 | Hegis code: 5699
minimum credit hours required: 30
The objective of this program is to offer a 30-credit certificate program that provides the student the opportunity to complete concentrated study in a field predetermined by the college. Students interested in earning the certificate in special studies should consult with their faculty advisors to insure proper selection of courses.

General Certificate Requirements
9 credit hours
- Humanities 3
- ENG 1530: English Composition II 3
- Social Sciences Elective 3
- Mathematics/Sciences 3
- Liberal Arts & Sciences and/or Career Electives 21 or more credit hours

IMPORTANT POINTS (Refer also to page 40):
- These courses are in a concentrated study in a particular area.
- All first time, full-time students are required to take INT 1520: Student Success Seminar.

CERTIFICATE PROGRAM:

WEB DESIGN
curriculum code: 1846 | Hegis code: 5104
minimum credit hours required: 26-27
The web design certificate program helps meet the growing demand by industry for people knowledgeable about web page design and Internet related issues. It provides the student with a strong base in computer technology complemented by an understanding of design principles. Students who successfully complete the web design certificate meet entry level requirements for employment as a web designer or website support specialist.

General Certificate Requirements
6-7 credit hours
- Humanities 3
- ENG 1510: English Composition I (or higher) 3
- Mathematics/Sciences 3
- MAT 1590: College Algebra and Trigonometry or higher 3-4

Program Core Requirements
20 credit hours
- CSC 1530: Web Publishing 3
- CSC 1570: Programming Concepts and Applications 3
- CSC 1590: Computing Programming 4
- CSC 1630: Web Technologies 3
- CSC 2410: Web Programming 3
- CSC 2660: Database Management 4

IMPORTANT POINTS (Refer also to page 40):
- Due to prerequisite courses, this program will take more than two semesters to complete.
- CSC 1630 provides an overview of Macromedia Suite (Dreamweaver, Flash, and Fireworks). The prerequisite to CSC 1630 is CSC 1530.

CERTIFICATE PROGRAM:

WELDING TECHNOLOGY
curriculum code: 1922 | Hegis code: 5308
minimum credit hours required: 32
The welding technology certificate is for students desiring employment in the expanding field of welding and welding technology engineering. Students will have the opportunity to pursue careers such as welding technician, welding supervisor, inspector, and sales engineer, qualifying for technician level positions involved in testing and improving welding processes, procedures, and equipment.

General Certificate Requirements
11 credit hours
- Humanities 3
- ENG 1510: English Composition I (or above) 3
- Social Science Elective 3
- Mathematics/Sciences 5
- CSC 1310: Introduction to Word Processing* 1
- MAT 1200: Applied Mathematics for Technology or MAT 1590: College Algebra & Trigonometry** 4

Program Core Requirements
21 credit hours
- WLD 1200: Safety and Cutting Processes 3
- WLD 1350: Shielded Metal Arc Welding 3
- WLD 1360: Gas Metal Arc Welding 3
- WLD 1370: Gas Tungsten Arc Welding 3
- WLD 2250: Advanced SMAW 3
- WLD 2260: Advanced GMAW 3
- WLD 2270: Advanced GTA W 3

IMPORTANT POINTS (Refer also to page 40):
- CSC 1310-1330 are five-week courses that represent a time commitment of 15 weeks equivalent to a full three-credit hour course.
- ** MAT 1220 and MAT 1590 have a prerequisite of MAT 0600 or two years of high school algebra/geometry and placement exam.
- With the appropriate mathematical background students may elect to take MAT 1600 and/or MAT 1710.
- To complete the program in two semesters, students must begin in a fall semester at the appropriate levels of math.
One-Plus-One Transfer Agreements

JCC has special arrangements with the State University of New York College of Environmental Science and Forestry in forest technology and land surveying technology and with the State University of New York College of Technology at Alfred (Alfred State) in health information/medical records and in biological science.

Under these "one-plus-one" agreements, students normally spend one year at JCC and then transfer to the New York State Ranger School at Wanakena or to Alfred State to complete the second year of the degree program. Through appropriate course selection in consultation with an academic advisor at JCC, students prepare for successful transfer and earn their degrees from the transfer institution.

SUNY College of Environmental Science & Forestry

The Forest Technology Program and the Land Surveying Technology Program at the New York State Ranger School at Wanakena

Students can complete one year of study at JCC and then transfer to the SUNY College of Environmental Science and Forestry-New York Ranger School at Wanakena into programs in

- forest technology (curriculum code: 0620)
- land surveying technology (curriculum code: 1086)

**ESF requirements**

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Biology I and II with lab²</td>
<td>8</td>
</tr>
<tr>
<td>English with a focus on writing</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics*</td>
<td>3</td>
</tr>
<tr>
<td>Economics*</td>
<td>3</td>
</tr>
<tr>
<td>Unrestricted electives*</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total transfer credits</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

**JCC equivalents**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 1570</td>
<td>4</td>
</tr>
<tr>
<td>BIO 1580 or 2660 or 2670</td>
<td>4</td>
</tr>
<tr>
<td>ECO 2610 or 2620</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1530 and 1540*</td>
<td>6</td>
</tr>
<tr>
<td>MAT 1590 or above</td>
<td>4</td>
</tr>
<tr>
<td>PHY 1610 or 1710</td>
<td>4</td>
</tr>
</tbody>
</table>

**IMPORTANT POINTS:**

- Courses selected may be in general biology, but at least one course in introductory botany is preferred.
- Competency in plane trigonometry is required. If competency is demonstrated beyond this minimum level, credits may be applied toward the unrestricted elective category. Calculus is advised if a student feels transfer to a baccalaureate program is a possibility.
- Students considering transfer to a baccalaureate program at Syracuse are advised to take microeconomics.
- Students who take ENG 1510 and 1530 at JCC can complete the equivalent of ENG 1540 at ESF.

**Note:** For additional program details, refer to the current SUNY College of Environmental Science and Forestry catalog.

SUNY College of Technology at Alfred (Alfred State)

Students can complete one year of study at JCC and then transfer to Alfred State into programs in:

- health information technology/medical records (curriculum code 1117)
- biological science (curriculum code 0584)

Students who intend to complete one year of study at JCC and then transfer into one of these programs may obtain the appropriate suggested first and second semester course formats from the counseling centers at the Jamestown and Cattaraugus County campuses and the North County and Warren centers.
Protective Service & Public Safety Technology Programs

The Corrections Officer Technology, Law Enforcement Technology, and Public Safety Technology-Fire Science programs involve partnerships with community agencies.

Individuals seeking entry into the Corrections Officer Technology and Law Enforcement Technology programs should contact the admissions office or the Counseling and Career Development Center for more information regarding program admission requirements.

Information about the Associate in Science - Public Safety Technology: Fire Science and Certificate - Public Safety Technology: Fire Science programs can be obtained from the program director.

CERTIFICATE PROGRAM:

CORRECTIONS OFFICER TECHNOLOGY

curriculum code: 1660  |  Hegis code: 5505
minimum credit hours required: 32

This certificate program is designed to educate and train students for employment as corrections officers. In order to be enrolled in the core requirements of the certificate program and those of the New York State Division of Criminal Justice Services, students must be sworn corrections officers employed with a local correctional facility.

General Certificate Requirements 15 credit hours

| Humanities          | 6 |
| ENG 1510 or ENG 1530: College Composition | 3 |
| CMM 1610: Public Speaking             | 3 |
| Social Sciences              | 3 |
| PSY 1510: General Psychology or SOC 1510: Introduction to Sociology | 3 |

Mathematics/Science 6

Math Electives 3

CSC 1510: Introduction to Computers 3

Core Requirements 17 credit hours

| CRI 1350: Corrections Academy     | 10 |
| CRI 1310: Corrections Practicum    | 2 |
| CRI 1410: Peace Officer Firearms   | 2 |
| CRI 1440: Inmate Direct Supervision| 2 |
| CRI 1430: Inmate Classification    | 1 |

CERTIFICATE PROGRAM:

LAW ENFORCEMENT TECHNOLOGY

curriculum code: 1658  |  Hegis code: 5505
minimum credit hours required: 45

This certificate may be awarded to students who attend the Chautauqua County Law Enforcement Academy and complete the additional degree requirements listed.

General Certificate Requirements 9 credit hours

| Humanities          | 3 |
| ENG 1530: English Composition II | 3 |
| Social Sciences Elective | 3 |
| PSY 1510: General Psychology or SOC 1510: Introduction to Sociology | 3 |

Mathematics/Sciences

CRI 2250: Law Enforcement Academy I 10

CRI 2260: Law Enforcement Academy II 10

CRI 2380: Law for the Law Enforcement Officer 3

CRI 2420: Standardized Field Sobriety 3

CRI 2470: Law Enforcement Practicum 4

PHE 2460: Physical Education for the Law Enforcement Officer 2

PHE 2470: Defensive Tactics for Law Enforcement 2

SPA 1500: Spanish in the Workplace 2

ASSOCIATE IN APPLIED SCIENCE

PUBLIC SAFETY TECHNOLOGY - FIRE SCIENCE

curriculum code: 2013  |  Hegis code: 5507
minimum credit hours required: 60

Contact program director for more information.

CERTIFICATE PROGRAM:

PUBLIC SAFETY TECHNOLOGY - FIRE SCIENCE

curriculum code: 2012  |  Hegis code: 5507
minimum credit hours required: 30

Contact program director for more information.
Course Descriptions

Descriptions of the college’s regular credit courses are listed on the following pages. The number of credit hours assigned to each course follows the description.

Course numbers are designated as follows: 0000-0990 - imputed and developmental courses; 1000-1990 - freshman level courses; and 2000-2990 - sophomore level courses.

Courses carrying imputed credit are not considered college level courses and may not be counted toward a degree or certificate program. Courses which presently carry imputed credit are:

- ENG 0190: Essential Reading Skills
- ENG 0410: Developing Reading Versatility
- ENG 0430: Essential Writing Skills
- HUM 0340: Student Development
- MAT 0300: Developmental Mathematics
- MAT 0400: General Mathematics
- MAT 0500: Elementary Algebra
- MAT 0600: Intermediate Algebra

All courses required to earn a specific associate degree are normally offered with such frequency that a full-time student can earn the degree in a two-year period.

Each course description has designations indicating which semester and on which campus (Jamestown - J, Cattaraugus County Campus - C, or Online) the college intends to offer the course. Certain courses do not have a designation indicating which semester they are offered; these courses may or may not be offered on the specified campus(es) during the period 2012-2014. The college reserves the right to cancel course offerings if enrollment is insufficient. Current course, degree, and certificate information can be found at www.sunyjcc.edu.

JCC also offers credit-free courses, seminars, and workshops. For more information, contact the Center for Continuing Education.

Course Requisites

These terms explain the course requirements found at the end of each course description:

**Prerequisite**
A course a student has already successfully completed, or a demonstration of competence by achieving a placement test score above a specific cutoff level.

**Corequisite**
A course which a student takes during the same semester as the class in question. If a student has already successfully completed a corequisite, he/she does not need to take the course again.

**Eligibility**
A reference to eligibility to take English courses. All students must be tested for placement in English courses. The placement tests indicate which English course the student is eligible to take. For example, a student is eligible to take ENG 1530 when he/she has scored an 80+ on the Accuplacer or a 40+ on the Asset and has demonstrated writing proficiency by successfully completing the college writing placement test with a score of 10-12 on the Writeplacer or a 7-9 on the Asset.

**Placement test**
JCC’s placement test assesses skills in mathematics, reading, and writing. If a student chooses to take any course for which there is a placement test prerequisite, he/she must take the appropriate test. As a rule, full-time students take the complete test after they have been accepted for admission to the college and prior to registration. New part-time students are strongly encouraged to take the test prior to registration. Part-time students must take the placement test prior to enrolling in any course which has a reading or writing prerequisite.

**Reading**
Some courses have as a course requirement the achievement of a certain score (e.g. an 80+ on the Accuplacer or a 40+ on the Asset) on the reading placement test. Full-time students can find out about placement scores from their advisors; part-time students can learn about their scores in the counseling centers.

**Permission of instructor**
A course with this notation requires the student to meet with the course instructor to receive permission to take the course.

**Waiver of Pre-/Corequisites**
If a student feels qualified to take a course for which he or she does not appear to have the formal pre-/corequisite background, the student should contact the faculty member teaching the course or the assistant dean for the area. If, in the estimation of the faculty member or assistant dean, the student meets the pre-/corequisites in some other way, the faculty member or assistant dean may sign a waiver form which the student can then present to his advisor and/or the registrar. Students cannot register for courses for which they do not have a pre-/corequisite or a signed waiver form.

Current course, degree, and certificate information can be found at www.sunyjcc.edu.
AMERICAN SIGN LANGUAGE

ASL 1510 Introductory Sign Language I Students will gain a working knowledge of manual communication, including sign language, finger-spelling, conceptualization, structure, and syntax of American Sign Language. An introduction to cultural and historical perspectives of the deaf community is also emphasized. Eligibility: ENG 1510 and a score of 70+ on the Accuplacer test. J fall, spring; C fall, spring. 4 credit hours.

ASL 1520 Introductory Sign Language II Students will continue to sharpen their skill level and understanding of American Sign Language conceptualization, structure, and syntax. Students will expand their repertoire of American Sign Language vocabulary, including key phrases that are necessary for day-to-day interaction. Comprehension of cultural and historical perspectives of the Deaf community will progress and deepen. Prerequisite: ASL 1510. J fall, spring; C fall, spring. 4 credit hours.

ANTHROPOLOGY

ANT 1510 Human Evolution and Prehistory Traces the physical and cultural evolution of the human species. Students will critically analyze fossils, stone tools, and other evidence for such human development and understand the meaning of the theory of evolution and apply those to the present status of humanity. Eligibility: ENG 1510; must meet minimum college level reading score: Accuplacer 80+. J fall; C fall. 3 credit hours.

ANT 1520 Introduction to Cultural Anthropology Examines the nature of the concept of cultural behavior. Students will understand the patterning of social and cultural systems among societies around the world and gain global and ethnic understanding. Students will also determine the universal as well as variations involved in each cultural system. ANT 1510 is not a prerequisite for this course. Eligibility: ENG 1510; must meet minimum college level reading score: Accuplacer 80+. J spring; C spring. 3 credit hours.

ANT 1530 Comparative Religion Students will examine cultural expressions of belief in the supernatural, focusing specifically on people’s ideas about magic, witchcraft, and religion. This course takes a wide-ranging and cross-cultural approach to studying religious beliefs and behaviors and incorporates “world religions” such as Christianity, Judaism, and Islam, as well as the “indigenous” religions of Africa, Asia, Australia, and the Americas. Students will have the opportunity to contrast other people’s beliefs and practices with their own and develop a deeper understanding of the role of religion in the human experience. Eligibility: ENG 1510; must meet minimum college level reading score: Accuplacer 80+. J occasionally; C occasionally. 3 credit hours.

ANT 2510 Peoples/Cultures of Americas Students will study the cultural variations and developments of Native Americans primarily in North America with a focus on contemporary Indigenous Peoples. Students will demonstrate a general knowledge of culture areas in order to examine the historic and current effects of colonization. Students will also understand contemporary issues such as their reclamation, language revitalization, land rights, and the exercise of Indigenous sovereignty. ANT 1520 is suggested but is not a prerequisite. Eligibility: ENG 1530. J occasionally; C spring. 3 credit hours.

ANT 2520 Peoples/Cultures of World Deals with the major types and varieties of societies in the world outside the Americas to further global and ethnic understanding. Students will consider varieties of cultural behavior such as initiation rites, warfare patterns, and social structure with a view to students developing the critical thinking skills to compare and evaluate such behaviors. A culture area such as Africa or Oceania is selected for such analysis. ANT 1520 is suggested but not a prerequisite. Eligibility: ENG 1530. J occasionally. 3 credit hours.

ANT 2570 History of World Religions This interdisciplinary course examines the development and variety of religious belief in the past and present. Historical, pre-historic, and non-literate traditions are examined, including Native American, African, Asian, Indo-European, and Semitic beliefs. Special consideration is given to religious development, assimilation, diffusion, practices, and phenomena. Cross-cultural comparisons and the key tenets of today’s world faiths are also emphasized. Eligibility: ENG 1530. J occasionally. 3 credit hours.

ANT 2590 Sex, Sexuality, and Gender Students will learn about sex, sexuality, or gender, practices and concepts both from around the world and here in the United States. Students will be able to compare and contrast people’s understanding of the body and its development, how people come to understand their own sex and gender characteristics, and the place that each one of us occupies in terms of our sex, sexuality, and gender behaviors. Corequisite: ENG 1530. J occasionally; C occasionally. 3 credit hours.

ANT 2600 Planet Earth: Critical Topics Students will examine critical issues affecting humanity and the global environment, from an in-depth, three-part perspective. Students will investigate the science of selected topics of global environmental significance, explore their causes and consequences within contemporary culture, and evaluate the impacts and importance of the mass media in public perception concerning these issues. Corequisite: ENG 1530 and a reading score of 80+. J occasionally. 3 credit hours.

ARABIC

ARA 1510 Introductory Arabic I Students will learn Arabic language vocabulary and grammar by completing a series of activities designed for realistic communication, both written and spoken. They will learn the reading and writing of the Arabic alphabet. Through reading, dialogue, and associated study, students will develop an understanding of the language and cultural distinctions of Arabic speakers worldwide. Eligibility: ENG 1510; must meet minimum college level reading score: Accuplacer 80+. J occasionally; C occasionally. 3 credit hours.

ARA 1520 Introductory Arabic II Students will learn Arabic language vocabulary and grammar by completing a series of activities designed for realistic communication, both written and spoken. They will learn the reading and writing of the Arabic alphabet. Through reading, dialogue, and associated study, students develop an understanding of the language and cultural distinctions of Arabic speakers worldwide. Prerequisites: ARA 1510, Eligibility: ENG 1510; must meet minimum college level reading 80+. J occasionally, C occasionally. 4 credit hours.

ART

ART 1500 Introduction to Art Students will experience visual awareness and perceptual skills through lecture and studio assignments. Encourages exploration of individual components of the visual arts through the introduction of basic concepts and media in drawing, design, painting, printmaking, and sculpture. No prerequisites. J fall, spring; C fall, spring. 3 credit hours.

ART 1510 Drawing I Students will gain a working knowledge of foundation skills and abilities in artistic visual expression. Students are introduced to drawing media and concepts. Students learn to draw perceived objects and become able to discuss the drawings meaningfully. No prerequisites. J fall, spring. 3 credit hours.

ART 1520 Drawing II Students will further develop visual awareness and drawing skills in dry media with some wet media and in black and white with some color emphasis. Students perform object drawing, large scale drawing, media exploration, life drawing, and some portrait drawing. The human figure is in well-designed compositions is emphasized. Prerequisite: ART 1510. J spring. 3 credit hours.

ART 1530 2-D Design and Color Students will experience studio activities which will help them recognize and manipulate visual qualities and relationships of design as they create two-dimensional forms in both black and white and color. Students will create projects that involve the effective use of visual elements, such as line, texture, and color, and visual manipulation principles such as balance, unity, and contrast. Students will study and practice problem solving in the visual world using a variety of two-dimensional color and media. Critical evaluation and discussion of projects is an integral part of the course. No prerequisites. J fall. 3 credit hours.

ART 1540 3-D Design/Concept/Materials Students will experience studio activities which will help them understand and manipulate visual elements and principles while creating three-dimensional forms. Students will work in a variety of visual media with emphasis on selection of materials to promote concepts, and will experience basic fabrication techniques in the visual arts. Critical evaluation and discussion of projects is an integral part of the course. Prerequisite: ART 1530. J spring. 3 credit hours.

ART 1550 Survey of Visual Art: Prehistoric-Medieval Provides art and non-art majors with an overview of the historical evolution of the visual arts from the prehistoric through medieval periods. An overview of art from non-European cultures is also presented. Students will explore artistic philosophies, styles, media, materials, and the evolving function of art in society. Students are introduced to the formal structure of works of art and will study new methods and materials. Links between technical evolution and its relationship to stylistic change are explored. The influence of major philosophical shifts in culture at-large on the arts is also emphasized. Material is presented through slide lectures, videotapes, classroom discussions, and readings. Course requires
ART 1560 Survey of Visual Art: Renaissance-Contemporary Provides art majors and non-art majors with an overview of the historical evolution of the visual arts from the Renaissance through contemporary periods. Special lectures on technical development of the 19th and 20th centuries augment the historical progression. Additional material that extends the discussion of contemporary art is introduced. Students explore artistic philosophies, styles, media, materials, and the evolution of art’s function in society. Material is presented through slide lectures, videotapes, classroom discussions, and assigned readings. Course requires extensive reading, some writing, and participation in discussion groups. Corequisite: ENG 1530. J fall; C occasionally. 3 credit hours.

ART 1570 Basic Black/White Photography Students will gain a working knowledge of the fundamental creative and technical base in photography. Students deal with developing, printing, and finishing techniques in the context of creative visual expression. Students are introduced to comparative studies of history and criticism in the medium. No prerequisites. J fall, spring. 3 credit hours.

ART 1590 Ceramics I Students will gain a working knowledge of fundamental and advanced studio work in clay preparation, hand building, throwing, mold making, slip casting, glaze preparation, decorating techniques, and firing techniques. No prerequisites. J fall, spring. 3 credit hours.

ART 1600 Creative Ceramics This course is designed mainly for intermediate level students and community members. Students will develop skills with potter’s wheel, hand building methods, glazing, decoration techniques, and kiln operations. Prerequisite: ART 1590; must meet minimum college level reading score: Accuplacer 80+. J occasionally. 1 credit hour.

ART 1610, 1620, 2610, 2620: Studio Problems-Ceramics ART 1610, 1621, 2611, 2621: Studio Problems-Computer Graphics ART 1612, 1622, 2612, 2622: Studio Problems-Painting ART 1613, 1623, 2613, 2623: Studio Problems-Photography Students will build upon previous studio course experiences in advanced studio production courses under art faculty supervision. Students who have completed the basic and intermediate (as applicable) courses in drawing, ceramics, photography, electronic arts, design or painting, may register for one, two, or three hours of credit per semester in a studio course in that medium. Students are expected to spend two hours in studio work each week for each credit hour anticipated. Studio problem courses are student initiated with each student, together with the faculty member, creating an acceptable course outline and evaluation process for the work of the semester. In some cases, a group studio problem experience may be initiated by visual arts faculty. Students achieving 12 credit hours in art studio problems must obtain permission from the arts and humanities assistant dean to take additional coursework (for credit) in art. Prerequisite: Permission of instructor required. J occasionally. 1-3 credit hours.

ART 1670 Digital Photography I Students in this fine arts and media arts studio course will establish a foundation in digital photography techniques, digital darkroom use, and management, output, and presentation techniques. Students will create images using digital cameras, enhance and manipulate images in the computer, manage and archive digital image files, and assemble a portfolio. Corequisite: ENG 1510 or eligibility. ENG 1530. J occasionally. 3 credit hours.

ART 1730 Introduction to Computer Art/Design Students will be introduced to techniques and processes of creating artwork and graphic design using the computer. Students will get an overview of electronic image manipulation, illustration, and page layout and design. This course is a prerequisite to other computer art/graphic courses. No prerequisite. J fall, spr. 3 credit hours.

ART 1740 Graphic/Design/Layout/Publishing Students will focus on the development of graphic design, computer, and presentation skills needed to produce professional looking layouts suitable for print and web publishing for the student’s portfolio. Concepts are worked out and visually organized stressing the use of type and image through sketches. The artwork is recreated and refined on the computer in a page layout program such as Adobe InDesign, then is printed to create three dimensional or mounted prototypes. Typography basics and course concepts are taught through projects that include problem solving exercises, software tutorials, lecture, review of work in progress, and critiques. Prerequisite: ART 1730. J spr. 3 credit hours.

ART 1750 Graphic Design Applications Students will work on developing graphic design skills through exercises and projects. The creative process will be a main focus with artwork produced for the student’s portfolio using Adobe Photoshop and Adobe Illustrator. Technical skills required to run these software programs will also be learned, and an aesthetic understanding will be developed by incorporating design and color concepts specific to the assignments. Students enrolling in the course must have prior experience with Photoshop and Illustrator and must be able to further develop their computer skills in creating and manipulating artwork. Prerequisite: ART 1730. J fall, spr. 3 credit hours.

ART 2510 Painting I Students will create paintings in a variety of media and concepts as well as gain understanding of the potential of a visual creator. Students work in watercolor, gouache, acrylic, and oil on paper supports and are required to produce a portfolio of paintings with evaluation based on technical growth and exploration of visual ideas. No prerequisites. J occasionally. 3 credit hours.

ART 2520 Painting II Students will continue painting I experience with emphasis on individual exploration and ideas as well as different painting techniques. Technical approaches are discussed, but the course focus is on the student developing his/her own images in a personal, distinctive, and effective way. Prerequisite: ART 2510. J occasionally. 3 credit hours.

ART 2570 Intermediate Black/White Photography Students are offered additional experiences which are built on skills acquired in ART 1570. Extensive work in fine black and white photography, studio photography techniques, and experimental techniques is included. Designed to help students who have established basic skills and interest in photography to grow as student photographers in an atmosphere of advanced performance. Prerequisite: ART 1570. J occasionally. 3 credit hours.

ART 2590 Interdisciplinary Photography Combining traditional and non-traditional photographic processes with new technologies allows photographers to explore new opportunities and creative possibilities. This course enables students to communicate their ideas by combining photo-based mediums with computer-generated imagery, drawing, and painting. Classes include time in the darkroom and the computer graphics studio as well as lecture and discussion. All projects will be presented within an historical context. Students will study classic and contemporary art making: assignments include library research, viewing slides, and assigned readings. Prerequisite: ART 1570. J occasionally. 3 credit hours.

ART 2600 Ceramics II Students will demonstrate further development of skills with potter’s wheel, hand building methods, glazing, decoration techniques, and kiln operations. Wheel throwing and pottery skill development will be emphasized throughout the course. Prerequisite: ART 1590; must meet minimum college level reading score: Accuplacer 80+. J occasionally. 3 credit hours.

ART 2730 Web Design and Animation This studio production course is designed to advance the image creation skills and knowledge gained in the foundation media arts course, ART 1730: Introduction to Computer Art and Design. Students will create websites and 2-D animation using the industry standard software Flash and Dreamweaver. The course emphasizes understanding the needs of the audience as the motivation for creating effective web design and making appropriate aesthetic choices in designing those sites. Prerequisite: ART 1730. J fall, spring, 2 credit hours.

ART 2740 Advanced Digital Imaging With Photoshop Students’ knowledge and skill base in digital imaging will be enhanced through in-depth instruction in the use of Adobe Photoshop. Students will become technically proficient at the capture, manipulation, and output of images using digital still cameras and flat bed scanners. A more sophisticated level of aesthetic understanding will be achieved as students create images that express their imagination. Prerequisite: ART 1730; Eligibility: ENG 1530. J occasionally. 3 credit hours.

ART 2750 Portfolio Seminar Students will complete their visual art portfolio containing artist’s resume and statement, 20 slides of personal work, and digital media of all portfolio components. Professional practice of the visual artist will be introduced. Research project, participation in juried show(s), and portfolio completion are required. Prerequisites: At least one studio art course, ART 1730 preferred; Eligibility: ENG 1530. J spr. 2 credit hours.

ART 2800 Interactive Design This studio production course advances the skills and knowledge gained in foundation media arts courses ART
1730, ART 2730, and CMM 1710. Students will create images, sound, and motion sequences using programs they are already familiar with for use in interactive design projects using Macromedia’s Director software. They will publish projects to CD-ROM, DVD, and/or the Internet. The course emphasizes an understanding of the needs of the audience and the user for creating effective interactivity and applying that understanding to production design. Corequisite: ENG 1530. J occasionally. 3 credit hours.

ASTRONOMY

AST 1510 Introduction to Astronomy
Students will learn about the universe while learning the scientific way of looking at the world and life. There will be four fundamental recurring questions: What is out there? Why is it the way it is? How do we know? How sure are we that we are right? Students will learn that science is a process and will learn the connection between theory and observation. Students will demonstrate their knowledge by observations of the sky and by accessing astronomy websites. Prerequisite: MAT 0600; Eligibility: ENG 1530. J occasionally. 3 credit hours.

AVIATION

AVN 1100 Aircraft Powerplants/Systems
Students are provided with instruction in the theory and operating principles of reciprocating engines and appropriate systems necessary for pilot understanding. While not intended to be an aviation mechanics course, students will study aircraft structure, airframe stresses, lubrication systems, and other related systems. Prerequisite: MAT 0600; Eligibility: ENG 1530. J fall. 3 credit hours.

AVN 1140 Private Pilot Ground School
Students will receive theoretical training necessary to sit for the written portion of the Private Pilot Practical Test. This course will focus on aerodynamics, aircraft performance, cross-country navigation techniques, the application of the Federal Aviation Regulations (FARs), the use of the Airman’s Information Manual (AIM), and various aircraft maneuvers. Instruction is offered by FAA and college-approved instructors who are associated with local FAA-approved flight schools. Prerequisite: ENG 0430; Corequisite: AVN 1530; Eligibility: MAT 0600 and must meet minimum college level reading score: Accuplacer 80+. J fall, spring, summer. 3 credit hours.

AVN 1150 Private Pilot Flight
Students will receive flight training necessary to sit for the flight portion of the Private Pilot Test. This course will offer students their first opportunity for actual flight training in accordance with Part 141 of the Federal Aviation Administration (FAA) Requirements. Dual instruction and supervised solo flight practice are conducted by FAA and college-approved instructors who are associated with local FAA-approved flight schools. Among the topics included are flight principles, pre- and post-flight procedures, taxing and ground procedures, flight controls, basic maneuvers, takeoffs and landings, communications, ATC procedures, and an Introduction to aircraft systems. Prerequisites: FAA Third Class Medical Certificate, minimum age of 17 prior to the “flight check” at the end of the course, and must meet minimum college level reading score: Accuplacer 80+; Corequisite: AVN 1140. J fall, spring, summer. 1.5 credit hours.

AVN 1200 Survey/Air Traffic Control
Students will be able to describe air traffic control communication procedures. Students will be able to describe fundamental differences between radar and non-radar operations. Students will be able to communicate with air traffic controllers. Students will be able to describe how air traffic controllers sequence and direct aircraft. Eligibility: ENG 1530. J spring. 3 credit hours.

AVN 1240 Instrument Pilot Ground School
Students will focus on the fundamentals of flying an aircraft solely by reference to instruments and will become familiar with flight instruments and navigational aids. Topics include basic navigation systems such as VOR (Very High Frequency Omni Directional Range), ADF (Automatic Direction Finder), ILS (Instrument Landing System), as well as advanced navigation systems such as GPS (Global Positioning System), LORAN, INS, and RNAV. This is the ground school portion of the instrument pilot rating. Prerequisite: AVN 1140 and 1150, or Private Pilot Certificate; Corequisite: AVN 1350; Eligibility: ENG 1530; other: current FAA Third Class Medical Certificate. J fall, spring, 3 credit hours.

AVN 1250 Instrument Pilot Flight Students will receive instrument flight training in accordance with Part 141 of the Federal Aviation Regulations (FAR). This course will focus on the fundamentals of flying an aircraft solely by reference to instruments. It consists of a minimum of 35 hours of dual flight instruction along with briefing and other matters related to instrument flight. Prerequisite: AVN 1140 and 1150, or Private Pilot Certificate; Corequisites: AVN 1240 and 1530; Eligibility: ENG 1530; other: current FAA Third Class Medical Certificate. J fall, spring. 1.5 credit hours.

AVN 1340 Commercial Pilot Ground School I
This course, along with AVN 2140: Commercial Pilot Ground School II, prepares students for the FAA Commercial Pilot Written Exam. Topics covered include complex aircraft systems; aircraft performance and control; aerodynamics, air traffic control and the National Airspace System; Federal Aviation Regulations, radio navigation, meteorology, and the physiology of flight (including discussions of hypoxia, hyperventilation, middle ear and sinus problems, spatial disorientation, carbon monoxide poisoning, motion sickness, physiology of night flying, and the effects of alcohol and drugs including over the counter medications). Prerequisite: AVN 1340 and 1350; Corequisite: AVN 2150; Eligibility: ENG 1530; other: current FAA Third Class Medical Certificate. J fall, spring. 1.5 credit hours.

AVN 1350 Commercial Pilot Flight I
Students will receive commercial flight training in accordance with Part 141, appendix D, of the Federal Aviation Regulations. FAA and college-approved instructors associated with local FAA-approved Fixed Base Operators (FBOs) conduct dual instruction and supervise solo flight. The course consists of a minimum of 71 hours of flight instruction along with briefing and other matters related to commercial piloting. The student will bear all expenses beyond the above flight and instructional time. This course is the second half of a training package (along with AVN 1350) that prepares students for the FAA Commercial Pilot Practical Test ASEL (Airplane Single Engine Land). Prerequisites: AVN 1340 and 1350; Corequisite: AVN 2140; Eligibility: ENG 1530; other: current FAA Third Class Medical Certificate. J fall, spring. 2.5 credit hours.

AVN 2200 Advanced Aircraft Systems
Students will focus on a more advanced presentation of aircraft systems than is covered in AVN 1100. Among the systems covered are electrical, hydraulic, anti-icing, instrument, pressurization, and fuel systems. Prerequisite: AVN 1100 or Private Pilot and Instrument Rating; Eligibility: ENG 1530. J summer. 3 credit hours.

AVN 2250 Certified Flight Instructor/Airplane
This course consists of a minimum of 65 hours of instruction - 25 hours of dual flight and 40 hours of classroom instruction - and prepares students for the FAA Certified Flight Instructor Airplane Practical Test. Flight instruction consists of a comprehensive review of private and commercial flight maneuvers. The class instruction includes an in-depth discussion of the fundamentals of instruction, including lesson plan preparation, laws of learning, and effective communication techniques. Aerodynamics, regulations, procedures, and other topics covered during the private and commercial phases of training are also reviewed. 

Prerequisites: commercial pilot certificate with instrument rating and current FAA Third Class Medical Certificate. J fall, spring. 3 credit hours.


AVN 2450 Certified Flight Instructor/Instrument Preparates students for the FAA Certified Flight Instructor-Instrument Practical Test. This course covers the beginning and advanced topics necessary for instructing students in instrument flight. In addition to 15 hours of dual flight instruction, students will learn how to prepare lesson plans in instrument flight theory, methods for effective communication, the use of a variety of instructional methods, and how to evaluate performance during 20 hours of classroom instruction. Prerequisite: Certified Flight Instructor-Airplane rating; other: current FAA Second Class Medical Certificate. J fall, spring. 2 credit hours.

Biology

BIO 1450 Emergency Medical Technology This course presents a contract offering limited to persons involved in the delivery of emergency medical care who intend to take the New York State Health Department’s certifying exam for emergency medical technicians. Students will learn about all major aspects of trauma, medical emergencies, cardiopulmonary resuscitation, victim extrication, transport, spinal injuries, shock, airway management techniques, and use of an anti-shock garment. In addition to 90 hours of classroom/laboratory work, students will complete one hour of observation and assistance in a hospital emergency room. Eligibility: MAT 0500 or greater; must meet minimum college level reading score: Accuplacer 80+. J fall, spring. 7 credit hours.

BIO 1500 Human Biology This course covers basic structures and functions of the human body. Students will learn about the chemical basis of life, cellular structure and metabolism, tissues, and an overall survey of the organ systems of the body. An Introduction to human evolution is presented. Recent developments in science, medicine, and health coupled with environmental issues and their impact on health are incorporated into the course. Laboratory exercises include use of the microscope, experimentation, and hands-on investigation of organ systems. Corequisite: ENG 1510 or Eligibility: ENG 1530. J fall, spring. C fall, spring. 4 credit hours.

BIO 1510 Health Science Students will investigate a variety of health-related topics, many of which are useful in planning a healthier lifestyle. Topics include stress, mental health, nutrition, human sexuality and reproduction, birth control, sexually transmitted and other diseases, cardiovascular health, cancer, drugs (including alcohol), and environmental health. This survey course is appropriate for non-science majors. Corequisite: ENG 0430 and ENG 0410; Reading score Accuplacer 70+. Note: Eligibility for ENG 1510 is strongly recommended. J fall, spring; C fall, spring; online fall, spring; 3 credit hours.

BIO 1520 Biology of Birds In this Introduction to birds, one of the most colorful and popular groups of animals on our planet, students will learn about basic anatomy and physiology, evolutionary history, classification and identification by sight and song, behavior, and ecological importance. Outdoor fieldwork is included. Eligibility: ENG 1510; must meet minimum college level reading score: Accuplacer 80+. J occasionally; online occasionally. 1 credit hour.

BIO 1540 Biology of Insects This course studies insects, the most abundant and diverse group of animals on our planet. Students will learn about basic anatomy and physiology, evolutionary history, classification and identification, behavior, and ecological and economic importance. Field trips and a small insect collection are required. Outdoor fieldwork included. Eligibility: ENG 1510; must meet minimum college level reading score: Accuplacer 80+. J occasionally. 1 credit hour.

BIO 1560 Biology of Mammals This course studies mammals, the group considered to be the peak of animal evolution. Students will learn about physiology, evolutionary history, classification and identification, behavior, and ecological importance. Outdoor fieldwork included. Eligibility: ENG 1510; must meet minimum college level reading score: Accuplacer 80+. J occasionally. 1 credit hour.

BIO 1570 Principles of Biology I Students will identify, understand, and interpret fundamental biological principles such as biodiversity, evolution, ecology, and the foundational aspects of life, cell structure and function, cellular metabolism, photosynthesis, respiration, cellular reproduction, and classical, human and molecular genetics. Laboratory may include one or more outdoor experiences. Prerequisite: high school chemistry or corequisites: CHE 1500 or CHE 1530 and MAT 0600 and ENG 1510 (or Eligibility: ENG 1530). J fall, spring; C fall, spring. 4 credit hours.

BIO 1580 Principles of Biology II Students will recognize, identify, describe, and classify representatives of the major phylumgenic and taxonomic groups of life on earth, surveying the three domains of life’s biodiversity and the archaea, bacteria, protist, fungi, plant, and animal realms. Students will study evolutionary history and relationships, life cycles, reproductive strategies, morphology, anatomy, physiology, behavior, and ecological roles of representative organisms. Laboratory may include one or more outdoor experiences. This survey course is appropriate for both science and non-science majors. Prerequisite: BIO 1570. Eligibility: ENG 1530. J spring; C spring. 4 credit hours.

BIO 1700 Immunology Students will study the mechanisms needed to establish normal immunity, as well as the biological problems that can arise in allergies, autoimmunity and chronic inflammation. As such they will learn about diseases from which so many suffer. In addition, during laboratories, students will be engaged in individual research projects to learn valuable standard operating procedures for laboratory work, like good note keeping, making reagents, etc. The research projects will be used as a vehicle for them to learn the important biotechnology techniques and concepts that have developed out of the field of immunology, as well as to prepare them for an undergraduate research experience should they choose. Special emphasis will be placed on the nexus between immunology, molecular biology, and pathophysiology. Prerequisite: BIO 1570 or 2510; Eligibility: ENG 1530. J occasionally; C occasionally. 4 credit hours.

BIO 1710 Personal Health and Safety Designed for non-science majors, this course deals with emergency medical problems as they relate to sudden illness, accidents, environmental emergencies, and life threatening situations. Students will learn about legal responsibilities, bleeding, shock, soft tissue injuries, musculoskeletal injuries, syncope, diabetic emergencies, seizures, strokes, poisoning, and alcohol abuse. Successful course completion may possibly lead to American Red Cross certifications in both community CPR, first aid/responding to emergencies, and automatic external defibrillation (AED). Appropriate for non-science majors. Corequisite: ENG 0430 and ENG 0410; Reading score Accuplacer 70+. Note: Eligibility for ENG 1510 is strongly recommend. J occasionally. 3 credit hours.

BIO 1820 SURI: Biotechnology Students will be exposed to authentic laboratory environments and the practice application of scientific method in context of research projects. The course is divided into laboratory experience and a weekly three-hour colloquium where students receive lectures on key topics and present scientific literature. Colloquium also trains students in lab notebook keeping, scientific presentation skills and reading/presenting biotechnology and biomedical literature. Students are divided into either Biotechnology I or Biotechnology II, depending on their level of experience, but are blended together in a single course. Biotechnology I students are required to understand and explain the methods used and data presented in scientific literature and in their own research. Research topics range from cancer biology and immunology to environmental biotechnology and deliberately use methods and interpretation of results unique to the field of biotechnology. Prerequisite: BIO 1570. J summer.

BIO 1830 SURI: Environmental I Students will participate in environmental research that pertains to their area of interest and/or as requested by local environmental organizations. As part of this experience, students will read, interpret, and present published scientific research papers. Students will be responsible for experimental design, maintaining a laboratory journal, and acquiring the necessary laboratory and field research skills to complete their research and present their results. Students are divided into either Environmental I or Environmental II, depending on their level of experience, but are blended together in a single course.

Course Descriptions
Environmental I students are expected to function as technicians. As such, they will learn how to function in a research setting, learn scientific record-keeping and how to design and perform a well controlled experiment reproducibly. Prerequisite: BIO 1570. J summer.

**BIO 2010 Biology Internship** Students receive on-the-job experience consisting of 135 hours of supervised activity in a local business or industry. Students work in conjunction with a faculty mentor and a supervisor at the job site. All guidelines in the original college internship policy will be followed. Prerequisite: At least a 2.0 GPA and either sophomore standing or one semester completion in an appropriate certificate program. J occasionally; C occasionally. 3 credit hours.

**BIO 2510 Anatomy & Physiology I** This course is the first of two human anatomy and physiology courses which must be taken in sequence. This first course is designed for students who have had little or no previous study of the body or the physical and chemical principles on which body structure and function is based. In this course, students are introduced to basic chemistry and physics, cytology, and histology, and the following organ systems are covered: integumentary, skeletal, muscular, cardiovascular, immune, and respiratory. The accompanying laboratory deals with basic terminology, microscopy, animal dissection, organ dissection, and experimentation. Prerequisite: high school chemistry, CHE 1500, or CHE 1530. Corequisite: ENG 1510; must meet minimum college level reading score: Accuplacer 80+. It is strongly recommended that students have an appropriate biology course. J fall, spring; C fall, spring. 4 credit hours.

**BIO 2520 Anatomy & Physiology II** This course is the second of two human anatomy and physiology courses which must be taken in sequence. In this course, students are introduced to water, electrolyte, and acid-base balance, and the following organ systems are covered: urinary, digestive, endocrine, nervous, and reproductive. The accompanying laboratory deals with microscopy, animal dissection, organ dissection, and experimentation. Prerequisite: BIO 1570 or BIO 2510; Eligibility: ENG 1530. Must meet minimum college level reading score: Accuplacer 80+. J spring; C spring. 4 credit hours.

**BIO 2531 Microbiology** Students will identify the microorganisms of importance to medicine, industry, and the natural world. Topics include microbial taxonomy; cultivation; metabolism; genetics; physical, chemical, and chemotherapeutic agents of microbial control; host defense mechanisms and immunology; biology; epidemiology; and selected bacterial, fungal, protozoan, and viral pathogens of medical significance. Prerequisite: BIO 1570 or BIO 2510; Eligibility: ENG 1530. J fall, spring; C fall, spring. 3 credit hours.

**BIO 2532 Microbiology-Lab** Students will become skilled in appropriate techniques for handling bacterial cultures, identifying specimens and implementing and evaluating various standard diagnostic procedures. Prerequisite: BIO 1570 or BIO 2510; Eligibility: ENG 1530. J fall, spring; C fall, spring. 1 credit hour.

**BIO 2550 Conservation Biology** Students will study, discuss, and present information related to the global loss of biodiversity. Traditional as well as modern conservation practices will be discussed emphasizing the ways in which the principles of genetics, ecology, and evolutionary biology are being utilized to conserve and protect at-risk species and global biodiversity. The growing need for the application of ecological principles to our human role in the environment, including topics such as habitat alteration and fragmentation. Introduction of exotic species, ecological economics, the importance of diversity, and extinction will be discussed. Multiple field trips will be included outside of scheduled class time. Prerequisite: BIO 1570 or high school AP biology of approved high school advanced biology; Eligibility: ENG 1530. J fall, spring; C fall, spring. 3 credit hours.

**BIO 2560 Genetics** Students will identify the fundamental concepts of heredity, including Mendelian principles and extensions, structure and replication of chromosomes, gene and chromosomal mutations, gene linkage and chromosome mapping, transcription and translation, regulation of gene expression, mechanisms of mutation, recombination and repair, population genetics, molecular evolution, cloning and recombinant DNA technology, and other contemporary topics. Prerequisites: BIO 1570; Corequisite: CHE 1550; Eligibility: ENG 1530. J occasionally. 4 credit hours.

**BIO 2570 Environmental Issues/Ethics** Students will gain critical understanding of the impacts of human activities as they affect the earth and the web of life it sustains from both ethical and scientific perspectives. Contemporary environmental issues such as methods and limitations of science and moral reasoning, global warming, ozone depletion, deforestation, animal rights, population growth, waste disposal, biodiversity, and species extinction will be discussed. This team-taught course is offered under biology for natural science credit (BIO 2570) or philosophy for humanities credit (PHL 2570). Prerequisites: BIO 1570 and ENG 1530. J occasionally. 3 credit hours.

**BIO 2600 Planet Earth: Critical Topics** Students will examine critical issues affecting humanity and the global environment, from an in-depth, three-part perspective. Students will investigate the science of selected topics of global environmental significance, explore their causes and consequences within contemporary culture, and evaluate the impacts and importance of the mass media in public perception concerning these issues. Corequisite: ENG 1530 and a reading score of 80+. J occasionally. 3 credit hours.

**BIO 2620 Tropical Biology Seminar** Students will experience “hands-on” learning about South and Central American tropical habitats, including rainforests, coral reefs, mangrove swamps, and Caribbean coastal shore areas, via classroom lectures and travel to Costa Rica, Panama, or other biodiverse sites during spring recess. Animals and plants typical of both marine and terrestrial tropical communities will be explored and identified, and their various habitats will be investigated. Prerequisites: BIO 1570 and permission of the instructor; Eligibility: ENG 1530. Rigorous physical activities, including swimming, snorkeling, and hiking are required. J occasionally; C occasionally. 3 credit hours.

**BIO 2640 Animal Behavior** Students will master a variety of topics including the nature of instinct, biological basis of aggression, social communication, animal navigation and migration, mating, and reproductive behavior, and territoriality. Both classical and recent studies, including those that deal with human behavior will be represented. Field trips may be an additional part of the course. Prerequisite: a college biology or psychology course. J occasionally; C occasionally. 3 credit hours.

**BIO 2660 Zoology** In this introduction to the animal kingdom, students will be asked to identify and understand animal morphology, development, behavior, relationships with the environment, and the evolutionary history of numerous phyla and classes of animals. This course explains what animals are, what they do, and how they came to be. One or more field trips will be included. Prerequisite: BIO 1570; Eligibility: ENG 1530. J fall, spring. 4 credit hours.

**BIO 2670 Botany** Using a classical taxonomic study of the botanical realm, students will gain an understanding of bacteria, protophytops, fungi, and the true plants, and explore the ecological, evolutionary, and economic significance of these organisms. Emphasis is placed on the morphology, anatomy, physiology, behavior, and ecology of the principal organisms through the study of cells, tissues and organs, life cycles and reproductive strategies, evolutionary relationships and trends, taxonomic classification, and related contemporary issues. Laboratory includes off-campus field trips and outdoor fieldwork assignments. Prerequisite: BIO 1570; Eligibility: ENG 1530. J fall. 4 credit hours.

**BIO 2760 Nutrition** Students will evaluate the importance of carbohydrates, lipids, proteins, vitamins, minerals and water, energy metabolism, nutritional needs throughout the life cycle, nutrition and disease states, food safety, and consumer issues dealing with nutrition. Prerequisite: a high school biology course, or BIO 1570, or BIO 2510; Corequisite: ENG 1510 and college level reading score Accuplacer 80+. 3 credit hours.

**BIO 2800 Cell and Molecular Biology** This course examines the structure and function of living cells. The course extends and adds to the fundamental cell biology knowledge students acquire in BIO 1570: Principles of Biology I. In the lecture component of the course, students will learn about energy use by cells; cellular proteins and enzymes; DNA, chromosomes, and gene expression; membrane structure and transport; cellular organelles; cell communication; the cytoskeleton; and control of the cell cycle and cell death. In the laboratory portion of the course, students will learn how to perform contemporary methods used to manipulate cells and molecules within cells. Prerequisite: BIO 1570; Eligibility: ENG 1530. J occasionally; C occasionally. 4 credit hours.

**BIO 2810 Biotechnology** Research Students will be introduced to problem-solving using modern laboratory techniques in molecular biology that were first introduced in courses such as Principles of Biology, Genetics, and Cell and Molecular Biology. Problem solving draws on the basic techniques of molecular biology used in the study of gene structure and function, including DNA/RNA and plasmid isolation, protein extraction, Southern
blotting and western blotting, PCR, gene cloning, and others. This course provides hands-on experience with the techniques and instrumentation used in the modern biotechnology laboratory. Prerequisite: BIO 2560; Corequisite: BIO 2600. 2 credit hours.

BUS 2820 SURI: Biotechnology II Students will be exposed to authentic laboratory environments and the practical application of scientific method in context of research projects. The course is divided into laboratory experience and a weekly three hour colloquium where students receive lectures on key topics and present scientific literature. Colloquium also trains students in lab notebook keeping, scientific presentation skills and reading/presenting biotechnology and biomedical literature. Students are divided into either Biotechnology I or Biotechnology II, depending on their level of experience, but are blended together in a single course. Biotechnology II students are required to understand and explain the underlying concepts in scientific literature and in their own research at an undergraduate level. This includes the methods, results, and conclusions drawn in the research. Research topics range from cancer biology and immunology to environmental biotechnology and deliberately use methods and interpretation of results unique to the field of biotechnology. Prerequisite: ENG 1530; BIO 1700 or BIO 2531 or BIO 2560, or BIO 2800. J summer.

BUS 2830 SURI: Environmental II Students will participate in environmental research that pertains to their area of interest and/or as requested by local environmental organizations. As part of this experience, students will read, interpret, and present published scientific research papers. Students will be responsible for experimental design, maintaining a laboratory journal, and acquiring the necessary laboratory and field research skills to complete their research and present their results. Students are divided into either Environmental I or Environmental II, depending on their level of experience, but are blended together in a single course. Environmental II students are expected to function like an advanced student. In addition to Environmental I expectations, they are also expected to understand and communicate how the papers they present fit into the underlying science. Prerequisite: ENG 1530; BIO 1750; and BIO 1580, or BIO 1830, or BIO 2550 or BIO 2600, or BIO 2660, or BIO 2670. J summer.

BUSINESS

BUS 1220 College Keyboarding Students will master the keyboard and develop skills and techniques in accuracy, proofreading, speed, and document production. Basic letters, one-page reports, and a variety of business documents are introduced and keyed using the computer. Skill building is emphasized through individualized instruction. No prerequisites. J fall, spring; C fall, spring; online fall, spring. 3 credit hours.

BUS 1320 Word Processing Students will learn to create, edit, save, and print documents. Preparation of business letters and reports will enhance basic and production skills and office simulation activities. The ability to produce and edit professional business documents is strengthened. The course provides hands-on training in word processing software. Prerequisite: BUS 1220. J fall, spring, C fall, spring, online fall, spring. 3 credit hours.

BUS 1410 Accounting Fundamentals Students will gain an understanding of the accounting principles and procedures used to record, classify, and summarize financial data. Students will become familiar with accounting terminology and many of the financial records, forms, and statements used in an electronic environment. No prerequisites. J spring; C spring. 3 credit hours.

BUS 1420 Office Procedures Students will prepare to learn and perform procedures to become effective in both the operation and managerial levels required in today’s and tomorrow’s office. A survey of the automated office and introduction to integrated office systems is emphasized. Students are given a perspective on the role of an office professional and an awareness of the technical developments that have affected the office professional. Course content includes theory and practice in time and work management, telephone techniques, planning/coordinating travel and meetings, and communication skills. No prerequisites. J spring; C spring; online spring. 3 credit hours.

BUS 1430 Entrepreneurship I This course provides the student with skills and resources necessary to assess current personal, economic, social, and business environment for opportunities for new ventures. Students will assess their business ideas based on their own strengths and skills, by looking internally at prior experience, education and skills. In addition the student will begin an external analysis of area trends. Business ideas will be matched with the student’s skills, as well as personal, professional, and financial goals. Students will finalize their business concept and conduct a feasibility study of their local market. Eligibility: ENG 1510. J occasionally; C occasionally; online occasionally. 3 credit hours.

BUS 1500 Introduction to Business Students will study the elements and characteristics of a free enterprise system and will be presented an overview of functional areas of business and basic concepts of the business world. Some topics include the environment of business, organization and management of the enterprise, management of human resources and production, marketing, finance, government’s role in business, social responsibility, and cultural diversity, as well as major societal issues facing today’s business executives. Recommended for beginning business students and non-business majors. Corequisite: ENG 0430. J fall, spring; C fall, spring; online occasionally. 3 credit hours.

BUS 1510 Principles of Financial Accounting Students will gain a broad view of accounting’s role in satisfying society’s need for financial information. In an overview of the accounting profession, students will understand generally accepted accounting principles underlying the design, integrity, and effectiveness of accounting information systems. Providing relevant financial statements for the decision maker and the use of computers to generate financial information are outlined. Prerequisite: must meet minimum college level reading score: Accuplacer 80+. J fall, spring; C fall, spring; online occasionally. 4 credit hours.

BUS 1520 Principles of Managerial Accounting Students will demonstrate basic decision making and analyzing skills in management accounting. Financing a business through debt or capital structures, analysis of cash flows, financial ratios, manufacturing costs, budgeting, cost-volume-profit analysis, and current managerial accounting topics are covered. Prerequisite: BUS 1510. J fall, spring; C fall, spring; online occasionally. 4 credit hours.

BUS 1610 Personal Finance Students will gain an appreciation of the need for personal financial planning and will learn how to apply such planning to goal setting and budgets. They will evaluate measures to risk and harnessing to a risk management plan. Students will have the ability to coordinate income, assets, and savings into a comprehensive program that takes the planner through the various stages of their life cycle, from college to retirement. Eligibility: ENG 1510. J fall, spring; C occasionally. 3 credit hours.

BUS 1650 Global Business Students will learn how and why countries differ. More specifically, they will learn about the economics, politics, and global monetary system of international trade. Students will develop an understanding of the global marketplace, different cultures, and the role of management and labor in international business. (Previous knowledge of economic, business, geography, and world politics is helpful, but not a requirement.) Eligibility: ENG 1510; must meet minimum college level reading score: Accuplacer 80+. J spring. 3 credit hours.

BUS 2010 Business Internship Students will receive on-the-job experience consisting of 135 hours of supervised activity in a local business or industry. Students work in conjunction with a faculty member and a supervisor at the job site. All guidelines in the original internship policy will be followed. Prerequisite: sophomore standing. J fall, spring; C fall. 3 credit hours.

BUS 2020 Business Internship Students will receive on-the-job experience consisting of 135 hours of supervised activity in a local business or industry. Students work in conjunction with a faculty member and a supervisor at the job site. All guidelines in the original internship policy will be followed. Prerequisite: sophomore standing. J fall, spring; C fall, spring. 3 credit hours.

BUS 2270 Introduction to Taxation Introduces students to a broad range of tax concepts and types of taxpayers. The course will also emphasize the basic structure of the tax law and the process of performing tax research, as well as build a foundation of the details of tax law that are most likely to be of long-term importance. Students will be exposed to tax research, tax planning, and tax compliance. Prerequisites BUS 1510-1520. J occasionally. 3 credit hours.

BUS 2320 Word Processing Production Students will refine basic skills mastered in word processing and practice more sophisticated features of Microsoft Word for multi-page documents including page formatting, footnotes, macros, merge, document assembly, sort, select, tables, and graphics. Documents similar to those encountered in business organizations are prepared. Projects simulating real-life situations will reinforce word processing and desktop publishing skills. Prerequisite: BUS 1320 or equivalent experience. J fall, spring; C fall, spring. 3 credit hours.
BUS 2420 Professional Development Internship  Students will learn to integrate theory and practice in a business setting by working 10 hours per week in a business organization. Student, instructor, and internship site supervisor will jointly plan the experience and help the student develop as a professional. A weekly, two-hour seminar focuses on topics related to the professionalism that is required in today’s business world. Prerequisites: Sophomore standing and must be program major. J fall; C spring. 3 credit hours.

BUS 2480 Business Electronic Communication  Students will learn to design, create, and publish professional communication and marketing materials for businesses and organizations using presentation and publishing software. They will investigate other electronic communication tools used in business today such as electronic mail, audio and videoconferencing, and the Internet. Prerequisite: Sophomore standing. Online fall. 3 credit hours.

BUS 2510 Corporate Finance  Students will apply computational, critical thinking, and financial analysis tools to data to make it useful for business decisions of a financial nature. The student will demonstrate an understanding of alternative forms of business organization, ratio analysis, risk-return tradeoffs, time value of money, debt versus equity financing, valuation of securities, and capital budgeting. Students learn to apply these tools in the context of maximizing shareholders’ wealth in a global economy. Prerequisites: BUS 1510-1520. J occasionally; C occasionally. 3 credit hours.

BUS 2530 Business Law I  Students will study and examine the legal environment of business using the case method in which law is applied to factual situations. In BUS 2530, students study court systems and procedural law, tort and criminal law, constitutional law, and contract law. In BUS 2540, students study the law related to personal property and bailments, real property, secured transactions and bankruptcy, business structure including partnerships and corporations, and the Uniform Commercial Code. Eligibility: ENG 1530. J fall; C fall. 3 credit hours.

BUS 2540 Business Law II  Students will study and examine the legal environment of business using the case method in which law is applied to factual situations. In BUS 2530, students study court systems and procedural law, tort and criminal law, constitutional law, and contract law. In BUS 2540, students study the law related to personal property and bailments, real property, secured transactions and bankruptcy, business structure including partnerships and corporations, and the Uniform Commercial Code. Eligibility: ENG 1530. J spring; C spring. 3 credit hours.

BUS 2550 Corporate Finance  Students will apply computational, critical thinking, and financial analysis tools to data to make it useful for business decisions of a financial nature. The student will demonstrate an understanding of alternative forms of business organization, ratio analysis, risk-return tradeoffs, time value of money, debt versus equity financing, valuation of securities, and capital budgeting. Students learn to apply these tools in the context of maximizing shareholders’ wealth in a global economy. Prerequisites: BUS 1510-1520. J occasionally; C occasionally. 3 credit hours.

BUS 2570 Principles of Management  Students will learn the basic concepts, factors, functions, and techniques of management in organizations. Students will obtain specific knowledge of planning, organizing, directing, and controlling and the interconnectedness of these functions in productive organizations. Upon course completion, students will demonstrate a knowledge of the principles of good management in individual and team-based environments. Eligibility: ENG 1530 and Sophomore standing. J fall; C fall. 3 credit hours.

BUS 2580 Management/Organizational Behavior  Students will develop an understanding of the basic concepts of behavioral sciences and their application to performance of individuals working in organizations. Students will study key attitudes and behavior that affect productivity. Upon course completion, students will demonstrate an understanding of the factors that affect performance such as leadership, motivation, communication, absenteeism, and job satisfaction as well as a basic understanding of how diverse individual styles of interaction contribute to an organization. Eligibility: ENG 1530 and Sophomore standing. J spring; C spring. 3 credit hours.

BUS 2590 Advanced Managerial Accounting  Students will develop techniques for internal reporting and analysis of accounting information to assist managers in their decision making processes. Students will demonstrate an understanding of various budgeting techniques and the responsibility of managers in the process. Upon course completion, students will have a knowledge of the fundamental accounting concepts of planning and control. Prerequisites: BUS 1510-1520 and MAT 1590. J occasionally; C occasionally. 3 credit hours.

BUS 2630 Human Resource Management  Students will learn the basic functions of human resource management in organizations. Topics include organization of jobs, employment, training, labor relations, compensation, appraisal, and benefits. Eligibility: ENG 1530. J occasionally; C occasionally. 3 credit hours.

CHEMISTRY

CHE 1500 Introduction to Chemistry  Students will investigate fundamental concepts of chemistry from a theoretical approach using basic scientific tools of measurement and problem solving. Topics include atomic structure, nomenclature, bonding, periodic behavior, chemical equations, acids and bases, gases, liquids, solids, and properties of solutions. The course is for students with little or no chemistry background and/or who wish to continue in CHE 1550. Eligibility: ENG 1510; Corequisites: MAT 0600 or MAT 1500; must meet minimum college level reading score: Accuplacer 80+. J fall; C fall; online occasionally. 3 credit hours.

CHE 1550 College Chemistry I  Students will investigate fundamental concepts of chemistry from a theoretical perspective with an emphasis on problem solving. Through the laboratory students will attain and demonstrate qualitative and quantitative skills. The chemistry of elements and compounds will be studied through measurements, atomic structure, periodicity, chemical bonding, stoichiometry, reaction classification, redox, gases, liquids, and solids. The review class is strongly recommended as an opportunity to practice problem solving, to ask specific questions, and to review returned quizzes and exams. Course content is designed for the science/engineering major who has already taken a chemistry course and who wishes to transfer to a four-year institution. Prerequisites: high school chemistry or CHE 1500 or CHE 1530; Corequisites: ENG 1510 and MAT 1590; must meet minimum college level reading score: Accuplacer 80+. J fall; C spring; J fall. 4 credit hours.

CHE 1560 College Chemistry II  A continuation of CHE 1550, students will investigate intermolecular forces in solids & liquids, solutions, kinetics, equilibrium, acids and bases, thermodynamics, electrochemistry, and nuclear reactions. Prerequisite: CHE 1550; Corequisite: ENG 1530 and MAT 1600. J spring; C spring. 4 credit hours.

CHE 2530 Organic Chemistry I  Students will apply many concepts from college chemistry to the study of organic molecules. Students will be able to name and draw structures, assign properties, predict reaction products, synthesize and explain the reaction mechanisms for alkanes, alkenes, alkynes, and cyclic hydrocarbons as well as alkylhalides, alcohols, and ethers. Aromatic compounds will be introduced and stereochemistry and effects of solvents will also be investigated. A broad spectrum of classical organic reactions will be examined in the lab using microscale techniques. Prerequisite: CHE 1560. J fall. 4 credit hours. 4 credit hours.

CHE 2540 Organic Chemistry II  A continuation of CHE 2530, students will extend their studies to the spectroscopic analysis of hydrocarbons. Additional topics include aromatic compounds, aldehydes, ketones, carbanions, carboxylic acids and their derivatives. amines, phenols, amino acids, polymers, lipids, carbohydrates, and proteins, and nucleic acids. Labs (still microscale) will investigate a range of multistep reaction sequences, as well as a few short classic reactions. Prerequisite: CHE 2530. J spring. 4 credit hours.

COMMUNICATION

CMC 1510 Introduction to Communication  Students will be introduced to the theories, processes, and applications of verbal and nonverbal human communication and explore why and how people communicate (face-to-face, in public, through the mass media, etc.). Students will also examine the ways that new communication technologies are shaping private and public discourse. Students will gain the skills necessary to recognize and analyze communication failures.
and be able to apply those skills in the process of becoming more effective communicators. 
Corequisite: ENG 1530; must meet minimum college level reading score: Accuplacer 80+. J fall, spring; C fall. 3 credit hours.

CMM 1610 Public Speaking Students will learn effective strategies for researching, preparing, and delivering informative and persuasive speeches to small groups. Students will be able to demonstrate methods for building confidence in speech delivery, supporting points with evidence, analyzing the audience, using media aids effectively, and refining delivery style. Eligibility: ENG 1510; must meet minimum college level reading score: Accuplacer 80+. J fall, spring; C fall, spring. 3 credit hours.

CMM 1630 Introduction to TV Production Students are introduced to the cameras and sound, lighting, mixing, recording, and graphic tools used to produce television programming. Working in teams to produce live-to-tape programs, students are given the opportunity to acquire producing, directing, writing for electronic media, and live editing skills. No prerequisites. J spring. 3 credit hours.

CMM 1710 Digital Video Production Students will be introduced to single camera, post-produced video making. Students will explore shot composition, using a digital video camera, film style shooting, sound recording, and lighting. They will learn how to conduct an audience analysis, write project treatments, and produce storyboards for projects that will be completed during the course. Projects are edited using digital video software and Macintosh computers. Corequisite: ENG 1530; must meet minimum college level reading score: Accuplacer 80+. J fall. 3 credit hours.

CMM 1750 Rhetoric of Vision and Sound This communication and media arts foundation course explores the vision and sound codes used in various forms of mediated communication. Students will examine films, television, radio, and the Internet to gain an understanding of the techniques employed by producers and directors to create meaning beyond content and script. Students will study the grammatical elements which comprise the rhetoric of vision and sound: the use of light, color, two- and three-dimensional space, time, motion, and sound. In today’s media saturated environment, the ability to decode mediated messages is a valuable critical thinking skill for all citizens; students interested in becoming producers of media will find the knowledge they have gained in this course especially helpful to their production efforts. Corequisite: ENG 1530. J occasionally. 3 credit hours.

CMM 2500 Interpersonal Communication Students will develop their ability to examine the interpersonal communication they are likely to encounter in their personal and professional lives. They will describe their interpersonal communication style, and understand the roles played by such factors as verbal and non-verbal cues, communication climate, intimacy, distance, and conflict. Students also learn to recognize obstacles to effective interpersonal communication and develop strategies for overcoming these obstacles. Corequisite: ENG 1530; must meet minimum college level reading score: Accuplacer 80+. J fall, spring; C occasionally. 3 credit hours.

CMM 2510 Introduction to Public Relations Students will learn the definition of, theory behind, and application of public relations (PR) and will be introduced to the role public relations plays in integrated marketing campaigns. The course will include a study of the strategic PR process; research, action and planning, communication and evaluation. Students will gain practical experience in writing news releases, market research, crisis management, and creative design. Corequisite: ENG 1530. J fall. 3 credit hours.

CMM 2530 Writing for Electronic Media This practical writing course offers students guidance and experience conceptualizing and writing for a variety of electronic media forms including radio, television, film, multimedia productions, and the Internet. The brief exposure to messages created for electronic media, as well as the interactive nature of some electronic media, makes writing for the media especially challenging. Students will learn how to cope with these challenges and become competent media writers. Prerequisite: ENG 1530. J spring. 3 credit hours.

CMM 2560, 2561, 2562, 2563, 2564, 2565 Communication/Media Arts Internship Students will demonstrate a working knowledge of the media by participating in actual work experience for a communication or media arts organization. Students will negotiate internship duties with the organization’s supervisor and with their faculty sponsor in the communication and media arts program. Students submit written logs of their experiences and a final report analyzing their internship experience, which contribute to their evaluation. Prerequisite: CMM 1510. J occasionally. 1-3 credit hours.

CMM 2570 Studio Production Practicum Students have the opportunity to expand the foundation of production skills acquired in CMM 1630. Producing, directing, writing for electronic media, and live editing skills are emphasized. Students will provide guidance and advice to production teams through live-to-tape programs and lab exercises. Prerequisite: CMM 1630. J occasionally. 1-3 credit hours.

CMM 2600 Planet Earth: Critical Topics Students will examine critical issues affecting humanity and the global environment, from an in-depth, three-part perspective. Students will investigate the science of selected topics of global environmental significance, explore their causes and consequences within contemporary culture, and evaluate the impacts and importance of the mass media in public perception concerning these issues. Corequisite: ENG 1530 and a reading score of 80+. J occasionally. 3 credit hours.

CMM 2610 Mass Communication/Media Literacy Students will learn about the processes, industries, and issues involved in the mass communication media of books, magazines, newspapers, radio, TV, film, the Internet, and the newest media technologies. They will learn how media has evolved over time and will be able to analyze the coding embedded in mass mediated messages. Students will also study the power of media has on us as individuals, Americans, and world citizens. Prerequisite: ENG 1530. J spring. 3 credit hours.

CMM 2620 Introduction to Electronic Word Processing Students will learn fundamental concepts of electronic word processing including creating, editing, formatting, printing, spell checking, and grammar checking documents. Students implement solutions to assigned problems using software such as Microsoft Word. This course is appropriate for students in any discipline and requires no prior computer experience. No prerequisites. J fall, spring; C fall, spring. 1 credit hour.

CMM 2630 Introduction to Electronic Spreadsheet Students will learn fundamental concepts of electronic spreadsheets including design, formatting, and working with charts and functions. Students implement solutions to assigned problems using software such as Microsoft Excel. This course is appropriate for students in any discipline and requires no prior computer experience. A student enrolled concurrently in or with prior credit in CMM 1560 cannot apply this course toward graduation. No prerequisites. J fall, spring; C fall, spring. 1 credit hour.

CSC 1300 Computer Basics for the Novice Designed for the newcomer to computers, this course introduces personal computer hardware and software by presenting the fundamentals of a Windows operating system and provides an exposure to word processing, graphics, spreadsheets, and other standard programs. Students may be concurrently enrolled in CSC 1510. This course will not count toward degree credits if the student has previously taken any other CSC course. No prerequisites. J occasionally. 1 credit hour.

CSC 1310 Introduction to World Wide Web Students will learn to use a variety of browsers to access information on the Internet and work with its multimedia capabilities. This course is appropriate for students in any discipline and requires no prior computer experience. No prerequisites. J fall, spring; C fall, spring. 1 credit hour.

CSC 1320 Introduction to Electronic Word Processing Students will learn fundamental concepts of electronic word processing including creating, editing, formatting, printing, spell checking, and grammar checking documents. Students implement solutions to assigned problems using software such as Microsoft Word. This course is appropriate for students in any discipline and requires no prior computer experience. A student enrolled concurrently in or with prior credit in CSC 1560 cannot apply this course toward graduation. No prerequisites. J fall, spring; C fall, spring. 1 credit hour.

CSC 1330 Introduction to Electronic Spreadsheet Students will learn fundamental concepts of electronic spreadsheets including design, formatting, and working with charts and functions. Students implement solutions to assigned problems using software such as Microsoft Excel. This course is appropriate for students in any discipline and requires no prior computer experience. A student enrolled concurrently in or with prior credit in CSC 1560 cannot apply this course toward graduation. Corequisite: MAT 0500. J fall, spring. 1 credit hour.

CSC 1510 Introduction to Computer Science Students will develop computer literacy by studying an overview of computing and a brief introduction to programming. Topics include a history of computers and computing, computer system components, data representation, the impact of computers on society, computer ethics, an Introduction to data communications, networking, word processing, spreadsheets, programming in a structured language, and e-mail. Students will also use the Internet and a web browser. Less than 20% of class time is spent on lab exercises. No prerequisites. J fall, spring; C fall, spring; online fall, spring. 3 credit hours.

CSC 1530 Web Publishing Students will study advanced HTML language concepts, usability concepts, and JavaScript programming basics. Students will design home pages using tables, frames, forms, cascading style sheets, and JavaScript. Students will also learn how to publish a home page with video clips, sound, and animation. Prerequisite: Some knowledge of HTML required. J fall; C fall; online fall. 3 credit hours.

CSC 1560 Microcomputer Applications I Students
students use application software such as Microsoft Office to study word processing, spreadsheets, database management, and presentation software. The integration and practical application of these topics is stressed throughout the course. Students will spend a substantial amount of out-of-class time working on computer projects. Prerequisite: MAT 0600 or higher; must meet minimum college level reading score: Accuplacer 80+. J fall, spring; C fall, spring; online fall, spring. 4 credit hours.

CSC 1570 Programming Concepts/Applications Students will learn the components of the programming cycle including problem analysis, algorithm development, design implementation, debugging, and acceptable documentation standards. Students will implement their algorithms using an object-oriented programming language. Corequisite: MAT 0600. J fall, spring; C fall; online fall, spring. 3 credit hours.

CSC 1580 Microcomputer Hardware Systems/Software Students will study the design, installation, configuration, and maintenance of hardware and software components of an IBM compatible microcomputer. Interior components covered include memory, disk drives, expansion cards, and power supplies. Other common I/O devices and peripheral devices such as printers and the mouse are studied. Major categories of system software, operating systems, and diagnostic utilities are covered. Prerequisite: Computer knowledge equivalent to CSC 1510. J fall, spring; C spring; online spring. 3 credit hours.

CSC 1590 Computer Programming Students will learn algorithm development and object-oriented program design using an object-oriented language such as Java. Topics include control structures, program debugging, documentation, user-defined methods, parameter passing, graphical user interfaces, arrays, and user-defined classes. Students spend a substantial amount of out-of-class time working on computer projects. Prerequisite: CSC 1570: Corequisite: MAT 1590; must meet minimum college level reading score: Accuplacer 80+. J spring; C spring; online spring. 4 credit hours.

CSC 1600 Data Structures This course continues the study of algorithm development involving data structures, data abstraction, recursion, sorting, and searching. Topics in data structures include stacks, queues, linked lists, and trees. Large programming systems with multiple modules are designed and implemented using an object-oriented programming language such as Java. Prerequisite: CSC 1590; Corequisite: MAT 1600. J occasionally; C occasionally; online occasionally. 4 credit hours.

CSC 1630 Web Technologies Students will be introduced to a programming framework to develop code to be used in web development. Students will develop, manage, and publish code to the “cloud” using various tools consistent with the framework used. The integration and practical application of framework development technologies will be stressed. Students will spend a substantial amount of out-of-class time on computer projects which require a reliable Internet connection. Prerequisite: CSC 1530 and CSC 1570. J occasionally. 3 credit hours.

CSC 1680 Introduction to Visual Basic Students will learn to develop user-friendly, Windows-based business applications using Microsoft Visual Basic.Net. Topics include screen design, program organization, control structures, subprograms, arrays, and file maintenance. Students use Visual BASIC to communicate with other Windows-based applications such as Microsoft Excel and Access. Problem solving techniques and structured programming practices are emphasized. Prerequisite: CSC 1590 or equivalent programming experience. online occasionally. 3 credit hours.

CSC 1720 Numerical Analysis I Students will explore methods for the numerical solution of a variety of mathematical problems using various analysis tools such as Excel, MAPLE, and/or Mathematica. Topics include limits and derivatives, Newton’s method and min-max problems, numerical integration, Monte-Carlo methods, interpolation, and approximation theory. Corequisite: MAT 1710. J spring. 1 credit hour.

CSC 1760 Microcomputer Applications II Students will further their study of topics from CSC 1560 using a software package such as Microsoft Office. Database topics include action queries, custom reports and forms, macros, and modules. Students spend a major portion of the semester developing an application using a relational database. Spreadsheet topics include macros, charting, pivot tables, and data analysis tools. Some advanced features of word processing such as directories and forms are included. Prerequisite: CSC 1560. J occasionally; C occasionally; online fall. 3 credit hours.

CSC 2010-2020 Computer Science Internship Students receive on-the-job experience consisting of 135 hours of supervised activity in a local business or industry. Students work in conjunction with a faculty mentor and a supervisor at the job site. All guidelines in the original college internship policy will be followed. Prerequisite: At least a 2.0 GPA and either sophomore standing or one semester completion in an appropriate certificate program. J occasionally; C occasionally. 3 credit hours.

CSC 2350 Applications/Troubleshooting Computer User Specialist This course is designed to provide Information Technology majors and other computer related majors, with communications skills and technical skills necessary for troubleshooting and user support. Topics include: problem solving methodologies, operating systems (installation, customization, compatibility, and troubleshooting), help desk operation, service request tracking and analysis, hardware and software needs assessment, training and instructional methodology and application troubleshooting. Prerequisites: CSC 1560 and CSC 1580. J occasionally; C occasionally; online occasionally. 3 credit hours.

CSC 2410 Web Programming Students will study client and server side programming techniques using current scripting languages. Students will demonstrate knowledge of these topics including networking design and architecture, data transmission, standards, and protocols. Local area networks (LAN) and wide area networks (WAN) will be studied along with the technologies that support the Internet. Upon course completion, students will demonstrate knowledge of these topics and have the ability to work with these concepts. Students will have some hands-on experience in this course. Prerequisite: CSC 1570 or equivalent programming experience; Corequisite: CSC 1580. J fall, spring; C spring; online fall. 3 credit hours.

CSC 2510 Introduction to Systems Analysis Systems analysis and design determines the direction and scope of information system projects. Upon course completion, students will demonstrate the ability to discuss solutions to business problems, interviewing techniques, process analysis, the system life cycle, construction of data flow diagrams, interface design options, and project management. Students will apply the concepts to real problem situations. Prerequisite: CSC 1590; CSC 1560 is strongly recommended. J occasionally; C occasionally; online occasionally. 3 credit hours.

CSC 2650 Numerical Analysis II Students will apply computer numerical methods to the concepts encountered in intermediate calculus. Topics include limits of sequences, sums of series, point-wise approximations of functions using
Taylor polynomials, interval-wise approximations of functions using Lagrange and Chebyshev polynomials and Fourier series, and multiple integration. Students will use analysis tools such as Excel, MAPLE, and/or Mathematica. Prerequisite: CSC 1720 or Corequisite: MAT 2650. J fall. 1 credit hour.

CSC 2660 Database Management Students will learn about database design methodology, exploring various data models, particularly the relational model. Topics include relational algebra, query languages, design techniques, security considerations, and database implementation. Students will use a database management system such as Oracle or MySQL. Prerequisite: CSC 1590 or CSC 1760. J occasionally; C occasionally; online occasionally. 4 credit hours.

CSC 2670 Computer Organization Upon course completion, students will demonstrate the ability to discuss the hierarchy of a computer system including digital-logic level, machine level, operating system level, and assembly level. Students will also be able to list major differences between various computer systems. Students work on projects that might include assembly language programming, internal organization of a typical PC, number systems, and digital logic. Prerequisite: CSC 1590 or equivalent programming experience. J occasionally; C occasionally; online occasionally. 4 credit hours.

CSC 2680 Numerical Analysis III Students learn computer numerical methods to solve differential equations. Topics include one-step methods such as Euler and Runge-Kutta, multi-step methods such as Adams-Bashford and Milne-Simpson, extensions of the Runge-Kutta method to solve higher order equations and systems of differential equations, solving boundary value problems using shooting and finite difference methods, and solving certain partial differential equations. Students will use various analysis tools such as Excel, MAPLE, and/or Mathematica. Prerequisite: CSC 2650 or Corequisite: MAT 2660. J spring. 1 credit hour.

CRI 1310 Corrections Practicum During this 84-hour experiential format, the student/recruit will be placed in a correctional facility for on-the-job training. The student/recruit will be assigned to a full-time correctional officer. While applying their academic knowledge in a real world setting, students/recruits will learn and perform the requisite duties for a correctional facility. All work experiences will be reduced to written form on a daily basis and evaluated by the assigned training officer. At the completion of the practicum, these evaluations will be used to assist in determining performance competency and certification potential. Prerequisites: Student must be a sworn correction officer working in either a county jail or correctional facility. C occasionally. 2 credit hours.

CRI 1320 Introduction to Law Enforcement Starting with the origins of American law enforcement, this course concentrates on contemporary law enforcement agencies and their function within the criminal justice system. Students will study police agencies at the local, county, state, and federal levels, and their operational techniques, as well as goals and objectives within specific units of each agency. Eligibility: ENG 1510. Corequisites: CRI 1510; must meet minimum college level reading score: Accuplacer 80+. J occasionally; C occasionally; online occasionally. 4 credit hours.

CRI 1340 Introduction to Emergency Telecommunications Provides the student with material related to handling a variety of emergency situations. Students also examine specialized equipment used for telecommunications, including biomedical telemarketing, alert paging, and mobile emergency radio systems. Prerequisite: permission of Sheriff’s Academy director. J occasionally; C occasionally. 3 credit hours.

CRI 1350 Corrections Academy This New York state mandated study surveys the correctional system and provides an in-depth academic and practical correctional officer experience. Students/recruits are required to learn, understand, and apply the requisite functions of a correctional officer as stated by the New York State Department of Corrections. Prerequisites: Student must be a sworn correction officer working in either a county jail or correctional facility. C occasionally. 10 credit hours.

CRI 1360 Legal Issues/Emergency Telecommunications Provides emergency telecommunications with an overview of the legal system. Topics include criminal law, procedural law, and civil liability. Students are exposed to vehicle and traffic law and its application to emergency situations. Prerequisite: permission of Sheriff’s Academy director. C occasionally. 3 credit hours.

CRI 1370 Radar/LIDAR Operator This course provides the basic knowledge from which to prepare a student for the use of a police Radar/LIDAR utilized by police agencies across New York state. The course serves as basic principles of radar and LIDAR, legal and operational considerations, calibration and set up procedures, mock courtroom testimony, speed estimates and supervised field practicum. Prerequisite: student must be a certified police officer of a recognized law enforcement agency, or by permission of academy director. J occasionally. 2 credit hours.

CRI 1380 Emergency Medical Dispatcher Provides students with materials related to medical emergencies which require a response from emergency telecommunications. Students become familiar with recognition of medical emergencies, prioritizing emergencies, and selecting appropriate responses. Students must possess CPR certificates and New York state telecommunicator certification. Prerequisite: permission of Cayuga County corrections academy director. C occasionally. 3 credit hours.

CRI 1390 Breath Analysis Course This course provides a base of knowledge from which to prepare students for the use of breath analysis equipment currently utilized within New York State law enforcement agencies. Instruction will include such topics as pharmacology of alcohol, alcohol properties, legal issues, current case law, Henry’s Law, infrared theory, datamaster nomenclature and operation, court preparation, and lab exercises. Prerequisite: student must be a certified police officer of a recognized law enforcement agency, or by permission of academy director. J occasionally. 2 credit hours.

CRI 1410 Peace Officer Firearms This course is a requirement for New York State peace officers. It is a comprehensive study in the fundamental use of firearms. The student will be provided with detailed instruction in firearms safety, weapons nomenclature, shooting skills, ammunition, tactical situations, position shooting, and use of force issues. A portion of the course will be practical application of learned skills on the firearms range. Prerequisite: Students must be a sworn and properly registered peace officer as required by NYS statute. J occasionally. 2 credit hours.

CRI 1420 Report Writing in Criminal Justice Students will develop knowledge and skills necessary for concise, effective, and accurate report writing. The importance of the narratives required in reports generated by law enforcement personnel and other criminal justice vocations is emphasized. Prerequisites: CRI 1510 and permission of instructor; Eligibility: ENG 1530; must meet minimum college level reading score: Accuplacer 80+. J occasionally; C occasionally. 3 credit hours.

CRI 1430 Inmate Classification This course provides a base of knowledge of the inmate classification program mandated by the New York State Commission of Correction (minimum standard 7013). This course will prepare students to apply this knowledge in the workplace. Prerequisites: Student must be a sworn correction officer working in either a county jail or correctional facility. J occasionally. 1 credit hour.

CRI 1440 Inmate Direct Supervision Students will gain a basic knowledge and understanding of the running of a direct supervision housing unit in a correctional facility. Direct supervision allows correctional officers to interact with inmates inside the housing unit, in order to manage their behavior. Prerequisite: permission of Cayuga County corrections academy director. Student must be a sworn correction officer working in either a county jail or correctional facility. J occasionally. 2 credit hours.

CRI 1450 Latent Print Level I This course...
is designed to introduce students to the field of latent print work. The course will cover areas such as print patterning, SAFIS, Henry Classification System, NCIC classification, fingerprint verification, criminal procedure laws, major print cases, crime scene procedure, printing dusting procedures, print lifting procedures, latent print powders and chemicals, photography techniques, photography of print techniques, mock crime scene work and a mock trial. Prerequisite: Students must be a certified police officer of a recognized law enforcement agency or by permission of the academy director. J occasionally. 2 credit hours.

CRI 1460 Basic Investigative Photography This 35-hour course in basic and investigative photography features workshops intertwined with lectures. It is designed to enhance the photographic abilities of police officers by outlining techniques and methods used in crime scene photography. The latter portion of the course will go into a deeper methodology on lighting techniques used to bring forth the qualities of a piece of evidence secured at a crime scene. Prerequisite: Students must be a certified police officer of a recognized law enforcement agency or by permission of the academy director. J occasionally. 1.5 credit hours.

CRI 1470 Crime Scene Evidence Specialist This two week course specializes in training as it relates to an officer who will be responsible for the detection, collection, and documentation of evidence at a crime scene. This aspect of law enforcement directly relates to crime scene investigations and is intertwined with forensic laboratories, medical examiners offices, and prosecutors. The instruction will include the collection of blood, bodily fluids, DNA, trace, and physical evidence. Prerequisite: Students must be a certified police officer of a recognized law enforcement agency and must have successfully completed CRI 1460: Basic Investigative Photography. J occasionally. 4 credit hours.

CRI 1510 Introduction to Criminal Justice An interdisciplinary survey of the American criminal justice system with specific topical emphasis on crime, law enforcement, courts, and corrections. Students must learn and discuss cogently the significance of legal and behavioral aspects of crime, the process of justice, various law enforcement entities within the United States, the need for various court structures, and various evidential systems. For criminal justice students and those interested in social sciences. Eligibility: ENG 1510; must meet minimum college level reading score: Accuplacer 80+. J fall, spring; C fall, spring. 3 credit hours.

CRI 1520 Introduction to Corrections The students will learn the philosophy, history, and development of the American correctional system. Students study contemporary penalties and the various successes and problems associated with those penalties, including prison life, prisoners’ rights, community corrections, and the death penalty. For anyone interested in correctional careers. Prerequisite: CRI 1510; Eligibility: ENG 1510. J occasionally; C occasionally. 3 credit hours.

CRI 1540 Introduction to Legal Systems Students will gain an understanding of the American legal system by examining the social influences on law-making, community involvement in the legal system, and the unique role of police, judges, and lawyers. Students will explore cross-cultural comparisons and legal philosophy. For anyone interested in the fundamentals of criminal and civil law. Prerequisite: CRI 1510; Eligibility: ENG 1510. J occasionally; C occasionally. 3 credit hours.

CRI 1610 Search and Seizure Students will study the laws and constitutional issues governing searches and seizures by law enforcement officers. Students will gain experience in the practical application in securing, executing, and court presentation of search warrants and evidence seized pursuant to a warrant. Prerequisites: CRI 1320 or 1510 and permission of criminal justice faculty. J occasionally. C occasionally. 1 credit hour.

CRI 1630 Motor Vehicle Stops Students will learn about the interaction of law enforcement personnel and citizens during traffic stops. The proper procedures applied during misdemeanor and felony motor vehicle stops are also examined. Prerequisites: CRI 1320 or 1510 and permission of criminal justice faculty. J occasionally. C occasionally. 1 credit hour.

CRI 1650 Hostile Situation Management Students will how to recognize and resolve hostile situations in law enforcement which includes domestic conflicts, hostage situations, and routine calls for service. Students will also learn how to apply successful coping strategies during stressful conflicts. Prerequisites: CRI 1320 or 1510 and permission of criminal justice faculty. J occasionally. C occasionally. 1 credit hour.

CRI 1670 Serial Killers This course focuses on the etiology and typologies of the phenomenon of a serial killer, what makes a serial killer, and what impact a serial killer has on society. A cross-section of serial killers is explored, identifying what is believed to have caused these individuals to kill. Prerequisite: CRI 1510; must meet minimum college level reading score: Accuplacer 80+. J occasionally. C occasionally. 1 credit hour.

CRI 1690 Interview and Interrogation Students will learn current interview and interrogation techniques that can be applied in various accusatory and non-accusatory settings. Proper application of these techniques in accordance with the 5th Amendment (right against self-incrimination) as it applies to suspects and arrested persons and the 6th Amendment (right to counsel) is emphasized. Prerequisites: CRI 1320 or CRI 1510, and permission of a criminal justice faculty member. J occasionally. C occasionally. 1 credit hour.

CRI 1710 Criminal Justice and Substance Abusers Students will learn how to identify and communicate with persons having an alcohol or drug problem who are being processed in the criminal justice system. Prerequisites: CRI 1510 and permission of instructor; Eligibility: ENG 1530; must meet minimum college level reading score: Accuplacer 80+. J occasionally. C occasionally. 1 credit hour.

CRI 1720 Criminal Justice and the Mentally Ill Students will learn how to identify and communicate with mentally ill persons who are being processed in the criminal justice system. Prerequisites: CRI 1510 and permission of instructor; Eligibility: ENG 1530; must meet minimum college level reading score: Accuplacer 80+. J occasionally. C occasionally. 1 credit hour.

CRI 1730 Gangs and Criminal Justice Students will learn the development and history of gangs in the United States which includes studying different criminal enterprises in which gangs are involved and solutions to the gang problems. Corequisites: CRI 1320. CRI 1510, or CRI 1520. J occasionally; O occasionally.

CRI 2200 Instructor Development The experienced police officer has valuable knowledge, skills, and abilities which are gained through on the job experiences. This course assists the candidate in developing the ability to research, prepare, and communicate that knowledge to other police recruits and hired officers. Training will focus on constructing instructional objectives, planning of training, factors which influence adult learning, factors that modify behavior, the development of communication skills, and the instructional process in methods of evaluating course effectiveness. Prerequisite: Student must be a certified police officer of a recognized law enforcement agency, or by permission of the academy director. J occasionally. 5 credit hours.

CRI 2210 Law Enforcement Field Training Officer This course will provide the basic knowledge to prepare a student to become a field training officer. Instruction in such topics as principles in adult learning, FTO competency evaluations, remediation techniques, and FTO liability issues will be covered. Prerequisite: Student must be a certified police officer of a recognized law enforcement agency, or by permission of the academy director. J occasionally. 2 credit hours.

CRI 2220 Firearms Instructor This course is designed for the police instructor who wishes to expand his/her instructional skills to the area of firearms. The goal of this course is to assist the instructor candidate in developing their skills in relationship to fundamentals of marksmanship, firearms safety, course and curriculum design and the ability to diagnose shooter deficiencies and correct these actions. Topics of instruction will include: range safety, range maintenance, shooting fundamentals, instructional techniques, equipment maintenance, shooting course design, and legal issues. Prerequisites: CRI 2200; student must be a certified police officer of a recognized law enforcement agency, or by permission of the academy director. J occasionally. 4 credit hours.

CRI 2230 Law Enforcement Supervisor This course is mandated for any officer who has been promoted to a first line supervisor position. It is also recommended for any officer who aspires to become a first line supervisor. This course will cover topics in the area of: transition to supervisor, styles of leadership, roles of the supervisor, legal issues, incident management, community relations and contemporary police problems, review of written reports, search warrants, civil liability, constitutional law, use of force, stress management, child protective issues, domestic violence, media relations, and crime scene/incident management. Prerequisite: Student must be a certified police officer of a recognized law enforcement agency, or by permission of the academy director. J occasionally. 8 credit hours.

CRI 2250 Law Enforcement Academy I This New York State mandated study surveys the criminal justice system and provides an in-depth academic and practical law enforcement experience.
Students are required to learn, understand, and apply the requisite functions of a recruit police officer as stated by the New York State Division of Criminal Justice Services and the Municipal Police Training Council. Such functions include, but are not limited to, criminal justice systems; proper handling of various weapons; crime investigation; traffic enforcement; accident investigations; emergency medical procedures; criminal law, civil liability; and police ethics. Prerequisite: Successful completion of New York state law enforcement application process (see Chautauqua County sheriff’s academy director for detailed instructions and format); Corequisites: CRI 2380, CRI 2470, and PHE 2460. J fall. 10 credit hours.

CRI 2260 Law Enforcement Academy II
This New York state mandated study surveys the criminal justice system and provides an in-depth academic and practical law enforcement experience. Students are required to learn, understand, and apply the requisite functions of a recruit police officer as required by the New York State Division of Criminal Justice Services and the Municipal Police Training Council. Such functions include, but are not limited to, juvenile law and procedures, crime scene investigations, critical incident management, counterterrorism, case preparation, interview and interrogation, arrest processing, civil disorder, injury and death investigations. Eligibility: Student must be current Chautauqua County Sheriff’s Academy recruit. J occasionally; C occasionally. 10 credit hours.

CRI 2270 Law Enforcement Academy III
This course is encapsulated in the Basic Police Course and areas of instruction will be based on standards mandated by the NYS DCJS. Recruits who need recertification as police officers must successfully complete the entire Police Refresher Course. Individuals who enroll in this course will receive instruction in basic patrol functions, firearms, emergency medical services, vehicle operations, and physical fitness training. All mandated training is on a case by case basis and will be determined after an evaluation by DCJS of the students past training records and the amount of time since they graduated from the basic police academy. Police Refresher II is a continuation of Police Refresher I. Students must pass both Refresher I and II in sequential order before they can receive a certificate to work as a police officer. Refresher II builds on what was instructed in the refresher I course. Prerequisite: The student must have a prior NYS Basic Police certification which has lapsed or is in need of additional training hours as mandated by the Division of Criminal Justice Services of New York State. Students must be appointed and placed on the police registry in Albany by a NYS recognized law enforcement agency and must have met the basic academy requirements prior to application. Students must meet DCJS requirements as they relate to the Police Refresher Course. J occasionally; C occasionally. 5 credit hours.

CRI 2330 Criminal Procedural Law
Studies the criminal law processes necessary for successful criminal investigation including physical and testimonial evidence gathering, arrest, and presentation of an accused to court for trial proceedings. Students are required to apply contemporary U.S. Supreme Court decisions relevant to such topics as arrest, search and seizure, and interrogation. Prerequisites: CRI 1510; Corequisite: ENG 1530. J occasionally; C occasionally. 3 credit hours.

CRI 2370 Criminal Investigation
Analyzes the basic procedures used in the investigation of a criminal matter. Students are required to demonstrate proper crime scene investigation techniques via photographing, sketching, and evidence collection for crimes against property and crimes against a person as well as study interview and interrogation techniques and courtroom demeanor and testimony. Prerequisites: CRI 1510; Corequisite: ENG 1530. J occasionally; C occasionally. 3 credit hours.

CRI 2380 Law/Law Enforcement Officer
Students are required to learn and understand constitutional law and criminal procedural law as determined by the New York State Criminal Code. Students also study New York state vehicle and traffic laws and various New York state civil disturbance laws. Corequisites: CRI 2250, CRI 2460, CRI 2470, and compliance with New York state regulations. J fall. 3 credit hours.

CRI 2420 Standard Field Sobriety Test
Students will analyze drugs and how they impair human functions. Students will study illegal drugs and related sections of the New York state penal law, and the effects of alcohol on humans with an emphasis on driving while intoxicated. Students will gain practical skills in administering standardized field sobriety testing on intoxicated drivers as well as investigative skills in relating to intoxicated drivers. Eligibility: Student must be current Chautauqua County Sheriff’s Academy recruit or New York state certified police/peace officer. J occasionally. 3 credit hours.

CRI 2470 Law Enforcement Practicum
This experiential format places the student in the field for on-the-job training. Students will apply their academic learning in real settings and are assigned to certified field instructors who will evaluate the individual on a daily basis. Evaluations are based primarily on knowledge of the law, interpersonal skills and initiative, familiarity with forms, and the overall quality of demeanor expected of law enforcement officers. Corequisites: CRI 2250, CRI 2380, CRI 2460, and compliance with New York state regulations. J fall. 4 credit hours.

CRI 2510 Police Community Relations
Students will study the traditional method of providing police services, along with problem-oriented and community-based policing. Students will discuss the interpersonal and intergroup relations between police and the public. Required topics include police ethics, stereotypes, minority relations, peer relations, and the role of technology in providing police services and crime prevention. Prerequisites: CRI 1510; Corequisite: ENG 1530. J occasionally; C occasionally. 3 credit hours.

CRI 2520 Police Administration
Concentrates on contemporary principles of administration and their applications to the internal organization and management of law enforcement agencies. Students apply traditional management models/theories to various managerial concerns including planning, staffing, human resources, and leadership styles, as well as other proactive actions dealing with collective bargaining, future trends, and internal/external problem-solving. Prerequisites: CRI 1510; Corequisite: ENG 1530. J occasionally; C occasionally. 3 credit hours.

CRI 2530 Criminal Law
Course includes an analysis of the origin and general principles of criminal law. Incorporates substantive criminal law with emphasis on the elements of each crime and the proof required to prosecute and defend the charge. Students are required to apply various legal decisions to appropriate class discussions. Prerequisites: CRI 1510; Corequisite: ENG 1530. J occasionally; C occasionally. 3 credit hours.

CRI 2540 Criminalistics
Provides students with an overview of the role of forensic science in investigation. Students will learn the role and procedures for utilizing the crime lab to its fullest potential. Areas will include Automated Fingerprint Identification System (AFIS), DNA, Geographical Information Systems (GIS), gas chromatography, and other developing technologies. Prerequisites: CRI 1510, CRI 2370, ENG 1530, and sophomore standing. J occasionally; C occasionally. 3 credit hours.

CRI 2550 Ethics in Criminal Justice
Students will explore many of the ethical problems confronting legal system personnel, including police, lawyers, judges, and corrections personnel. Course materials will focus on ethical systems, the concepts of law and justice, and various real life ethical dilemmas. Prerequisites: CRI 1510; Corequisite: ENG 1530. J occasionally; C occasionally. 3 credit hours.

CRI 2560 Criminal Justice Internship
Offers a classroom seminar and an assignment with a specific criminal justice agency or office matching an individual student’s academic study and/or career goal. Students must relate theoretical concepts to the pragmatic operations of their placement agency and present those experiences in a seminar format. Prerequisites: CRI 1510, Corequisite: ENG 1530, sophomore with GPA of 2.5 or better, and permission of instructor required. J spring; C spring. 3 credit hours.

CRI 2570 Organized Crime in the US
Studies the evolution of organized crime in America.
from the 19th century to the present. Students will demonstrate knowledge of different types of organized crime, how they affect our economy, and will become familiar with the government’s response to criminal organizations. Prerequisites: CRI 1510; Corequisite: ENG 1530. J occasionally; C occasionally. 3 credit hours.

CRI 2610 White Collar Crime Using historical and current incidents, this course discusses white collar crime in various areas pertinent to the student. Areas such as unsafe products, environmental crime, securities fraud, fiduciary fraud, governmental crime, medical crime, and computer crime will be studied to show how these activities originated and how they are being used to fleece consumers and taxpayers. The course will address whichever scandal is currently being debated at the time of the class offering. Prerequisites: CRI 1510; Corequisite: ENG 1530. J occasionally; C occasionally. 3 credit hours.

CRI 2620 Introduction to Probation and Parole Students will explore the history, purposes, and development of probation and parole as correctional practices and will learn about the successes and problems, as well as the future, of these practices. Prerequisites: CRI 1510, CRI 1520; Corequisite: ENG 1530. J occasionally; C occasionally. 3 credit hours.

CRI 2640 American Judicial System Focuses on the dynamics of the courthouse. Students study lawyers and their participation in the criminal court arenas. Issues such as how and why cases move from one court to another, sentencing, and proposals for reforming the court process are discussed. Prerequisites: CRI 1510; Corequisite: ENG 1530. J occasionally; C occasionally. 3 credit hours.

CRI 2650 Juvenile Justice System Students will study various causes and categories of juvenile crime and delinquency and explores the unique structure and processes of the separate legal system for juveniles. Prerequisites: CRI 1510; Corequisite: ENG 1530. J occasionally; C occasionally. 3 credit hours.

CULINARY ARTS

CUL 2010 Culinary Internship The student will work in an approved setting under the direction of a trained chef to gain an understanding of the culinary professions available. Corequisite: Student must be enrolled in CUL 7001: Culinary Skills and Methods or have completed similar coursework. J occasionally. 3 credit hours.

DANCE

DAN 1510 Beginning Ballet Students will gain an understanding of body alignment and the importance of health for the dancer. Students learn basic ballet techniques, including barre work and ballet dance combinations, and are introduced to understanding rhythm and a brief history of ballet. No prerequisites. J occasionally. 2 credit hours.

DAN 1530 Modern Dance Technique Students will experience training the body for dance as a performing art. Students develop increasing strength, flexibility, and endurance while improving mind/body coordination and muscle control. Students will develop the ability to remember sequences of movement. No prerequisites. J occasionally. 2 credit hours.

DAN 1570 Modern Jazz Technique Students will prepare to perform modern jazz dance and dance in musical theatre. Students will experience a daily warm-up to increase strength, flexibility, and endurance, and a dance combination. Students are introduced to the history of jazz dance and kinesiology. No prerequisites. J occasionally. 2 credit hours.

DIGITAL/COMPUTER TECHNOLOGY

DCT 1210 Electrical/Electronic Concepts This is an introductory electrical/electronic course presented at a survey level. Verbal descriptions are used as a substitute for mathematics whenever possible. Component identification and how components are used in circuits are emphasized. Skills such as circuit wiring, understanding schematics, and using a multimeter for troubleshooting are developed throughout the course. Soldering theory and practice are included. Credit for this course may not be applied toward the digital/computer technology degree. No prerequisites. J occasionally. 3 credit hours.

DCT 1220 Programmable Logic Controllers Students will investigate the principles and applications of programmable logic controllers and how they are used in manufacturing automation. Topics include PLC hardware, programming using ladder logic, timers, counters, and PLC applications. The SLC-500 PLC will be used. Corequisite: DCT 1290 or some formal knowledge of electricity or electronics. J spring. 3 credit hours.

DCT 1290 DC Electricity Students will learn the fundamentals of DC circuit analysis and explore fundamental electrical quantities (current, voltage, resistance, and power), basic circuit laws, and network theorems. Fundamental concepts used in later electrical courses are emphasized. Prerequisite: MAT 0600. J spring. 4 credit hours.

DCT 1300 AC Electricity Students will extend the techniques used in DCT 1290 to include circuits containing resistance, capacitance, and inductance driven by sinusoidal forcing functions. Additional topics include transformers, AC power, and resonance. Prerequisite: DCT 1290. J fall. 4 credit hours.

DCT 1330 Electrical Devices/Circuits I Students will see detailed coverage of semiconductor diode and transistor theory and application. Topics include DC and AC diode and transistor models, graphical analysis, clippers, clampers, peak detectors, power supplies, class A voltage amplifier design, and an Introduction to power amplifiers. Corequisite: DCT 1300. J fall. 4 credit hours.

DCT 2010-2020 Technology Internship Students receive on-the-job experience consisting of 135 hours of supervised activity in a local business or industry. Students work in conjunction with a faculty mentor and a supervisor at the job site. All guidelines in the original college internship policy will be followed. Prerequisite: At least a 2.0 GPA and either sophomore standing or one semester completion in an appropriate certificate program. J occasionally; C occasionally. 3-4 credit hours.

DCT 2220 Digital Electronics Students will be provided a detailed introduction to digital systems. Included will be a discussion of number systems, codes, Boolean algebra, digital ICs, flip flops, and sequential circuits. Hands-on experience will be emphasized. Corequisite: MAT 0600. J fall. 4 credit hours.

DCT 2330 Electrical Devices/Circuits II Students will see detailed coverage of the approximations used to analyze circuits containing operational amplifiers. Topics include inverting and non-inverting amplifiers, summing circuits, 1/V converters, differentiators, integrators, wave-shaping circuits, and oscillators. Three terminal regulators, the 555 timer, and FET circuits are discussed. Prerequisite: DCT 1330. J spring. 4 credit hours.

ECONOMICS

ECO 1530 Contemporary Economic Problems Students will analyze current economic problems while critically evaluating solutions to these problems. Students integrate basic economic concepts and terminology to problems surrounding such issues as the environment, distribution of resources, health care, crime, market power, poverty, discrimination, government price controls, and international trade. This course is a Foreward to ECO 2610-2620. Corequisite: ENG 0430; must meet minimum college level reading score: Accuplacer 80+. J occasionally; C occasionally. 3 credit hours.

ECO 2610 Microeconomic Principles Students will understand how a market economy works using the fundamentals of supply and demand. They will learn to recognize the role of the private and public sector and evaluate unemployment, inflation, and Gross Domestic Product as indicators of economic activity. They will have the ability to understand matters of fiscal and monetary policy and evaluate conflicting economic opinions. Prerequisites: sophomore standing and ENG 1530; Eligibility: MAT 1590. J fall, spring; C fall, spring; Online occasionally. 3 credit hours.

EDU 1250 Early Childhood Development Students will examine principles of supply and demand with an applied analysis of consumer demand, sensitivity to price changes (elasticity) and utility. Using cost and revenue information, students will demonstrate the theoretical market of perfect competition and monopolies along with realistic alternative markets like monopolistic competition and oligopolies. Students will recognize the role of comparative advantage and specialization in international trade. Prerequisites: sophomore standing and ENG 1530; Eligibility: MAT 1590. J fall, spring; C fall, spring; Online occasionally. 3 credit hours.

EDU 1260 Health/Safety/Nutrition of Children Students will focus on basic considerations for establishing and maintaining a safe, healthy, and developmentally appropriate environment for
young children. Ways to promote good health and nutrition are presented, and prevention and reduction of injuries are explored. Eligibility: Must meet minimum college level reading score: Accuplacer 80+. J occasionally; C occasionally. 3 credit hours.

EDU 1290 Introduction to Early Childhood Education/Care Introduces students to the field of early childhood care and education. An overall view of the field includes history and theory; social, emotional, physical, cognitive, and creative development of young children; how early childhood professionals and early childhood programs meet the needs of young children and their families; and models of early childhood programs. Introduces the activities and materials of the early childhood profession. Corequisite: ENG 1530. J occasionally; C occasionally. 3 credit hours.

EDU 1300 Observation/Guidance of Young Children Students will develop observational skills as a method of understanding and assessing children’s development and behavior. Various methods in recording observations are used by students observing in local early childhood programs. The focus is on preschool children, but the skills can be applied to any age level. The topic of ethics will be included. Prerequisite: EDU 1250. Corequisite: ENG 1530; must meet minimum college level reading score: Accuplacer 80+. J occasionally; C occasionally. 3 credit hours.

EDU 1310 Family, School & Community Partnerships Students will examine the diversity of families and factors that influence parenting in contemporary society, focusing on strategies to develop working partnerships with parents. Students will study ways to design parent-teacher conferences, parent education, and parent involvement programs. The importance and nature of relationships between schools and community agencies will also be explored. Participation in service learning components of at least 20 clock hours in an early childhood program or community-based school is required. Corequisite: ENG 1530. J occasionally; C occasionally. 3 credit hours.

EDU 1510 Foundations/Education-Teaching Profession This introductory course for students considering a career in education, explores the historical, philosophical, and socio-cultural roots of education. Students will also examine the political, economic, legal, and ethical bases of American education. Contemporary issues facing education will be examined within the context of teachers, students, schools, and curriculum. Students will also do 20 hours of direct classroom observation and participation in area schools. Corequisite: ENG 1530. J fall, spring; C spring. 3 credit hours.

EDU 2110 Field Placement I-Education Students will gain practical experience participating in a minimum of 100 hours of supervised work in a public school or other appropriate educational setting. Students will also participate in a weekly seminar which focuses on developing knowledge of how schools and classrooms work and teamwork within the educational setting. The seminar also focuses on students’ experiences, problems, and special interests. The student, faculty coordinator, and school supervising teacher work together to develop an appropriate learning experience for the student. Students are responsible for assigned readings and a weekly written log of the field experience in addition to other assignments. Prerequisites: EDU 1510 with a C or better, a minimum of 3 credits of education electives with a C or better, and permission of the education faculty. Application required: must be a program major. Note: For those students enrolled in the Early Childhood certificate program, EDU 1510 may be replaced with EDU 1290 to satisfy the prerequisite. J fall, spring; C fall, spring. 4 credit hours.

EDU 2220 Field Placement II Students will gain practical experience participating in a minimum of 75 hours of supervised work in a different school or educational setting than they used in EDU 2210. Students will also participate in a weekly seminar which focuses on learning to further develop their interpersonal teaching skills. Students are responsible for assigned readings and a weekly written log of the field experience in addition to other assignments. Prerequisites: EDU 2210 with a C or better and permission of the education faculty. Application required: must be a program major. J spring; C fall, spring. 3 credit hours.

EDU 2340 Working with Adolescents Students will explore the characteristics, problems, and needs of adolescents, with emphasis on the techniques and skills necessary for working with them in a variety of settings - recreational, educational, and therapeutic. Topics include a look at treatment facilities, mental health, substance abuse, and the dynamics of delinquency. Corequisites: ENG 1530 and PSY 1510 or PSY 1520 and ENG 1530. J occasionally; C occasionally. 3 credit hours.

EDU 2440 Children’s Literature Provides students with a comprehensive knowledge of children’s literature with emphasis on identification and familiarization of the different types of children’s literature, the influence that literature can have on children’s and adults’ lives, and the development of effective and creative methods of using literature with children. Use of current technology is included. Prerequisite: ENG 1530. J fall, spring; C spring. 3 credit hours.

EDU 2450 Exceptional Children Students will develop knowledge and understanding of exceptional children and youth, the ways they are served in public schools, appropriate attitudes toward human viability, and individual differences. Current legal and instructional issues and methods are discussed. Prerequisites: PSY 1510 or PSY 1520 and ENG 1530. J occasionally; C occasionally. 3 credit hours.

EDU 2460 Field Experience-Exceptional Children Designed primarily for students who plan to transfer to a four-year institution to complete a baccalaureate degree in teacher education. Students will generally spend four to five hours per week in an educational setting working one-on-one or in small groups with students with identified disabilities as well as those at risk for academic failure. A regularly scheduled on-campus seminar is part of the course. Students spend a total of 45 hours in their educational setting during the semester in addition to the seminar. Prerequisites: PSY 1510 and ENG 1530; students should be concurrently enrolled in EDU 2450. J occasionally; C occasionally. 1 credit hour.

EDU 2500 Literacy in the Classroom This is a course for students who would like a basic foundation in literacy instruction. The five components of reading, basic reading disabilities, and applications to curriculum and instruction will be explored. In addition, students will examine the basics of literacy approaches including the collection and interpretation of data. Prerequisite: ENG 1530. J occasionally; C occasionally. 3 credit hours.

EDU 2510 Philosophy/Techniques-Early Childhood Students will examine the basic concepts of a child’s psychological and intellectual development in relation to methods and techniques appropriate to early care and education programs. Developmentally appropriate practices will be emphasized as they apply to the skills used with young children (birth to age 8), individually and in groups. Participation in observations and practice will be required. Students will also spend 20 hours of direct observation in an early childhood program approved by the instructor. Prerequisite: ENG 1530 and PST 2520 or EDU 1250 and EDU 1260. J occasionally; C occasionally. 3 credit hours.

ELECTRICITY/ELECTRONICS

ELC 1200 Fundamentals of Electricity Students will gain basic background knowledge of DC and AC circuits. Circuit analysis, circuit wiring, understanding schematics, and using measuring instruments for troubleshooting skills will be developed on an ongoing basis throughout the course. Corequisite: MAT 0600. J fall

ELC 1220 Industrial Automation/PLC Students will investigate the principles and applications of programmable logic controllers and how they are used in manufacturing automation. PLC hardware, SLC - 500 programming using ladder logic, and PLC applications will be emphasized. Prerequisite: ELC 1200. Campus and term; J spring

ELC 1230 Electric Motors and Control Systems Students will learn the fundamental concepts of motors and motor controls. Topics include ladder diagrams, pilot devices, contractors, motor starters, motors, and other control devices. Upon completions, students will be able to properly select, connect, and troubleshoot motors and control
ENG 1510 English Composition I
Students will develop the skills to write effective, organized standard written English. Emphasis will be on clarity, coherence, and particularly in accomplishing the sort of short in-class writing tasks required of college students. Prerequisite: admission by placement score: Accuplacer Writeplacer 1-3. J fall, spring; C fall, spring. 3 imputed credit hours.

ENG 1520 Masterpieces/World Literature II
Students will read, discuss, and analyze some of the most enduring and important works of literature from the 17th century to modern times. Prerequisites: ENG 1530-1540. J occasionally; C occasionally. 3 credit hours.

ENG 2510 Masterpieces/World Literature I
Students will read, discuss, and analyze some of the most enduring and important works of literature up to the 17th century. Prerequisites: ENG 1530-1540. J occasionally; C occasionally. 3 credit hours.

ENG 2520 Creative Writing
Students will develop and practice creative written expression. Emphasis on poetry or prose may vary with instructors, but primary attention is placed on the development of a student’s writing style. Prerequisites: ENG 1530-1540. J fall, spring; C occasionally. 3 credit hours.

ENG 2550 American Literature I
Students will study key works of early American literature (pre-1865) in their literary, cultural, and historical contexts. Students will be asked to explore what “American” means and what major ideas were at work to create a cultural definition for that term. In addition to studying the traditional texts of authors such as Hawthorne, Whitman, Fuller, Emerson, Bradstreet, Franklin, Bradford, etc., students will be exposed to literature outside of the New England canon including Native Americans, French and Spanish colonizers, and African slaves. Prerequisites: ENG 1530-1540. J occasionally; C occasionally. 3 credit hours.

ENG 2560 American Literature II
Students will study key works of American literature from 1865 to the present as well major literary movements such as regionalism, naturalism, realism, modernism and beyond. American writing will be approached in both historical and artistic context. In addition to studying texts of major authors such as Twain, James, Chopin, Chestnutt, London, Cather, Faulkner, Frost, Sandburg, Ginsberg and O’Connor, as well as contemporary authors including Morrison, Silko, Erdrich, Kingston, and Updike, students will study other works that focus on the rich diversity of voices and styles of American literature. Prerequisites: ENG 1530-1540. J occasionally; C occasionally. 3 credit hours.

ENG 2580 The Modern Novel
Students will discuss and analyze some of the great novels in the period from 1900 to the present day. Students will learn to understand the novel as a separate genre and recognize the characteristics distinguishing the modern novel from earlier fiction. Prerequisites: ENG 1530-1540. J occasionally; C occasionally. 3 credit hours.

ENG 2760 Literature Goes to Hell
Students will examine various works of literature, art, and music which include the Underworld, Hades, Hell, and the devil. These motifs are examined in a way that refers to the cultures and time periods from which they sprang. These are discussed as literary themes, not necessarily as religious ones. Prerequisites: ENG 1530-1540. J occasionally; C occasionally. 3 credit hours.

ENG 2750 World Mythology
Students will gain a background in the classical mythology and the British literature of the Romantic, Victorian, and 20th century periods. Prerequisites: ENG 1530-1540. J occasionally; C occasionally. 3 credit hours.

ENG 2740 Newswriting and Editing
Students will practice most forms of journalism found in newspapers, magazines, and broadcasting studios. Emphasis is on the individual student’s writing. Prerequisites: ENG 1530-1540. J fall. 3 credit hours.

ENG 2730 World Mythology
Students will be introduced to the work and times of Shakespeare. The play’s the thing and will be the main focus of the course, yet films, recordings, and class readings may be used as aids in appreciating and visualizing the plays. Selected comedies, tragedies, romances, and sonnets are read and discussed. Prerequisites: ENG 1530-1540. J occasionally; C occasionally. 3 credit hours.

ENG 2840 Film Study and Appreciation
Students will learn the film as a world art form and social document, focusing attention on major areas of film, such as history, criticism, and visual literacy. Students explore a range of film productions from silent films to current releases and examine various approaches to film criticism. Prerequisites ENG 1530-1540. J spring. 3 credit hours.

ENG 2850 Literature of the Bible
Students will read Old and New Testament selections and will discuss their various interpretations. Some historical background is provided, but emphasis will be
Course requirements: TOEFL, Accuplacer, and/or word families, distinguishing fact and opinion, and active vocabulary from context, introduction to expository writing and a targeted composing process is examined. Academic vocabulary is introduced. Prewriting skills including brainstorming and developing supporting details are explored. This course is intended for students with a greater level of proficiency in a language other than English. Course requirements: TOEFL, Accuplacer, and/or interview. 3 credit hours.

ELI 1550 English Language - Composition II Students will continue to develop academic writing skills, focusing on the specifics of English grammar and syntax. Students will continue developing essay writing skills, such as developing and supporting a thesis, transitional statements, and introductions and conclusions. Academic vocabulary continues to develop. Prewriting skills including brainstorming and developing supporting details continue to be explored as well as revision of produced work. Prerequisite: ENG 1500. J fall, spring; C fall, spring. 3 credit hours.

ELI 1600 English Language - Reading I Students will build reading strategies to include scanning, skimming, and clustering techniques. Skills in identifying topics, main ideas, supporting ideas, and making basic inferences will be developed. Coursework will include building passive and active vocabulary from context, introduction of word families, distinguishing fact and opinion, understanding vocabulary from context clues, decoding skills, and recognizing transitions. This course is intended for students with a greater level of proficiency in a language other than English. Course requirements: TOEFL, Accuplacer, and/or interview. J fall, spring; C fall, spring. 3 credit hours.

ELI 1550-1540 J spring; C occasionally. 3 credit hours.

ENGLISH LANGUAGE INSTRUCTION

ELI English Language - Reading I Students will continue to develop reading strategies to include scanning, skimming, and clustering techniques. Identifying topics, main ideas, supporting details, and making basic inferences are introduced and expanded upon. Coursework will include building passive and active vocabulary from context, introduction of word families, distinguishing fact and opinion, understanding vocabulary from context clues, decoding skills, and recognizing transitions. This course is intended for students with a greater level of proficiency in a language other than English. J fall, spring; C fall, spring. 3 credit hours.

ELI English Language - Reading II Students will continue to develop reading strategies to include scanning, skimming, and clustering techniques. Identifying topics, main ideas, supporting details, and making basic inferences are introduced and expanded upon. Coursework will include building passive and active vocabulary from context, introduction of word families, distinguishing fact and opinion, understanding vocabulary from context clues, decoding skills, and recognizing transitions. This course is intended for students with a greater level of proficiency in a language other than English. J fall, spring; C fall, spring. 3 credit hours.

ENG 2870 The Romance of Arthur Students will trace the historical and literary roots of the legend of King Arthur. Readings, films, and discussions center on the evolution of Arthur and notable features of his world: Avalon, Camelot, Merlin, Morgan Le Fay, Guinevere, Lancelot, Gawaine, and Mordred. In poems, chronicles, tales, and romances, major Arthurian images and themes will be examined, such as courtly love, chivalry, the sword of power, the Round Table, the Fisher King, and the Holy Grail. Among several works, the course examines the bardic traditions of the Brythonic Celt as well as the romance cycles of Chrétien de Troyes and Sir Thomas Malory. Prerequisites: ENG 1530-1540. C occasionally. 3 credit hours.

ENG 2890 Advanced Prose Writing Communications program students and others who have satisfied the prerequisites will experience a more advanced program of reading and writing. Students will read, discuss, and write about issues of culture raised by contemporary authors of nonfiction, and they will develop their stylistic options for a variety of rhetorical contexts. Prerequisites: ENG 1530-1540. J spring; C occasionally. 3 credit hours.

ENG 1500 English Language - Composition I Students will work with simple and complex sentences, guided paragraphs and will be introduced to essay writing with topic sentences and supporting details of evidence and examples. An introduction to expository writing and a targeted composing process is examined. Academic vocabulary is introduced. Prewriting skills including brainstorming and developing supporting details are explored. This course is intended for students with a greater level of proficiency in a language other than English. Course requirements: TOEFL, Accuplacer, and/or interview. 3 credit hours.

ENG 1530-1540 J spring; C occasionally. 3 credit hours.

ENGINEERING

ENR 1560 Introduction to Engineering & Engineering Design This course provides a first experience for students choosing an engineering career and is divided into three segments. Part one covers the engineering design process. Part two introduces the student to computer-aided design. Part three introduces the student to the engineering fields and advances in high technology. Field trips and speakers are used to help the student select a major field and a transfer institution. Corequisite: MAT 1590. J fall. 3 credit hours.

ENR 1010-2020 Engineering Internship Students receive on-the-job experience consisting of 135 hours of supervised activity in a local business or industry. Students work in conjunction with a faculty mentor and a supervisor at the job site. All guidelines in the original college internship policy will be followed. Prerequisite: At least a 2.0 GPA and either sophomore standing or one semester completion in an appropriate certificate program. J occasionally; C occasionally. 3 credit hours.

ENR 2510 Thermodynamics Students will continue investigations into mechanics with extensive study in Thermodynamic systems. Students will analyze and solve problems involving fluid dynamics, energy conservation, and thermodynamic processes. Prerequisites: PHY 1610 or 1710 and MAT 1720. 4 credit hours.

ENR 2550 Mechanics-Statics Students will study rigid body mechanics including forces, force systems, their resultants, and conditions for equilibrium. Other topics include equivalent force systems, equilibrium of rigid bodies, structural mechanics to include trusses, frames and beams, shear and bending moment diagrams, friction, and properties of areas and volumes. Prerequisites: PHY 1620 or 1720; Corequisite: MAT 2650. J fall. 3 credit hours.

ENR 2560 Mechanics-Dynamics Students will study time derivatives of vectors using Cartesian, cylindrical, and path coordinates. The dynamics of a particle from a single frame of reference including rectilinear and central force problems are stressed. Other topics are conservation of energy and momentum as applied to dynamic problems. Rigid body rotations and Coriolis acceleration are studied in detail. Prerequisite: ENR 2550; Corequisite: MAT 2680. J spring. 3 credit hours.

ENR 2580 Strength of Materials Students will be able to explain the concepts of stress and strain and the relationships between them in the solution of problems such as beams, columns, torsional members, connections and combined loading (Mohrs circle). Stress concentrations, thin-walled pressure vessels, and beam deflections are covered. Laboratory experiences include standard tests to determine properties of various materials when subjected to normal stress, bending, shear impact, and torsion loading. Hardness tests and non-destructive testing procedures are used. Prerequisites: MAT 2650 and ENR 2550. J spring. 4 credit hours.

ENT 2740 Analysis/Linear Electrical Circuits Students will gain expertise in the techniques of elementary circuit analysis. DC resistive circuits are first analyzed using Ohms and Kirchhoffs laws, voltage and current division, resistance and source combinations, and superposition. Basic techniques are expanded to include dependent sources, mesh analysis, nodal analysis, Thevenins and Nortons theorems, and the maximum power transfer theorem. Sinusoidal, exponential, and damped sinusoidal forcing functions are then introduced along with inductance and capacitance. Laplace transforms are used to obtain solutions for first and second order RL, RC, and RLC circuits. Prerequisite: MAT 1250 or Corequisite: MAT 1720. J fall. 3 credit hours.

ENTREPRENEURSHIP

ENT 1440 Entrepreneurship Operations Students will have an opportunity to develop the knowledge and skills needed by the business owner in the areas of marketing, management, and communications. Students will learn to identify potential customers, define target markets, and plan appropriate promotional strategies. In the area of business management, students will learn about employee behavior, motivation, leadership, building effective teams, interpersonal relationships, and employment laws and regulations. Other issues to be discussed will include personal image, professionalism, and customer service as well as effective networking, information and communication technology, and effective business writing. Students will be required to complete a segment of the business plan as it relates to this course. Eligibility: ENG 1510 Online. Fall. 3 credit hours.

ENT 1450 Entrepreneurship Finance Students will examine basic accounting practices and tax issues with emphasis on applications for business ownership. Topics include the purpose, design, and use of various financial documents; costs and inventory control; the creation and use of financial statements; tax liability and consequences; forms of revenue, costs, depreciation, and investments; daily operations and tax planning. Emphasis will be given to planning and managing assets, budgeting and control, debt versus equity financing, managing short and long term funds, capital budgeting techniques, and cost of capital to the firm. Students will be required to complete a segment of the business plan as it relates to this course. Eligibility: ENG 1510 Online. Fall. 3 credit hours.

ENT 1460 Family Owned Businesses This course is designed for students who will be entering a family-owned business, or expect to someday establish a business which they can leave to their children. Some of the topics covered include succession planning, handling conflict, dealing with non-family members, reinvension of
the business, management styles, strategy, leadership, and the evolution of the enterprise from the first generation entrepreneurial stage into the family business to the second, third, and succeeding generations. Eligibility: ENG 1510 Online occasionally. 1 credit hour.

ENT 1470 Retail Management/Franchise Ownership This course covers major retailing topics, including consumer behavior, information systems, store location, operations, service retailing, the retail audit, retail institutions, franchising, human resource management, computerizations, and retailing in a changing environment. Its decision-making orientation provides a real-world approach focusing on small retailers. Eligibility: ENG 1510. Online occasionally. 3 credit hours.

ENT 1480 Entrepreneurship Internship Students will receive on-the-job experience consisting of 135 hours of supervised activity in a local business. Students work in conjunction with a faculty member and a supervisor at the job site. All guidelines in the original internship policy will be followed. Eligibility: ENG 1510. J occasionally. 3 credit hours.

FRENCH

FRE 1510 Introductory French I Students will learn French language vocabulary and structure by completing a series of activities designed for realistic communication, both written and spoken. They will learn the reading and writing of the French alphabet. Through reading, dialogue, and associated study, students will develop an understanding of the language and cultural distinctions of French speakers worldwide. Eligibility: ENG 1510. J occasionally. C occasionally. 4 credit hours.

FRE 1520 Introductory French II Students will learn French language vocabulary and structure by completing a series of activities designed for realistic communication, both written and spoken. They will learn the reading and writing of the French alphabet. Through reading, dialogue, and associated study, students will develop an understanding of the language and cultural distinctions of French speakers worldwide. Prerequisite: FRE 1510 or two years high school French; Eligibility: ENG 1510. J occasionally. C occasionally. 4 credit hours.

FRE 2510 Intermediate French I Students will continue their French language study, including a review of basics covered in French 1510-1520. Students will focus on increasing their conversational fluency and understanding of the French civilization, past and present. They will also focus on expanding their reading ability by exploring popular and literary texts. Prerequisite: FRE 1520 or three years high school French or appropriate course placement on PLACE exam; Eligibility: ENG 1510. J occasionally. 3 credit hours.

FRE 2520 Intermediate French II Students will continue their French language study, including a review of basics covered in French 1510-1520. Students will focus on increasing their conversational fluency and understanding of the French civilization, past and present. They will also focus on expanding their reading ability by exploring popular and literary texts. Prerequisite: FRE 2510 or four years high school French. Eligibility: ENG 1510. J occasionally. 3 credit hours.

GEOGRAPHY

GEO 1520 World Regional Geography Students will study and evaluate interrelationships of location, climate, landforms, and natural resources with the cultural, economic, and political systems of the world’s political and cultural regions. Other topics include population trends, impact of technology and culture upon the natural environment, and patterns of economic development as they relate to regions of the world: Europe, Russia, Middle East, Asia, Africa, and the Americas. Eligibility: ENG 1510; must meet minimum college level reading score: Accuplacer 80+. J occasionally. C occasionally. 3 credit hours.

GEOL 1510 Physical Geology In this classical introduction to geology, students will identify and explain the geologic processes operating on and beneath Earth’s surface, including mineral and rock formation, plate tectonics, deformation, orogeny, weathering, erosion, transport, and deposition. Landforms resulting from geologic processes will be interpreted. Laboratory projects and field trips correlate with lecture topics. Corequisites: MAT 0600; Eligibility: ENG 1510; Must meet minimum college level reading score: Accuplacer 80+. J occasionally. 4 credit hours.

GLG 1520 Historical Geology Students will identify and interpret the scientific theories explaining the physical and biological evolution of Earth, with an emphasis on the North American continent, using stratigraphic, fossil, and radiometric evidence. Laboratory projects and field trips include the use of geologic maps, cross sections, and the study of faunal succession using fossil specimens. Prerequisite: GLG 1510 or 1550; Eligibility: ENG 1510; Must meet minimum college level reading score: Accuplacer 80+; J occasionally. C occasionally. 4 credit hours.

GLG 1550 Earth Science Students will identify and explain basic concepts in geology, oceanography, and meteorology, including mineral and rock formation, plate tectonics, mountain building, weathering and soils, erosional and depositional processes, geologic hazards, oceans, and the atmosphere. Optional field experiences are offered. This is an introductory course for students with little or no science background. Eligibility: ENG 1510 and MAT 0500; Must meet minimum college level reading score: Accuplacer 80+; J occasionally. C occasionally. 4 credit hours.

GLG 1610 New York State Geology Students will be introduced to the various geologic provinces of New York state and their unique history, physiography, and scenic beauty. Through the use of readings, lectures, audiovisual aids, and a mini-lab, students will be able to explain the major events in the geologic history of New York state and describe the geologic characteristics of each province. During the mini-lab, students will learn to identify common New York rocks, minerals, and fossils. Corequisite: ENG 1530; Must meet minimum college level reading score: Accuplacer 80+; J occasionally. C occasionally. 1 credit hour.

GLG 1620 The Age of Dinosaurs Students will explore life on earth during the Mesozoic era, the "age of dinosaurs." Through the use of readings, lectures, extensive audiovisual aids, the Internet and laboratory exercises, students will study major geologic events of this period, identify the behavior of the most common dinosaurs, and identify common Mesozoic marine and plant life. Class discussions and assignments will include new and controversial theories explaining the evolution, behavior, and extinction of dinosaurs. During mini-labs students will handle and learn to identify common dinosaur fossils. Corequisite: ENG 1530; Must meet minimum college level reading score: Accuplacer 80+; J occasionally. C occasionally. 1 credit hour.

GLG 1630 Ice Ages Students will be introduced to the major ice ages in our geologic past, with an emphasis on the Pleistocene Ice Age. Using readings, lectures, the Internet, audiovisual aids, and mini-labs, students will discuss the earth’s major era of glaciation, explain the forces in shaping topography, identify common Pleistocene age animals and discuss current theories of glaciality. Corequisite: ENG 1530; Must meet minimum college level reading score: Accuplacer 80+; J occasionally. C occasionally. 3 credit hours.

GLG 1640 Introduction/Paleontology Students will examine the history of life on Earth as reflected in the fossil record. The course covers the oldest known forms of life from over three billion years ago through the origin of marine communities, the invasion of land, dinosaurs, and the age of mammals. Emphasis will be placed on common fossil groups and the interaction of organisms with their diverse environments. This is an Introductory course for students with little or no science background. Corequisite: ENG 1530; Must meet minimum college level reading score: Accuplacer 80+; J occasionally. C occasionally. 3 credit hours.

GLG 1720 Geologic Hazards This course explores the dangerous and fascinating world of earthquakes and volcanoes. Students will study the geologic settings that produce these phenomena, specific hazards associated with each, and the immediate and long term effects of natural disasters of this magnitude. Risk assessment, human mitigation, and ways to minimize the devastating consequences of earthquakes and volcanoes will be covered. Eligibility: ENG 1530. J occasionally. C occasionally. 1 credit hour.

GLG 1740 Catastrophic Weather Students will be introduced to the field of meteorology and explore general weather principles and the where, when, why, and how of catastrophic weather events such as thunderstorms and lightning, tornadoes, hurricanes, floods, and drought. Methods to prepare and protect you and your family against these natural disasters are also covered. Eligibility: ENG 1530; Must meet minimum college level reading score: Accuplacer 80+; J occasionally. C occasionally. 1 credit hour.

GLG 1760 Petroleum Geology Petroleum resources constitute a major source of energy for our transportation, home, and industrial needs on a national and global basis. Students will gain an insight into the geology of petroleum (oil and gas), and develop an understanding of its origin, occurrence, and geologic controls. Students will increase their knowledge of economic, environmental, and geopolitical considerations as related to petroleum prospect development. Practice in prospect analysis will be obtained through a series of exercises which demonstrate basic use of wireline logs and subsurface maps. Eligibility: ENG 1530; Must meet minimum college level reading score: Accuplacer 80+; J occasionally. C occasionally. 1 credit hour.

GLG 1810 Introduction to Oceanography Students will learn basic oceanographic concepts including the physical, chemical, and biological processes operating in the oceans, how they interact, and their effects on terrestrial systems. Additional topics include mankind’s
relationship with the sea; the resources we receive from it, the impacts we have on it, and how it infiltrates our culture. Demonstrations and hands-on activities will reinforce lecture content. Corequisite: MAT 0600 or higher; ENG 1510. J fall.

GLOBAL STUDIES

GLS 1500 Introduction to Global Studies Students will learn about the study of global processes and examine interactions and changes that have affected our view of globalization over time. This includes understanding the interconnectedness of people, places, institutions, and circumstances around the world. Students will bring together different insights from social sciences, humanities, and natural sciences, while emphasizing the role of the individual and his/her relationship to the larger global community. Prerequisite: ENG 1530. must meet minimum college level reading score: Accuplacer 80+. Eligibility: ENG 1510. J fall; C fall. 3 credit hours.

GLS 2500 Global Studies Seminar Capstone Students will design and implement a single original global studies project of choice. [subject to instructor approval] that seeks to reinforce comprehension of course lectures and program content through academic research and a public demonstration of the work. In doing so, students will consider the ways in which their chosen program electives fit into the field of global studies and a globalized world. Prerequisites: ENG 1530. GLS 1500, and student must be within one semester of graduation in the AA Global Studies degree program or have permission of the instructor. J spring; C spring

HISTORY

HIS 1510 World History Before 1500 Students will examine the foundations of major cultures of today’s world from the beginning of recorded history to the early modern age, with an emphasis on how these developments continue to shape the human experience. They will utilize methods of the social sciences by researching, interpreting, and communicating an understanding of primary and secondary historical sources. The factual and interpretive content of this course will emphasize the comparisons of key historical developments, their chronology, interaction, and the diffusions of the world’s major cultures amid increasing global interconnection. Eligibility: ENG 1530. It is not necessary to take HIS 1510 before HIS 1520. HIS courses are reading and writing intensive. J fall, spring; C fall, spring. 3 credit hours.

HIS 1520 World History Since 1500 Students will be introduced to the history of the United States from the European Encounter through the Civil War. Using the methodology of the social sciences, students will learn and evaluate the major political, social, cultural, scientific-technological, economic, and natural developments that shaped the United States during its formative years; when the American republic was founded, expanded, and tested by division. Students will give special attention to the unique contributions made by diverse peoples and institutions, and the responsibilities of educated citizens today. Eligibility: ENG 1530. It is not necessary to take HIS 1510 before HIS 1540. HIS courses are reading and writing intensive. J fall, spring; C fall, spring. 3 credit hours.

HIS 1540 US History Since 1865 Students will examine the history of the United States from the conclusion of the Civil War to the present. Using the methodology of the social sciences, students will learn and evaluate the major political, social, cultural, scientific-technological, economic, and natural developments that shaped the recent American experience. Students will give special attention to the unique contributions made by diverse peoples and institutions, and will better understand the responsibilities of educated citizens today. Eligibility: ENG 1530. It is not necessary to take HIS 1530 before HIS 1540. HIS courses are reading and writing intensive. J fall, spring; C fall, spring. 3 credit hours.

HIS 2100 The American Civil War Students will survey the American Civil War and the subsequent Reconstruction Era. The specific topics to be covered include: the causes of the war; the political, economic, military, and diplomatic execution of the war; the problem of waging war in a democracy; the constitutional issues raised by the war; the reasons the South lost the Civil War; the impact of the war and reconstruction on American history; and the reconstruction policies of Lincoln, Johnson, and the Radical Republicans. Lectures will focus on the military aspects of the war. Prerequisite: ENG 1530. J spring; C occasionally. 3 credit hours.

HIS 2560 History of World War II Students will examine and evaluate the world at war with emphasis on the role of the United States from the battlefields to the homefront. Multiple factors of the aftermath of World War I, the rise of fascism, Japan’s expansion in Asia, the alliance of Britain, America, and the USSR, and the strategies of each side in the war are studied. Implications of the surrender of Germany and Japan, the use of nuclear bombs, and the interests of the U.S. and USSR in creating a new world after the war are assessed. Corequisite: ENG 1530. J occasionally. 3 credit hours.

HUM 0340 Student Development Students will become familiar with Arthur Chickering’s theory of student development and will assess their development in four of Chickering’s developmental areas. Students will formulate appropriate goals for their growth and development based on Chickering’s model. Grading is credit/fail. No prerequisites. J, fall, spring. 3 imputed credit hours.

HIST 2590 Native American History Students will examine the prehistory and history of Native North Americans through the present. Culture, religion, intertribal affairs, and Indian-European relations from a Native point of view are studied. The history of the Iroquois, particularly in New York state, is emphasized. Eligibility: ENG 1530. J occasionally; C occasionally. 3 credit hours.

HUMAN DEVELOPMENT

HUM 0340 Student Development Addresses the role that student development plays in college success. Students will identify factors affecting their development and success as students. Students will become familiar with Arthur Chickering’s theory of student development and will assess their development in four of Chickering’s developmental areas. Students will formulate appropriate goals for their growth and development based on Chickering’s model. Grading is credit/fail. No prerequisites. J, fall, spring. 3 imputed credit hours.

HUM 1300 On Course for Success Students will learn a number of proven strategies for creating greater academic, professional, and personal success, and discover how to create a rich, fulfilling life by examining their beliefs and developing new skills and behaviors. Students will focus on empowering themselves to make wise choices in their academic and personal life which will lead to improved experiences and outcomes. No prerequisites. J, fall, spring; C, fall, spring

HUM 1510 Achievement And Self Students will develop a greater self-understanding and self-awareness with emphasis on personal strengths, interpersonal skill, and achievement style. Students will identify their objectives for growth and change and learn specific goal setting and goal acquisition techniques. Lectures and experiential activities will be included. A grade of CR is awarded upon satisfactory completion. Eligibility: ENG 1510. J fall, spring; C fall, spring. 3 credit hours.

HUM 1550 Life/Career Planning Students will increase their understanding of their abilities, strengths, values, needs, interests, and personality as related to planning life and career goals. They will be able to locate and use various sources of occupational, career planning, and educational planning information. Students will identify career goals and objectives as well as action steps to be achieved in reaching their objectives and goals. They will become aware of the importance of a self-empowered attitude in achieving life and career goals. Eligibility: ENG 1510. J fall, spring; C fall. 2 credit hours.

HUM 1650 Leadership Development Students will develop an understanding of leadership theory, an awareness of the moral and ethical responsibilities of leadership, and an awareness of one’s own leadership style and abilities. Students will be given an opportunity to develop essential leadership skills and to understand and practice productive leadership behavior. The course will use experiential methods of discussion, film, simulation, and a variety of readings, including some from the humanities. Particularly appropriate for those currently in leadership positions or those wishing to gain skills for leadership roles. Eligibility: ENG 1530; must meet minimum college level reading score: Accuplacer 80+. J
occasionally; C occasionally. 3 credit hours.  

**HUMAN SERVICES**  

**HUS 1210 Introduction to Human Services**  
Students will examine the philosophy and goals of human services: social welfare, social work, and early childhood education, and be introduced to the historical, political, and social perspectives of human services. Programs designed to meet common human needs and alleviate social problems are identified and differences among programs including those of other countries are discussed. Methods and theories of intervention are studied with an emphasis on diversity of target populations. Through case studies, guest speakers, and agency visits, students are introduced to the human service career and generalist practice.  
Corequisite: ENG 1510 or Eligibility: ENG 1530; must meet minimum college level reading score: Accuplacer 80+. J fall, spring; C fall, spring.  

**HUS 2110 Field Placement I-Social Work**  
Students will gain practical experience participating in a minimum of 120 hours of supervised work in a human service agency. Students will also participate in a weekly seminar which focuses on developing knowledge of agency networking, teamwork, applied ethics, and communication skills. The seminar also focuses on students’ experiences, problems, and special interests. The student, faculty coordinator, and agency supervisor work together to develop an appropriate learning experience for the student. Students are responsible for assigned readings and a weekly written log of the field experience in addition to other assignments.  
Corequisites: HUS 1210 with a C or better, a minimum of 3 credits of human services electives with a C or better, HUS 1410, and permission of the human services faculty.  
Corequisite: ENG 1530. Application required; must be a program major. Social science majors transferring to a four-year social work or human services program may also apply: J fall, spring; C fall, spring, 5 credit hours.  

**HUS 2210 Field Placement II**  
Students will gain practical experience participating in a minimum of 120 hours of supervised work in a different agency or using a higher skill set than used in HUS 2210. Students will also participate in a weekly seminar which focuses on learning to develop a helping relationship. Students will learn about the characteristics of the helper and client, and techniques of helping that are appropriate to their agency situations. Opportunities for analysis of personal characteristics and development of skills in the helping relationship will be provided during both practicum and seminar. Students are responsible for assigned readings and a weekly written log of the field experience in addition to other assignments.  
Corequisites: HUS 2210 with a C or better and permission of the human services faculty. Application required; must be a program major: J spring; C fall, spring, 5 credit hours.  

**HUS 2350 Mental Illness: Classification/Intervention**  
Students will learn information on the historical and current classification of mental illnesses including the current Diagnostic and Statistical Manual (DSM). Students will explore assessment techniques and beginning evidence based clinical interventions for various mental health populations. Students will utilize the DSM to analyze and diagnose an individual and identify the roles of human service professionals within the field of mental health.  
Corequisites: ENG 1530 and PSY 1510 or HUS 1210; must meet minimum college level reading score: Accuplacer 80+. J occasionally. 3 credit hours.  

**HUS 2370 Introduction to Gerontology**  
Students will examine an interdisciplinary perspective of the aging process and the social environments of older adults. Physical, psychological, and social changes are covered. Topics include theories of aging, demographic changes, ageism, vulnerable populations, and problems of income, retirement, housing, and health care. Emphasis is on the particular needs of the older adult and the resources and services available nationally and locally. Field trip included.  
Corequisite: HUS 1210, PSY 1510, or SOC 1510; Corequisite: ENG 1510 or Eligibility: ENG 1530; must meet minimum college level reading score: Accuplacer 80+. J occasionally. 3 credit hours.  

**HUS 2380 Working with Older Adults**  
Students will focus on attitudes, knowledge, and methods by which the human service caregiver can offer direct services to the older adult. Topics include enabling the elderly to maintain normal roles and continuity of life, coping mechanisms in adapting to age, counseling with older adults, dynamics of institutional life, principles of long-term care, developing therapeutic environments in communities and institutions, and service programs for older adults.  
Corequisite: ENG 1510 or Eligibility: ENG 1530; must meet minimum college level reading score: Accuplacer 80+. J occasionally. 3 credit hours.
HUS 2430 Alcohol and Chemical Dependency: Treatment Builds on previous alcoholism and substance abuse courses to provide an overview of methods used in the field of chemical dependency. Specific focus is on the primary skills required of counselors: group and individual counseling, treatment planning, diagnostic assessment, psychological evaluation, and case management. The course assumes a working knowledge of alcoholism and other addictions and a prior course in interviewing is suggested. The New York State Division of Alcohol and Substance Abuse has reviewed this course and found it consistent with approved standards for 45 hours of education/training for the CASAC. Provider number E00566AL OASAS. Prerequisite: HUS 1310 or extensive employment in a chemical dependency agency. Prior interviewing course suggested. B.S. and M.S. level individuals are permitted to enroll if they have prior counseling education. HUS 1280 and HUS 2230 recommended. J spring. 3 credit hours.

INTERNATIONAL EDUCATION
INE 2730 Semester Abroad The student should consult with the study abroad coordinator to determine the appropriate course number(s) to register for because credit hours vary. Offers programs in many countries including Australia, Ecuador, England, Ireland, and Spain. Programs consist of courses taken at a college or university in the host country. Credit hours earned vary by program and session. Students can choose courses in the humanities, social sciences, business, and internships for service professions. Classes are conducted in English and other languages. Students may take a conventional semester abroad, studying at a university, or they may also engage in service learning 20 hours per week, while attending a university abroad. Financial aid for which a student is eligible applies to these programs as well. Application deadline for the summer session is March 1; for the fall semester it is April 1; and for the spring semester it is November 1; with some exceptions for certain programs. Prerequisite: 26 college credits with a 2.5 GPA or better. J fall, spring; C 1-12 credit hours.

INTERDISCIPLINARY STUDIES
INT 1500 Master Student Students will develop the skills necessary to reach their educational goals, including improved study skills, communication skills, and time management skills. Students will examine life issues faced by college students and will understand the significance of personal responsibility in achieving their goals. Eligibility: ENG 0410 and ENG 0430. J fall, spring; C fall, spring. 2 credit hours.

INT 1520 Student Success Seminar Designed to acclimate and orient students to higher education. Students will develop an understanding of the academic and personal demands of college life, and the attitudes, behaviors, and skills which successful students exhibit. Students will become familiar with the resources available at this college to help them succeed. No prerequisites. J fall, spring; C fall, spring; occasionally. 1 credit hour.

INT 1550-2550 Honors Fieldwork Experience Students will design and implement a fieldwork project that seeks to enhance comprehension of course material through experiential learning by combining academic research, both through scholarly sources and in the field, faculty mentor conferencing, and a public demonstration of the work. In doing so, the student will consider the ways in which course material is contextualized in the world around us. The student will submit a project that includes a project plan, research paper, and public demonstration of her/his work. Students and the humanities meet with the faculty mentor to design the project, and review progress throughout the semester. 1 credit hour.

INT 1750 Arts in the Apple Arts in the Apple is intended to provide art, music, theatre, communication, and media arts students with a field-based learning experience using a trip to New York City, during which students will visit museums, cultural institutions, theatres, and attractions. A final project, researched in New York City, will be produced as a result of the course experience. Eligibility: ENG 1530. J fall. 3 credit hours.

INT 2530 Humanities I Students will examine the ideas and ideals which characterize the moral, intellectual, and aesthetic activities from early civilization through the medieval period. By considering the literature, art, philosophy, and religion of various ages, students will learn how these interrelated disciplines define a people and a time. Students will also gain an overview of individuals and works in the humanities which are fundamental to early Western culture. Prerequisite: ENG 1530. C occasionally. 3 credit hours.

INT 2540 Humanities II Students will examine the ideas and ideals which characterize the moral, intellectual, and aesthetic activities from the Renaissance to the 20th century. By considering the literature, art, music, philosophy, and religion of various ages, students will learn how these interrelated disciplines define a people and a time. Students will also gain an overview of individuals and works in the humanities which are fundamental to recent Western culture. Prerequisite: ENG 1530. C occasionally. 3 credit hours.

INT 2800 Science Connections A science outreach opportunity for science majors, students in this course design and present hands-on science investigations for third grade students in physical science, biology, chemistry, and earth science/geology. Course major with sophomore standing and permission of instructor; must meet minimum college level reading score: Accuplacer 80+. J spring. 1 credit hour.

LAND AGENT
LND 2010 Land Agent Internship Students receive on-the-job experience consisting of 135 hours of supervised activity in a local business or industry. Students work in conjunction with a faculty mentor and a supervisor at the job site. All guidelines in the original college internship policy will be followed. Prerequisite: At least a 2.0 GPA and either sophomore standing or one semester completion in an appropriate certificate program. J occasionally. 3 credit hours.

LIBRARY
LIB 1500 Library Research Skills Students develop basic skills in library research techniques using both print and electronic tools. Focus is on location and retrieval of information from major reference sources, print indexes, and electronic databases. Especially designed for freshmen and returning adult students. No prerequisites. J occasionally. C occasionally. 1 credit hour.

MATHEMATICS
LIB 1600 Electronic Library Resources Students will be introduced to the latest online free and subscription databases, as well as web-based library catalogs. Students gain a working knowledge and learn basic operating procedures in a variety of electronic databases. Lectures, demonstrations, and hands-on assignments are featured. No prerequisites. Online fall, spring, summer. 1 credit hour.

MATH 0300 Prealgebra: Extended Time Students will improve their basic mathematical skills. Topics include integers, real numbers, fractions, decimals, percents, and ratios and proportions. Applications are emphasized throughout to help students improve their ability to handle everyday mathematics. Students are introduced to variables and other elementary algebra topics. MAT 0400 Prealgebra will improve their basic mathematical skills. Topics include integers, real numbers, fractions, decimals, percents, and ratios and proportions. Applications are emphasized throughout to help students improve their ability to handle everyday mathematics. Students are introduced to variables and other elementary algebra topics. MAT 0500 Elementary Algebra Students will learn basic algebraic skills necessary for further study in mathematics and many other disciplines which involve quantitative problems. Topics include a review of arithmetic and signed numbers, linear equations and inequalities, graphing and Cartesian coordinates, basic rules of exponents, and solving 2-by-2 systems of equations. Problem-solving and applications are emphasized. Prerequisite: MAT 0300 or MAT 0400 or placement exam. J fall, spring. 3 imputed credit hours.

MAT 0400 Prealgebra Students will improve their basic mathematical skills. Topics include integers, real numbers, fractions, decimals, percents, and ratios and proportions. Applications are emphasized throughout to help students improve their ability to handle everyday mathematics. Students are introduced to variables and other elementary algebra topics. MAT 0500 Elementary Algebra Students will learn basic algebraic skills necessary for further study in mathematics and many other disciplines which involve quantitative problems. Topics include a review of arithmetic and signed numbers, linear equations and inequalities, graphing and Cartesian coordinates, basic rules of exponents, and solving 2-by-2 systems of equations. Problem-solving and applications are emphasized. Prerequisite: MAT 0300 or MAT 0400 or placement exam. J fall, spring. 3 imputed credit hours.

MAT 0600 Intermediate Algebra Students will learn basic algebraic skills necessary for further study in mathematics and many other disciplines
Course Descriptions

which involve quantitative topics. Topics include an Introduction to functions, polynomial arithmetic, factoring, rational and radical equations and expressions, properties of rational exponents and solutions to quadratic equations. Problem-solving and applications are emphasized. Prerequisite: MAT 0500 or one year of high school algebra and placement exam. J fall, spring; C fall, spring. 3 imputed credit hours.

MAT 1200 Applied Math for Technology Students will learn applications for algebra, trigonometry, complex numbers, exponential, sinusoidal and logarithmic functions, vectors, and determinants. Illustrative examples are provided for the electrical, mechanical, computer technology and physics disciplines. This course is designed to meet the specialized needs of technology students and is not recommended for engineering or mathematics majors. Prerequisite: MAT 0600 or two years of high school algebra/geometry or placement exam. J occasionally. 4 credit hours.

MAT 1250 Applied Technical Calculus Students will learn applications of derivatives and integrals. Illustrative examples are provided for the electrical, mechanical, computer technology and physics disciplines. A computer algebra system such as Derive is incorporated into the course. The course is designed to meet the specialized needs of technology students and is not intended for engineering or mathematics majors. Prerequisite: MAT 1220 or MAT 1590. J occasionally. 4 credit hours.

MAT 1500 Problem Solving With Mathematics Students will develop problem solving skills through a detailed study of topics such as financial mathematics, linear and exponential modeling, and geometry, in concert with specific problem solving strategies such as drawing diagrams, making systematic lists, looking for patterns, identifying sub-problems, and working backwards. Solution presentations and communication are emphasized. Prerequisite: MAT 0500 or one year of high school algebra and placement exam; must meet minimum college level reading score: Accuplacer 80+; J fall, spring; C fall, spring; online fall, spring. 3 credit hours.

MAT 1540 Elementary Statistics Students will investigate various topics in both descriptive and inferential statistics including measures of central tendency and spread, graphical analysis of data, probability, random sampling, correlation and regression, hypothesis testing and confidence intervals. Practical applications are emphasized throughout the course. A significant part of the course is taught in a laboratory setting using a software package such as Minitab. Prerequisite: MAT 0600 or MAT 1590 or two years of high school algebra/geometry and placement exam; must meet minimum college level reading score: Accuplacer 80+; J fall, spring; C fall, spring; online fall, spring. 3 credit hours.

MAT 1590 College Algebra/Trigonometry Students will learn algebra and trigonometry topics necessary to prepare them for the study of precalculus. Topics include one-to-one functions and their inverses and graphs, polynomial and rational functions and their applications, radicals and exponents, complex numbers, and trigonometric functions, including graphs and basic identities. Problem-solving and applications are emphasized. An approved graphing calculator is required. Prerequisite: MAT 0600 or two years of high school algebra/geometry and placement exam. J fall, spring; C fall, spring; online fall, spring. 4 credit hours.

MAT 1600 Precalculus Students will learn topics necessary for studying calculus and discrete mathematics. Algebra topics include rational and polynomial functions. Trigonometry topics include graphs, identities, half and double-angle formulas, and inverse trig functions. Other topics include exponential and logarithmic functions, and an Introduction to limits. An approved graphing calculator is required. Prerequisite: MAT 1590 or three years of high school algebra/geometry and placement exam. J, fall, spring; C fall, spring; online fall, spring. 4 credit hours.

MAT 1630 Calculus for Business & Social Science I Students will study an Introduction to differential calculus of functions of a single variable with applications to the behavioral, management, and social sciences. Topics include limits, continuity, derivatives, and applications of derivatives for algebraic, exponential, and natural logarithm functions. Prerequisite: MAT 1530 or MAT 1600 or high school precalculus or equivalent. A student cannot receive graduation credit for both MAT 1630 and MAT 1710. J occasionally; C occasionally. 3 credit hours.

MAT 1640 Calculus for Business & Social Science II Students will study an Introduction to integral calculus for functions of a single variable and the calculus of functions of several variables. Techniques of integration and differentiation and applications of these techniques to the behavioral, management, and social sciences are studied. Prerequisite: MAT 1630 or MAT 1710. A student cannot receive graduation credit for both MAT 1640 and MAT 1720. J occasionally; C occasionally. 3 credit hours.

MAT 1670 Discrete Mathematics Students will master fundamental concepts of discrete mathematics that are essential for further studies in mathematics and computer science. Topics include symbolic logic and deductive reasoning, methods of proof, set theory, combinatorics, Boolean algebra, number theory, relations, and graph theory. Prerequisite: MAT 1600 or high school precalculus or equivalent. J fall; C spring. online fall. 3 credit hours.

MAT 1710 Calculus & Analytic Geometry I Students will study the fundamental concepts of calculus. Topics include an Introduction to analytic geometry, functions, limits and continuity, and derivatives and integrals and their applications. An approved graphing calculator is required. A computer algebra system such as DERIVE is incorporated into the course. Prerequisite: MAT 1600 or high school precalculus or equivalent. J fall, spring; C fall. 4 credit hours.

MAT 1720 Calculus & Analytic Geometry II Students will further their study of calculus. Topics include applications of the definite integral such as volume, surface area and arc lengths, logarithmic and exponential functions, trigonometric and hyperbolic functions, techniques of integration, polar coordinates, parametric equations, improper integrals, and sequences and series including power series and Taylor series. An approved graphing calculator is required. A computer algebra system such as DERIVE is incorporated into the course. Prerequisite: MAT 1710. J fall, spring; C spring. 4 credit hours.

MAT 2650 Calculus & Analytic Geometry III Students will continue their study of calculus. Topics include solid analytic geometry, calculus of functions of several variables, multiple integration, two- and three-dimensional vectors, and vector calculus (including Green’s Theorem and Stokes’ Theorem). A computer algebra system such as Mathematica is incorporated into the course. Prerequisite: MAT 1720. J fall. 4 credit hours.

MAT 2670 Linear Algebra Students will learn the algebra and geometry of finite-dimensional vector spaces and their linear transformations, the algebra of matrices and determinants, characteristic values and vectors, and diagonalization of matrices. A computer algebra system such as DERIVE is incorporated into the course. This course is intended for students majoring in mathematics, computer science and engineering. Prerequisite: MAT 1720. J spring. 3 credit hours.

MAT 2680 Ordinary Differential Equation Students will study differential equations of the first and higher order, systems of linear differential equations, and Laplace transforms. Applications are stressed throughout the course. The course is intended for students majoring in mathematics, computer science, and engineering. Prerequisite: MAT 1720, MAT 2650 strongly recommended. J spring. 3 credit hours.

MECHANICAL TECHNOLOGY

MCT 1210 Applied Pneumatics/Hydraulics Students will be introduced to the basics of hydraulic and pneumatic machinery. They will study the basic components of these systems, such as pumps, valves, and actuators. This course will include a combination of laboratory activities and computer based simulations. Students will also discuss safety standards for pneumatic and hydraulic systems. No prerequisites. J spring.

MCT 1240 Engineering Drawing With AutoCAD Students will focus on engineering drawing fundamentals, incorporating both manual and computer-aided drafting. Topics include freehand sketching, principles of applied geometry, orthographic projections, dimensioning, section views, pictorials, conventional drawing practices, standards, tolerancing, and an Introduction to 2-D wire frame software such as AutoCAD. Students will create and modify CAD geometry, text, and dimensions. Eligibility: must meet minimum reading score: Accuplacer 70+. J fall. 3 credit hours.

MCT 1250 Statics for Technology Students will study rigid body mechanics including forces, force systems, their resultants, and conditions for equilibrium (including friction). Topics include equivalent force systems, equilibrium of rigid bodies, and structural mechanics (trusses, frames, beams, properties of areas, and volumes). Prerequisite: PHY 1250. Corequisite: MAT 1220 or MAT 1590 or higher. J spring. 3 credit hours.

MCT 1270 Machine Theory and Operations Students will learn the function and operation of basic chip producing machine tools such as lathes, drill, milling machines, saws, and grinders. Prerequisite: MAT 0600. J fall. 3 credit hours.

MCT 1280 Computer Numerical Control/ Machine Tools Students will learn the pro-
programming and operation of Computer Numerically Controlled (CNC) machine tools. Manual programming of two and three axis mills and lathes using canned cycles will be covered. Topics discussed will include CNC machine components, absolute and incremental programming, preparatory functions (G-codes), miscellaneous function (M-codes), tool length offsets, cutter compensation and cutting tools and workholding methods for CNC. Lab projects provide hands-on experience for students on CNC controllers. Prerequisite: MCT 1270; Corequisite: MAT 1220 or MAT 1590 or higher. J spring. 4 credit hours.

MCT 1300 Machine Tool Technology II Students will gain exposure to setting up and running manual machine tools such as lathes, mills, and drill presses. In this course, the students will concentrate on more hands-on applications of set-up and machining of more complex parts using the manual equipment in the MTI lab. Prerequisites: MCT 1240 and 1270 and MAT 1220 or MAT 1590 or higher (or higher then MAT 1590). J spring. 3 credit hours.

MCT 1340 Manufacturing Drawings & GD&T Students will gain further exposure to actual manufacturing drawings and other information provided. The first part of the course will cover the ability to read, interpret, and construct manufacturing drawings. The second part will introduce the students to geometric tolerance and dimensioning. Prerequisite: MCT 1240. J spring. 3 credit hours.

MCT 1380 Introduction to Solid Modeling Students will be introduced to 3-D solid modeling software. Much of the course is spent on application of a parametric solid modeler such as Solid Works. Students will learn to create and sketch geometry and parametric solids. Students will also be introduced to detailing and assembly modeling. Emphasis is placed on establishing constraints that correctly convey the design intent. Prerequisite: MCT 1240 or equivalent experience. J spring. 3 credit hours.

MCT 1390 AutoCAD Students will learn the concepts and fundamental principles of computer-aided drafting using AutoCAD software. Throughout both lecture and laboratory assignments, students will apply the commands and functions used in industry to create working mechanical drawings. Prerequisite: MCT 1240. J fall. 2 credit hours.

MCT 2010-2020 Technology Internship Students receive on-the-job experience consisting of 135 hours of supervised activity in a local business or industry. Students work in conjunction with a faculty mentor and a supervisor at the job site. All guidelines in the original college internship policy will be followed. Prerequisites: At least a 2.0 GPA and either sophomore standing or one semester completion in an appropriate certificate program. J occasionally: 3 credit hours.

MCT 2230 Mechanics of Materials Students will learn stress, strain, the mechanical properties of materials, tension, compression, torsion, and beams. Topics such as columns, welded and riveted connections, combined stress, stress concentrations, thermal stresses, and pressure vessels are discussed. Prerequisites: MCT 1250 and MAT 1220 or MAT 1590 or higher. J fall. 4 credit hours.

MCT 2270 Mechanics of Energy Systems Students will analyze and solve problems involving thermodynamic systems. Students will study thermodynamic processes, including cycles. Applications will focus on fluid dynamics and energy conservation, and heat transfer. Prerequisite: PHY 1260. J spring. 4 credit hours.

MCT 2280 Advanced CNC Programming Students will continue learning computer numerically controlled (CNC) programming, but move into advanced programming of three, four, and five-axis CNC machines. CAD/CAM is introduced and illustrated. Students will be exposed to Fanuc and Haas controllers. Prerequisites: MCT 1280 and MAT 1220 or MAT 1590 or higher. J fall. 3 credit hours.

MCT 2300 Machine Tool Technology III Students will gain additional exposure in setting up and running CNC machine tools such as lathes, mills, and EDM equipment. Students will concentrate on the set-up and machining utilizing CNC programs of more complex parts using the CNC equipment. Prerequisites: MCT 1330 and MAT 1220 or MAT 1590 or higher (or higher then MAT 1590). J fall. 4 credit hours.

MCT 2340 Dimensional Metrology Studies gain exposure to basic and state of the art requirements for inspection and measurement of machined parts and assemblies. Students will be introduced to the various types of inspection equipment. Students will also have hands-on exposure to metrology via a CMM (Coordinate Measurement Machine) and an optical comparator. Students will learn about state-of-the-art advances in measurement techniques from industry representatives. Prerequisites: MCT 1340 and MAT 1220 or MAT 1590 or higher (or higher then MAT 1590). J fall. 2 credit hours.

MCT 2380 Advanced Solid Modeling Students will extend their knowledge by using the parametric solid modeler in industrial design application. Skills are developed to support applications in the area of feature patterns, molded and cast parts, sheet metal applications, lofting, and sweeps. Assembly modeling and editing is covered as well as detailing of parts and assemblies. Links to other applications such as publication bill of materials, CAM, analytical packages, and other CAD systems are also featured. Prerequisite: MCT 1380. J fall. 3 credit hours.

MCT 2410 Computer-Aided Manufacturing Students will gain exposure to the principles and procedures used in PC-based CAD/CAM part programming and manufacturing. Course is based on the use of local industry standard CAM software. The PC-based CAM system will be used to produce complex machined parts from detailed solid models on advanced CNC machine tools. Prerequisites: MCT 1380, 2280, and 2300. J spring. 3 credit hours.

MCT 2420 Manufacturing Process I Students will learn traditional manufacturing processes. Topics include processes such as casting, hot and cold working, injection molding, powder metallurgy and finishing, as well as MTL props and their effect on the manufacturing process, and lean manufacturing. Labs consist of tours of traditional manufacturing plants and a project which requires students to create a small factory that uses new manufacturing techniques. Emphasis of the project is on quality, reduced work in process, and the team approach. Prerequisites: MCT 1280, MCT 1380, and sophomore technology standing. J spring. 3 credit hours.

METEOROLOGY

METEOROLGY

MCT 1510 Introduction to Meteorology Students are introduced to the basic concepts and processes of atmospheric science. Topics include atmospheric moisture, vertical and horizontal air pressure patterns, thermal patterns, clouds, atmospheric circulation and winds, air masses, fronts, fog, ice formation, thunderstorms, turbulence, and sub-tropical weather. Students will study weather data including surface and pressure maps, surface weather data, and a variety of computerized weather data banks throughout the U.S. and selected areas of the world. The relationships of meteorological phenomena to aeronautical conditions will be included. Prerequisite: MAT 0600; Corequisite: ENG 1510; must meet minimum college level reading score: Accuplacer 80+ J occasionally. 3 credit hours.

MEDICAL OFFICE TECHNOLOGY

MOT 1410 Medical Terminology Focuses on medical terminology as it occurs in the anatomical systems of the human body. Students will learn the basic principles of medical word building, pronunciation, and use of medical terms. Students will also learn about all human anatomical systems, the study of common diseases, procedures, and abnormalities. Eligibility: ENG 1510. J fall; C fall, spring; online fall, spring. 3 credit hours.

MOT 1420 Medical Office Procedures Students will learn procedures to become effective in the administrative duties necessary in today’s state-of-the-art medical office. Students will examine medical records management, filing procedures, medicolegal communications, appointment scheduling, telephone procedures, insurance form completion, medical coding, medical transcription, and financial recordkeeping. Eligibility: ENG 1510. C spring; J fall; online fall, spring. 3 credit hours.

MOT 2430 Medical Transcription Provides students with the training necessary to demonstrate mastery in transcribing medical reports. Realistic dictation from healthcare facilities will give students the experience of listening to a variety of medical terms, different accents, and various medical reports. Prerequisites: MOT 1410 and MOT 1420. Online fall, spring. 3 credit hours.

MOT 2440 Medical Coding I (CPT) Students are introduced to procedural coding. Students will learn CPT and HCPCS coding systems, and how to relate coding procedures to office operations, medical reimbursement, and medical billing. Prerequisites: MOT 1410 and MOT 1420. C fall; J fall, online fall. 3 credit hours.

MOT 2450 Medical Coding II (ICD-9-CM) Students are introduced to ICD-9-CM coding classification systems. Students will learn how diagnostic coding procedures relate to medical reimbursement and office operations. Prerequisites: MOT 1410 and MOT 1420. C spring, J spring, online spring. 3 credit hours.

MUSIC

MUS 1510 Introduction to Music Guides the student’s search for musical enjoyment and understanding. A survey of classical and popular music is presented through listening and written
examples. Students will gain knowledge of music literature and the art of music and its relationship to society. No prior musical experience or skills required. Eligibility: ENG 0430; must meet minimum college level reading score: Accuplacer 80+. J fall. 3 credit hours.

MUS 1570 Music Theory I introduces the student to the basic fundamentals of reading and writing music. Students will work with elements of common practice theory and harmony through written assignments and aural skills training. No previous musical experience or skills required. No prerequisites. J fall. 3 credit hours.

MUS 1580 Music Theory II in this continuation of Music Theory I, students gain further mastery of the structure of music through written work in more complex chordal structure, compositional techniques, and aural skills. Prerequisite: MUS 1570. J spring. 3 credit hours.

MUS 1590 American Music: Classic/Popular This course is designed as an overview of American music, past to present, classical and popular. Music will be considered chronologically from Native American through current musical influences. Topics will include music of the classical, folk, Hispanic, blues, jazz, rock, and music theatre literature. No prior music experience or skills are required. This course is a good companion course to MUS 1510. Prerequisite: ENG 0430; Must meet minimum college level reading score - Accuplacer 80+. J spring. 3 credit hours.

MUS 1610, 1620, 2610, 2620 Applied Music-Private Lessons Provides for private study for the beginner or more advanced student on instruments, voice, composition, or other areas of music. Students gain musical skills and artistry through individual instruction. Sessions are arranged through the director of music. Public performance is optional. A studio fee is required. May be taken for a total of 6 credit hours. No prerequisites. J fall, spring. 1 credit hour.

MUS 1630 Beginning Voice Singers of all levels of experience from the beginner on can take this course. Students will improve their vocal performance for singing or speaking by dealing with written and class exercises. Vocal production, vocal pedagogy, artistic interpretation of song, working with accompanists, stage usage, acoustics, and the use of sound equipment will be considered. Recommended for those interested in performing arts, communications, education, public speaking, and related areas. No prerequisites. J fall, spring. 3 credit hours.

MUS 1650 Business of Music Students will gain an understanding of the various means of entering the music business, learn the important role of the agency of music publishing and marketing contracts and arrangements. Students will also learn how to gain attention from a record label. Various careers available in the music business are also examined. Eligibility: ENG 1510. J spring. 3 credit hours.

MUS 1670 Beginning Piano Offers group instruction in piano for the beginner. Through work at the keyboard and written work in music theory, students gain improved ability to perform at the piano or other keyboard instruments. Recommended for those interested in careers in therapy, recreation, education, music performance, music education, and other related fields. No prerequisites. J fall, spring. 3 credit hours.

MUS 1680 Beginning Guitar Offers group instruction in guitar for the beginner. Through work on the instrument and written work in music theory, students gain improved ability to perform on the guitar. Recommended for those interested in careers in therapy, recreation, education, music performance, music education, and other related fields. No prerequisites. J fall, spring. C occasionally. 3 credit hours.

MUS 1690 Piano II Students will receive further study in class piano. Aspects of keyboard technique, sight reading, improvisation, artistry, and repertoire will be emphasized. Prerequisite: MUS 1670. 3 credit hours.

MUS 1700 Guitar II Students will receive further study in class guitar. Aspects of guitar technique, sight reading, improvisation, artistry, and repertoire will be emphasized. Prerequisite: MUS 1680. J occasionally. 3 credit hours.

MUS 1710 Audio Recording Provides an Introductory experience in audio recording and sound engineering. Audio recording is helpful for individuals considering audio as a career or as a personal interest. Through work with the college’s audio studio, students will gain a knowledge of studio techniques, as well as the aesthetics and styles of music in relation to sound recording. Additional studio hours will be scheduled. No prior studio or musical skills are necessary. Recommended for those pursuing music, education, communications, multimedia, or performing arts. Eligibility: ENG 0410 and ENG 0430. J fall, spring. 3 credit hours.

MUS 1720 Music Ensemble I Students will have the opportunity to participate in a music ensemble, gain a greater understanding of music literature and styles, and grow in musical expression through performance. Prerequisites: Must meet minimum college level reading score - Accuplacer 80+. First-time performers are expected to be at a graduating high school level on voice or instrument. C occasionally. 2 credit hours.

MUS 1730 Music and Digital Studio Appropriate for students with a personal or career interest in this area. No prior music or studio knowledge is required. Through coursework and experience in the college’s digital studio, students will be introduced to and gain an understanding of the new music technology including music software, music sequencing, sound sampling, synthesizers, effects, drum machines, and other related equipment. Emphasis will be placed on aesthetics and style in the music produced. Additional studio hours are required. Recommended for those pursuing education, communications, and Internet production with regard to audio, multimedia, education, performing arts, or music related fields. Eligibility: ENG 0410 and ENG 0430. J spring. 3 credit hours.

MUS 1740 Music Ensemble II Students will have the opportunity to participate in a music ensemble, gain a greater understanding of music literature and styles, and grow in musical expression through performance. This course is the second in the music ensemble series of courses and will cover new and different music literature. Prerequisite: MUS 1720; must meet minimum college level reading score: Accuplacer 80+. C occasionally. 2 credit hours.

MUS 1750, 1760, 2750, 2760 Music Ensembles: Chorus MUS 1830, 1840, 2830, 2840 Music Ensembles: Jazz MUS 1850, 1860, 2850, 2860 Music Ensembles: Rock MUS 1870, 1880, 2870, 2880 Music Ensembles: Concert Band These courses offer students an opportunity to participate in one or more of the college’s music ensembles. Students gain a greater understanding of music literature and styles and grow in musical expression through performance. Full- and part-time students can enroll in music ensembles. A total of 12 credit hours in music ensembles may be taken for humanities credit unless additional hours are approved by the assistant dean of arts, humanities, and health sciences. Since ICC music ensembles are non-audition, it is expected that first time instrumentalists be at high school levels on their instruments. Chorus members must be able to sing in tune. Questions of participation are at the discretion of the instructor. No prerequisites. J fall, spring. 2 credit hours.

MUS 1890 Guitar Maintenance/Repair With a major course emphasis on guitar maintenance and repair, students will concentrate on proper stringing, tuning, set-up, and maintenance. Electric, acoustic, and MIDI Controller instruments will be considered. Purchase considerations for new and used instruments will be discussed. No previous music or repair experience required. Application to other stringed instruments will be included as appropriate. No prerequisites. J occasionally. 1 credit hour.

MUS 1930 Aural Skills I This course focuses on rhythm, melodic, and harmonic recognition and dictation, sight reading, solfeggio, and Kodaly hand signals. Students will have access to computer-assisted practice sessions in the theory studio. Strongly recommended for students wishing to improve their musical abilities. No previous musical experience required. No prerequisites. J fall. 1 credit hour.

MUS 1940 Aural Skills II Provides further study in concepts emphasized in MUS 1930. Students will have access to computer-assisted practice sessions in the theory studio. Strongly recommended for students wishing to improve their musical abilities. Prerequisite: MUS 1930. J spring. 1 credit hour.

MUS 2570 Music Theory III Students will receive a continuation of music theory instruction. Form and analysis, chromaticism, aspects of choral and instrumental arranging will be considered. Prerequisite: MUS 1580. J fall. 3 credit hours.

MUS 2580 Music Theory IV Further consideration of form and analysis, composition, and arranging will be offered in this continuation of Music Theory III. Aspects of 20th century composition will be considered. Prerequisite: MUS 2570. J occasionally. 2 credit hours.

MUS 2610, 2620, 2630, 2640 Applied Music-Private Lessons Provides for private study for the beginner or more advanced student on instruments, voice, composition, or other areas of music. Students gain musical skills and artistry through individual instruction. Sessions are arranged through the director of music. Public performance is optional. A studio fee is required. May be taken for a total of 6 credit hours. No
MUS 2720 Music Ensemble III Students will have the opportunity to participate in a music ensemble, gain a greater understanding of music literature and styles, and grow in musical expression through performance. This course is the third in the music ensemble series of courses and will cover new and different music literature. Prerequisite: MUS 1740; must meet minimum college level reading score: Accuplacer 80+. J occasionally. 2 credit hours.

MUS 2740 Music Ensemble IV Students will have the opportunity to participate in a music ensemble, gain a greater understanding of music literature and styles, and grow in musical expression through performance. This course is the fourth in the music ensemble series of courses and will cover new and different music literature. Prerequisite: MUS 2720; must meet minimum college level reading score: Accuplacer 80+. J occasionally. 2 credit hours.

MUS 2890 Digital/Audio Studio Seminar Students will have the opportunity to work in the audio and digital studios. Students will design a project or series of projects encompassing the two facilities. Class participation is required. Further instruction in audio and digital studio techniques, recording, and sound reinforcement will be presented. Prerequisite: MUS 1710 or MUS 1730. J occasionally. 2 credit hours.

MUS 2930 Aural Skills III More complex harmonies, chordal structure, and rhythmic dictation will be covered in this continuation of MUS 1940. Tonal and atonal sight singing will be studied. Prerequisite: MUS 1940. J occasionally. 1 credit hour.

MUS 2940 Aural Skills IV Advanced tonal and atonal dictation and sight singing will be studied in this continuation of MUS 2930. Prerequisite: MUS 2930. J occasionally. 1 credit hour.

NURSING
NUR 1450 Introduction Associate Degree Nursing This course facilitates entry into the associate degree program for students who have successfully challenged or received transfer credit for NUR 1510. Selected learning activities will focus on and emphasize those aspects of associate degree nursing which augment basic clinical knowledge and skills, including: the roles of the associate degree nurse; nursing as a profession; ethical/legal considerations; communication; functional health patterns; and the nursing process. Students will be oriented to the basic policies and requirements pertaining to all students in the associate degree program. Prerequisite: Successful challenge of or transfer of credits for NUR 1500, NUR 1510, BIO 2510, ENG 1530, and PSY 1510. Eligibility: NUR 1520. J occasionally. 1 credit hour.

NUR 1500 Basic Pharmacology and Dosage Calculation Designed for the beginning nursing student, students will learn basic principles of pharmacology and medication dosage calculation. Pharmacologic principles and legal/ethical considerations are important to understand to safely administer and assess medications that will be given during the clinical component of NUR 1510. Calculations include interpretation of physician orders, accurate reading of drug labels, use of medication measuring equipment, and implications for varying ages of clients. Prerequisite: acceptance into nursing program. J fall. C fall. 1 credit hour.

NUR 1510 Foundations of Nursing Students will be introduced to the National League of Nursing (NLN) Associate Degree (AD) competencies (professional behaviors, communication, assessment, clinical decision making, caring interventions, teaching and learning, collaborating and managing care), the three roles of the AD nurse (provider of care, manager of care and member within the discipline), and Quality and Safety Education for Nurses (QSEN) competencies. Students will provide safe, holistic, patient-centered care to adult and geriatric individuals with diverse cultures experiencing basic disruptions in biophysical and psychosocial dimensions in a variety of healthcare settings. Select ethical-legal principles are introduced. Corequisites: BIO 2510, ENG 1530, and PSY 1510. J fall; C fall. 6 credit hours.

NUR 1520 Health Restoration Students will continue to develop National League of Nursing (NLN) Associate Degree (AD) competencies (professional behaviors, communication, assessment, clinical decision making, caring interventions, teaching and learning, collaborating and managing care), the three roles of the AD nurse (provider of care, manager of care and member within the discipline), and Quality and Safety Education for Nurses (QSEN) competencies first introduced in NUR 1510. Students will provide safe, holistic, patient-centered care across the life span with diverse cultures. The coursework emphasizes individuals experiencing simple/acute health disruptions in biophysical and psychosocial dimensions. Practice will occur in a variety of healthcare settings. Students will focus on assisting patients to reestablish health/wellness with emphasis on maternal, newborn, and surgical patients. Prerequisites: NUR 1500 and NUR 1510; Corequisites: NUR 2970, BIO 2520, and PSY 2570. 7 credit hours.

NUR 1530 Summer Nursing Clinical Experience Students will develop a higher level of clinical performance for a student moving from the freshman to sophomore nursing level during this course. Students participate in a supervised medical-surgical clinical experience in an acute health care agency setting with an instructor present. Students will continue to develop the National League of Nursing (NLN) Associate Degree (AD) competencies (professional behaviors, communication, assessment, clinical decision making, caring interventions, teaching and learning, collaborating and managing care), the three roles of the AD nurse (provider of care, manager of care and member within the discipline), and Quality and Safety Education for Nurses (QSEN) competencies. The student will provide safe, holistic, patient-centered care across the life span of diverse cultures. The clinical experience emphasizes individuals experiencing simple/acute health disruptions in biophysical and psychosocial dimensions. Prerequisites: completion of NUR 1520 and BIO 2520 with a grade of C or better. J summer; C summer

NUR 2050 Nursing Internship Students receive on-the-job experience consisting of 45 hours of supervised activity in a health care agency setting. Students work in conjunction with a faculty mentor and a supervisor at the job site. Individual goals and objectives will be developed between student, faculty, mentor, and agency supervisor. Prerequisites: successful completion of NUR 2510 with a grade of C+ or better and permission of the instructor. J spring; C spring. 1 credit hour.

NUR 2060 Nursing Internship Students receive on-the-job experience consisting of 90 hours of supervised activity in a health care agency setting. Students work in conjunction with a faculty mentor and a supervisor at the job site. Individual goals and objectives will be developed between student, faculty, mentor, and agency supervisor. Prerequisites: successful completion of NUR 2510 with a grade of C+ or better and permission of the instructor. J spring; C spring. 2 credit hours.

NUR 2350 Pharmacology For Nurses This course presents an in-depth study of pharmacological action of medications and the associated nursing assessments and interventions. Concepts of medication usage, the major classifications and actions of medications, and the care of the client, utilizing the nursing process, are emphasized. Prerequisite: NUR 1520 and successful completion of BIO 2510 and BIO 2520 with a grade of C or better. J spring, summer; C spring, summer. 3 credit hours.

NUR 2510 Health Restoration/Maintenance I Students will continue to develop National League for Nursing (NLN) Associate Degree (AD) competencies (professional behaviors, communication, assessment, clinical decision making, caring intervention, teaching and learning, collaborating and managing care), the three roles of the AD nurse (provider of care, manager of care and member within the discipline), and Quality and Safety Education for Nurses (QSEN) competencies. Course work emphasizes individuals experiencing complex acute and chronic biophysical and mental health deviations. Using a variety of healthcare settings, the student provides quality, safe, holistic, patient centered care across the life span with diverse cultures. Emphasis will be placed on the care of patients with the following alterations: mental health, cell growth, mobility, nutrition, metabolism, neurologic, and renal function. Prerequisite: NUR 1520, NUR 2970, PSY 2510, BIO 2520; Corequisites: NUR 2550, and NUR 2760 or BIO 2760, and BIO 2351. J fall; C fall. 8 credit hours.

NUR 2520 Health Restoration & Maintenance II Students will continue to develop the National League for Nursing (NLN) Associate Degree (AD) competencies (professional behaviors, communication, assessment, clinical decision making, caring interventions, teaching, and learning, collaborating and managing care) and Quality and Safety Education (QSEN) competencies and the three roles of the AD nurse with an emphasis on the role as manager of care. Course work emphasizes individuals experiencing complex acute and chronic biophysical and mental health deviations. Using a variety of healthcare settings, students will provide safe, holistic, patient centered care across the life span with diverse cultures. Emphasis will be placed on the care of patients with the following alterations: cardiac, respiratory, neurologic, hematologic, burns, domestic violence, and end of life care. Prerequisites: BIO 1760, BIO 2530, NUR 2510, NUR 2550; Corequisites: NUR 2530 and NUR 2560, ENG elective, and MAT 1500. J spring; C spring. 8 credit hours.
Course Descriptions

NUR 2550 Pathophysiology I Students will study diseases as seen in physiological and psychological changes that occur as a result of disease processes, with emphasis on the analysis of primary and secondary nursing and collaborative assessments and the mechanisms of their development. Students will integrate concepts from anatomy and physiology, microbiology, and chemistry, and focus on their application to clinical practice. Prerequisite: NUR 1520. J fall; C fall. 2 credit hours.

NUR 2560 Pathophysiology II As a continuation of Pathophysiology I, students will master diseases as seen in physiological and psychological changes that occur as a result of disease processes, with emphasis on the analysis of primary and secondary assessments and the mechanisms of their development. Students will integrate concepts from anatomy and physiology, microbiology, and chemistry, and focus on their application to clinical practice. Prerequisite: NUR 2550. J spring; C spring. 2 credit hours.

NUR 2970 Health Assessment Students’ knowledge, skills, and expertise will increase in all aspects of nursing health assessment: obtaining health histories; performing physical assessments; recognizing normal assessment findings and deviations from the normal; and recording accurate, concise, and clear data. Emphasis is on performing systematic health assessments of adults, incorporating developmental principles and psychological, sociological, and cultural aspects. To a lesser degree, child assessment is integrated into the course. Laboratory for integration of theory and skill mastery is included. At the end of the semester, each student will perform a health assessment on a selected client and record findings. Prerequisite: NUR 1510 or RN or LPN licensure. J spring; C fall, spring. 3 credit hours.

OCCUPATIONAL THERAPY ASSISTANT

OTA 1510 Foundations of Occupational Therapy Students will be introduced to the history, development, function, and philosophy of the occupational therapy profession and the occupational therapy assistant. Students will learn about relevant theories, frames of reference, and models of practice that influence the occupational therapy process. In addition, students will identify how sociopolitical, economic, and geographic factors influence current occupational therapy practice. Students will also demonstrate their ability to locate, select, and interpret evidence-based practice research that supports ethical occupational therapy practice. Prerequisite: acceptance into OTA program. J fall. 3 credit hours.

OTA 1520 Medical Specialties Students will understand the effects heritable diseases, genetic conditions, disability, trauma, and injury to physical and mental health have on an individual. Students will explore the effects disabling conditions have on the occupational performance of a person. Students will learn about normal development throughout the lifespan, medical terminology, signs and symptoms, course and prognosis, and common medical treatments related to disease/disability. Prerequisite: acceptance into OTA program. J fall. 3 credit hours.

OTA 1530 Fundamental Skills of OTA I This is the first course in a series of two that focus on development and refinement of skills for the occupational therapy assistant. Students will learn the application component of the knowledge learned in Foundations of Occupational Therapy. Topics include, but are not limited to: understanding yourself and others, applications of the language of the profession, Introduction to basic computer skills and assessment tools, development of professional behaviors. Prerequisite: acceptance into OTA program. J fall. 1 credit hour.

OTA 1620 Psychosocial Concepts/Techniques Introduces students to the care of clients with psychiatric and neurobehavioral disorders. Content addresses roles dysfunction and prevention strategies, as well as occupational therapy assessment and intervention techniques. Emphasis is placed on learning to provide care utilizing the occupational therapy process of evaluation, treatment planning, implementation, and documentation of care. Real life and fictional case studies will be used to gain experience in assessment and treatment techniques. Learning experiences will occur in the classroom and field environments and will mirror best practices in mental health. Prerequisites: OTA 1510, OTA 1520. J spring. 2 credit hours.

OTA 1630 Fundamental Skills of OTA II Students will build upon the knowledge gained from OTA 1530 to further develop skills necessary for professional practice. More application and evaluation of the following skills will occur: application of the OT process, treatment planning, activity analysis, computer skills, assessment use and techniques, cultural sensitivity and portfolio development. Prerequisite: OTA 1530. J spring. 1 credit hour.

OTA 1640 Therapeutic Groups Students will demonstrate the knowledge and skills needed to develop and implement therapeutic groups for cohorts of various ages and disabilities. Students will learn about group norms, group characteristics, structure, planning, leadership, and the evaluation of groups in occupational therapy. Prerequisite: OTA 1510. J spring. 2 credit hours.

OTA 1650 Growing Years: Birth-Young Adult Students will learn the major developmental disabilities across the lifespan and how a disability adversely affects the development and engagement in life roles (i.e. student, sibling, friend, etc.). Theories of human development and occupation will be linked to provide a deeper understanding of the acquisition of functional skills and social roles of children birth to 21 years of age. Occupational assessments will be explored and relevant treatment techniques will be reviewed. Learning about treatment delivery methods and client implementations will emphasize the use of therapeutic activities in the natural environments and the family centered models. Prerequisites: OTA 1510 and OTA 1520. J spring. 3 credit hours.

OTA 1700 Fieldwork IA Students will be introduced to and will practice professionalism skills both in the classroom and in various community settings, under the direction of an occupational therapy practitioner. Preparation for and exposure to practice settings and patient interaction are the primary focus of this course. Through reflection and discussion, application of knowledge about the profession will be practiced. HIPAA regulations, mandated reporter requirements, and universal precautions will be addressed. Background checks will be completed in preparation for student experiences working with the pediatric population. Corequisites: OTA 1620 and OTA 1650. J spring. 1 credit hour.

OTA 2520 Adulthood and Aging Students will focus on the role occupational therapy plays in working with older adults and families across the continuum of care. Students will learn the influence the aging process has on physical, sensory, and cognitive functions and their relationship to functional capabilities. Psychosocial aspects of aging and how environment, culture, and values impact lifestyle and occupation will be discussed. Students will share an understanding of theories, issues, and clinical skills specific to practice in geriatric rehabilitation, home health care, long-term care, adult day care programs, and community practice, including wellness and prevention programs. Prerequisite: OTA 1520. J fall. 2 credit hours.

OTA 2540 Fieldwork IB Students will learn how to interact with patients and the healthcare team and will practice and demonstrate the professionalism skills in this course. Through observation and participation in at least two different community settings, while under the supervision of a qualified professional, students begin to assimilate academic coursework, creating an opportunity for professional growth and development. Corequisites: OTA 1610-1620. J fall. 1 credit hour.

OTA 2550 Technology & Environment Applications for Living Students are provided with a basic knowledge of assistive devices and their use with diverse populations in a variety of practice settings. Students will be exposed to both low and high level technologies including the use of adaptive equipment, wheelchairs and positioning devices, computer modifications, and environmental adaptation. This course provides instruction in selection and modification of adaptive equipment and wheelchairs, and documentation. Students will learn how to educate clients on the use of the assistive devices necessary to improve their occupational performance. Prerequisite: OTA 1630. J fall. 3 credit hours.

OTA 2560 OT Intervention Across Lifespan Students will explore theoretical understanding of common frames of reference and translate these into functional treatment. Students will investigate common treatment approaches and uncover interventions that address common motor, sensory, cognitive, and perceptual disorders across the lifespan. Students will develop treatment sessions using the occupational therapy intervention continuum as a framework which supports the tenets of occupation-based practices. Simulation, role, and fictional case studies will be used to stimulate clinical reasoning and problem solving. Prerequisite: successful completion of OTA 1620, 1630, 1640, 1650, and 1700 with a “C” or better. J spring. 1 credit hour.

OTA 2570 Classroom to Clinic-Prep Students will learn skills needed to transition from the classroom to the field. Students will identify Level II fieldwork expectations, explore the supervisory and interdisciplinary team relationships, review professional and ethical behavior, review AOTA, NBCOT and licensure requirements, develop a resume and cover letter, and begin preparation for job searching. Prerequisite: Successful completion of OTA 1620, 1630, 1640, 1650, and 1700 with a
“C” or better. J spring. 2 credit hours.

OTA 2520 Physical Rehabilitation Students will be introduced to concepts and techniques needed to provide care to patients with neurological, orthopedic, and muscular-skeletal conditions. Students will refine transfer and goniometry techniques, while developing skills with manual muscle testing, mobility, and the application of treatment approaches relevant to the physically disabled population. Prerequisite: OTA 1520. J fall. 3 credit hours.

OTA 2700 Fieldwork IIA: Principles/Practicum Students will participate in the first of two level II fieldwork experiences required for the program. An in-depth experience in the delivery of occupational therapy services will be provided in one of a variety of clinical placement sites. This experience shall develop and expand the students’ repertoire of occupational therapy practice in an effort to develop competent, entry level prepared occupational therapy assistants that are skilled in applying the OT process to client care. Students will be mentored through this experience by a qualified OT practitioner. In addition, students will participate in an online portion of the course with student learning focusing on the regulation of the profession of occupational therapy at the local, state, and federal levels. Principles of occupational therapy ethics/dispute resolution systems will be explored and applied to personal and professional conflicts. Students will explore roles and responsibilities of various team members while reflecting on their own responsibilities of working in the profession of occupational therapy. Psychosocial factors that influence engagement in occupation will be integrated into student learning. Level II fieldwork must be completed within 12 months of academic preparation. Prerequisite: Successful completion of all OTA courses with a “C” grade or better. J spring. 6 credit hours.

OTA 2720 Fieldwork IIB: Service Management Students will participate in their second of two level II fieldwork experiences which are required for the program. An in-depth experience in the delivery of occupational therapy services will be provided in one of a variety of clinical placement sites. This experience shall further develop and expand students’ repertoire in order to develop competent, entry level prepared occupational therapy assistants that are skilled in applying the OT process to client care. Students will be mentored through this experience by a qualified OT practitioner. In addition, students will participate in an online component to the course which will challenge students to identify and discuss trends and issues facing the profession in a variety of service contexts. Service delivery concepts will be explored with topical areas to include, but not limited to, management concepts, reimbursement, quality improvement, supervision, and leadership. Level II fieldwork must be completed within 12 months of academic preparation. Minimum of eight weeks of Level II Fieldwork experience. Prerequisite: OTA 2700. J spring. 6 credit hours.

PHILOSOPHY

PHL 1510 Introduction to Philosophy Students will gain an understanding of the Western philosophical tradition and the influences of philosophical thinking. Students are introduced to major areas of philosophy and explore the relationships between concepts in metaphysics, epistemology, ethics, social philosophy, and aesthetics. Eligibility: ENG 1530: must meet minimum college level reading score: Accuplacer 80+. J fall, spring. C fall, spring. 3 credit hours.

PHL 1570 Critical Reasoning Students will identify and criticize arguments and will acquire an understanding of basic concepts in semantics and logical analysis. Students will distinguish sound from unsound arguments and identify common fallacies. Prerequisite: Must meet minimum college level reading score: Accuplacer 80+. J occasionally; C occasionally. 3 credit hours.

PHL 2550 Philosophy of Religion Students will acquire an understanding of basic problems concerning the existence and nature of the divine. Students will also identify different perspectives on the nature of religious experience and its relationship to other areas of philosophy such as ethics and political philosophy. Prerequisite: ENG 1530. J occasionally; C occasionally. 3 credit hours.

PHL 2570 Environmental Issues/Ethics Students will gain critical understanding of the impacts of human activities as they affect the earth and the web of life it sustains from both ethical and scientific perspectives. Contemporary environmental issues such as methods and limitations of science and moral reasoning, global warming, ozone depletion, deforestation, animal rights, population growth, waste disposal, biodiversity, and species extinction will be discussed. This team-taught course is offered under biology for humanities credit (PHL 2570). Prerequisites: BIO 1570 and ENG 1530. J occasionally. 3 credit hours.

PHL 2610 Introduction to Ethical Theory Students will acquire an understanding of basic ethical theories as expressed by major ethicists. Students will develop an appreciation of the complexities and implications of basic moral concepts such as responsibility, duty, character, and the good life. Prerequisite: ENG 1530. J occasionally; C occasionally. 3 credit hours.

PHL 2630 Contemporary Moral Problems Students will analyze and acquire an understanding of contemporary moral issues and problems. Students will learn how moral problems are approached differently by diverse ethical perspectives such as utilitarian-ism and deontological theorists. Students will develop a coherent moral point of view which they will use to approach issues such as privacy, abortion, suicide, euthanasia, war, civil disobedience, and pornography. Prerequisite: ENG 1530. J occasionally; C occasionally. 3 credit hours.

PHL 2650 Introduction to Formal Logic Students will be introduced to modern systems of formal logic. Students will determine the formal validity of arguments in propositional and quantifier logic, make deductions in both systems, and perform translations of ordinary language arguments into formal language. Prerequisite: ENG 1530. J occasionally. C occasionally. 3 credit hours.

PHL 2720 Biomedical Ethics Students will identify key problems confronted by health and medical care professionals. Students will articulate a moral point of view with which they will address problems such as informed consent, patient rights, confidentiality, euthanasia, genetic testing, and medical resource allocation. Prerequisite: ENG 1530. J occasionally. 3 credit hours.

PHYSICAL EDUCATION

PHE 1480 Personal Trainer Certification Students gain theoretical knowledge and practical skills in preparation for a national certification exam in personal training. Topics include guidelines for instructor safe, effective, and purposeful exercise, essentials of the client-trainer relationship, conducting health and fitness assessments, and designing and implementing appropriate exercise programming. Prerequisites: Eligibility: ENG 1510 and reading score 80+. J spring, fall. 3 credit hours.

PHE 1500 Care & Prevention of Athletic Injuries Students will be introduced to methods of conditioning, prevention, recognition, treatment, and rehabilitation of athletic injuries, administrative procedures, and other major concerns conducted in an athletic training setting. The application of skills and knowledge in the clinical experience in the athletic training room will be emphasized. Corequisites: BIO 2510 recommended, Eligibility: ENG 0430. J fall, spring. 3 credit hours.

PHE 1501-1508 Athletic Participation: Freshman Student athletes, who successfully complete participation in an NJCAA sport season, will learn about the competitive fundamentals of participation in an NJCAA certified sport. Students will be involved in a variety of learning experiences in the classroom, on the practice field, and during athletic contests. Through hand-on applications, students involved in team sports will learn group dynamics, problem solving, and time management skills. The course of study will focus on physical training and statistical and skill analysis which is sport specific. No prerequisites. J occasionally; C occasionally. 1 credit hour.

PHE 1510 Introduction to Fitness Students will explore the basic areas of health related fitness, body composition, cardiovascular fitness, flexibility, muscular endurance, and strength conditioning. Exposes students to each of the components of fitness through a combination of lectures and hands-on experiences. Students will identify their fitness status and develop, together with the instructor, an individualized program. No prerequisites. J occasionally. 2 credit hours.

PHE 1520 Zumba Students will learn basic principles of aerobic, interval, and resistance training to maximize caloric output, cardiovascular benefits, and total body toning. This class format combines fast and slow rhythms that tone and sculpt the body in an aerobic/fitness fashion to achieve a unique blended balance of cardio and muscle-toning benefits. Students will be introduced to basic anatomy, kinesiology, and exercise physiology. No prerequisites. J fall, spring. 2 credit hours.

PHE 1530 Fundamentals of Movement Students will gain a better understanding of physical and recreational movements of the human body. The course introduces kinesiology for muscle function, flexibility, and endurance. Students will practice proper alignment, balance, and flexibility. This course will include a series of drills to increase coordination and gain personal range of motion while gaining muscle strength and control. Corequisite: ENG 1510. J occasionally. 2 credit hours.
PHE 1540 Core Concepts Students will learn an easy-to-follow workout that increases strength as an alternative to a weight room workout. It will address core strength, muscle endurance, range of motion and joint stability. Students who complete a core-training workout regularly will help reduce the risk of injury and enhance athletic performance in most sports. The class will include the use of floor work, hand weights, stability balls, medicine balls, and rubber tubing, along with other equipment. No prerequisites. J spring. 2 credit hours.

PHE 1550 Promotion in Sport Students will be introduced to the engaging field of sport promotion and to aspects of successful promotions with topics not limited to foundation of sport promotions. Marketing, promotional agendas, structuring and implementing the 7-step incentive plan and other topics leading to effective promotions within the sports industry are explored. Corerequisite: ENG 1510 or eligibility: ENG 1530. J occasionally.

PHE 1560 Yoga I: Yoga/Relaxation Techniques Students will learn and demonstrate an understanding of the art of Hatha yoga and relaxation techniques. Students will learn how to relieve stress and emotional tension through the systematic training of guided imagery, diaphragmatic breathing, and breath awareness. The course includes lessons on yoga philosophy, postures, diet, meditation, and relaxation techniques. Hatha yoga is a human science that takes into consideration bodily pains, poor posture, faulty breathing, and incorrect walking, and teaches greater awareness of the body as a whole without separating it from the mind and the influences of all senses. Eligibility: ENG 0430. J fall, spring; C occasionally. 2 credit hours.

PHE 1590 Principles of Fitness & Wellness Students will be introduced to the basic concepts and benefits of physical activity, adequate nutrition, and positive lifetime patterns as a means to promote better health. Combines a series of lectures and labs to disseminate practical information that will enable students to make judgments about their lifestyle choices. Eligibility: ENG 0430. J occasionally. 3 credit hours.

PHE 1610 Introduction to Aerobic Exercise Students will perform flexibility, muscular strength, muscular endurance, and cardiovascular exercises continuously for a 30-minute period accompanied by popular music. Students are instructed in proper pulse monitoring techniques and are responsible for maintaining heart rates within their target heart rate zone. Exercise sessions will include a warm-up period and cool-down periods. No prerequisites. J fall, spring. 2 credit hours.

PHE 1620 Fitness Concepts & Applications introduces the new concept of flex-time physical education which allows students to enroll in either a weight training or cardiovascular conditioning program without traditional day and time schedule restrictions. Topics will include cardiovascular conditions, weight training, injury prevention, nutrition, weight control, body composition, lower back care, and relaxation techniques. No prerequisites. J occasionally; C occasionally. 2 credit hours.

PHE 1630 Traditional Karate Students will demonstrate the basic skills and techniques of preliminary exercises, sparring exercises, punches, blocks, and stances. Students will also learn karate history, methods, theories, and promotion systems. Eligibility: ENG 0430. J fall, spring. 2 credit hours.

PHE 1640 Introduction to Pilates Students will learn about a total body conditioning exercise method which combines flexibility and strength. The purpose of Pilates is to develop mind and body uniformity; provide balance, flexibility, and strength; improve posture; and strengthen the abdomen, lower back, and buttocks. No prerequisites. J fall, spring. 2 credit hours.

PHE 1650 Fundamental of Basketball Students will learn offensive and defensive fundamentals through drill work with an emphasis on shooting the basketball. The course is taught in a team type of atmosphere and structured to meet the needs and capabilities of the competitive as well as the beginning student. No prerequisites. J fall, spring. 2 credit hours.

PHE 1660 Introduction to Life Fitness Students will be introduced to the Life Fitness system of strength equipment. The course will introduce students to the Life Fitness philosophy of strength development, concepts of form and individual strength program development. Eligibility: ENG 0430. J fall, spring. 2 credit hours.

PHE 1670 Introduction to Physical Education Through class discussions, research assignments, and “in the field” observations students will develop an understanding of the various career opportunities in the field of physical education. The course is primarily suited for students pursuing a career in physical education or education. Eligibility: ENG 0430. J fall, spring. 3 credit hours.

PHE 1680 Beginning Weight Training Students will use universal and free weights to develop strength and muscular endurance. The course will introduce concepts of form, repetition sequences, and provide a basic understanding of muscle development and training techniques. No prerequisites. J fall, spring. 2 credit hours.

PHE 1690 Water Aerobics Students will perform uniquely designed exercises for specific muscle groups in the water. Students will become more fit through an exercise form that features repetition and resistance combined with normal body movements. Music and “in the field” observations will be provided instruction in beginning swimming basics. Students will demonstrate skill in a drownproofing, elementary backstroke, sidestroke, crawlstroke, trudgen stroke, and breaststroke. Improvement in swimming ability and cardiovascular health for all levels of swimmers are the main course objectives. No prerequisites. J occasionally; C occasionally. 2 credit hours.

PHE 1700 Specific Sport Training Students will develop and implement a training program that improves their performance in a specific sport or activity. The course will emphasize many training techniques and equipment that students will use to coordinate a comprehensive physical fitness regimen. Students will be able to chart progress toward personal and individual goals. Prerequisite: PHE 1660 or PHE 1680. J fall, spring. 2 credit hours.

PHE 1710 Individualized Swimming Students will be provided instruction in beginning swimming basics. Students will demonstrate skill in a drownproofing, elementary backstroke, sidestroke, crawlstroke, trudgen stroke, and breaststroke. Improvement in swimming ability and cardiovascular health for all levels of swimmers are the main course objectives. No prerequisites. J occasionally; C occasionally. 2 credit hours.

PHE 1720 Aerobic Conditioning I After testing, students will be issued individualized programs to follow for the semester. Students will consider activities such as walking, jogging, cycling, swimming, racquetball, rope skipping, and stair climbing when building an improvement program. No prerequisites. J fall. 2 credit hours.

PHE 1731 Lifeguarding/CPR/AED Students will learn the skills of preventive lifeguarding, water rescue techniques, and aquatic facility management for pools and waterfronts. American Red Cross certification in CPR for the professional rescuer, lifeguarding community first aid, automatic external defibrillator, and waterfront module may be used upon successful course completion. Students will learn to give immediate care to an individual who has been injured, has suddenly taken ill, or has a cardiac emergency. Prerequisite: swim skills test. J fall, spring. 3 credit hours.

PHE 1740 Volleyball/Softball Students will demonstrate the fundamental skills and strategies of both activities. Students will also develop and demonstrate officiating skills for both sports. No prerequisites. J occasionally. 2 credit hours.

PHE 1750 Cross-Country Skiing Students will demonstrate the basic skills used in cross-country skiing. Skills include, but will not be limited to, diagonal stride, star turn, reverse star turn, kick turn, stepping turn, herringbone, and sidestep. Field trips will be made to local cross-country ski areas. No prerequisites. J occasionally. 2 credit hours.

PHE 1760 Racquetball/Tennis Students will be introduced to the basic skills, rules of play, and strategies of both sports. Skill development in these racquet sports is emphasized. No prerequisites. J occasionally. 2 credit hours.

PHE 1770 Self-Defense: Coed Students will demonstrate the use of effective physical actions when no other alternative is available. Students will also demonstrate the ability to minimize the possibilities of assault and physical confrontation. The elements of karate, aikido, judo, and other fighting martial arts will be introduced. Learning how not to be a victim is the main course objective. No prerequisites. J fall, spring. 2 credit hours.

PHE 1780 Walking for Health Students will be introduced to topics that educate and encourage students to begin and maintain a safe and effective walking program. The course will encompass concepts and activities that will advance the understanding of the relationship between lifelong physical activities and overall well-being. No prerequisites. J fall, spring. 2 credit hours.

PHE 1790 Cardio Kickboxing Cardio kickboxing is an exercise program comprised of general conditioning exercises for body conditioning and fitness. The course will cover kickboxing moves in an aerobic setting. Students will learn to throw basic kicks and punches with proper form and technique. A warm-up, aerobic portion, drills, cool down, and stretch and relaxation are included in the class. Eligibility: ENG 1530. J occasionally. 2 credit hours.

PHE 1800 Running for Health and Fitness Students will explore the aspects and benefits of running in relation to overall achievement of personal wellness. The course will help students gain a greater awareness of their potential by developing a higher level of physical fitness and
PHE 1810 Baseball Fundamentals Students will demonstrate rules, knowledge, and basic skills of the game including grip, address, stance, posture, and swing. No prerequisites. J fall, spring. 2 credit hours.

PHE 1820 CPR for the Professional Rescuer Students will learn the skills needed to respond appropriately to breathing and cardiac emergencies according to American Red Cross criteria for the professional rescuer, including use of automated external defibrillation (AED) to care for victims of cardiac arrest. No prerequisites. J occasionally. 1 credit hour.

PHE 1830 Beginning Golf Students will learn the basic fundamentals, rules, and strategies of both sports. No prerequisites. J fall, spring. 2 credit hours.

PHE 1840 Self-Defense for Women This course prepares women to minimize the possibilities of criminal assaults and confrontations. Students will learn to use effective physical actions when no other alternative is available. Learning how not to be a crime victim is the main course objective. Elements of karate, aikido, judo, and other fighting martial arts are utilized. No prerequisites. J fall, spring. 2 credit hours.

PHE 1850 Bowling/Golf Students will demonstrate the fundamental skills, rules, and strategies of both sports. No prerequisites. J occasionally. 2 credit hours.

PHE 1860 Archery/foil Fencing Students will learn the basic fundamentals, rules, and strategies of each activity. No prerequisites. J occasionally. 2 credit hours.

PHE 1870 Sport Psychology Students will be introduced to basic aspects of performance in sport and athletic competition. Primary psychological and physiological tenants will be major topics discussed and related to enhancement of athletic performance. There will be practical skills and knowledge development as well as discussion of career opportunities and the future direction of sport psychology. Prerequisite: PST 1510. J fall. 3 credit hours.

PHE 1880 Sport Nutrition Students will develop a thorough understanding of the role nutrition plays in enhancing one’s fitness and sport performance. The effect nutrition has on health promotion and disease prevention is emphasized through current research and practical activities. Corequisite: ENG 1530 or Eligibility: ENG 1510: must meet minimum college level reading score: Accuplacer 80+. J occasionally. 2 credit hours.

PHE 1890 Introduction to Boot Camp Students will be involved in an intense basic aerobic workout without choreography or dance. The course focuses on endurance, strength, flexibility, and plyometric training. Circuit training, interval training, and endurance and resistance training are emphasized. Prerequisite: Must meet minimum college level reading score: Accuplacer 80+. J spring. 2 credit hours.

PHE 2010 Physical Education Internship Students receive on-the-job experience consisting of 135 hours of supervised activity in a local educational, recreational, or health setting. Students work in conjunction with a faculty mentor and a supervisor at the job site. All guidelines in the original college internship policy will be followed. Prerequisites: Must complete either sophomore standing or one semester completion in an appropriate certificate program. J occasionally; C occasionally. 3 credit hours.

PHE 2050 Athletic Training Internship Students will apply knowledge of athletic training skills in a hands-on experience consisting of 180 hours. Each student will be assigned to work with an athletic team under the supervision of the certified athletic trainer for the semester, attending practices and games. Students will learn about conditioning, injury evaluation, treatment, preventive techniques, and rehabilitation. Prerequisites: PHE 1500 and CPR and first aid certification; Corequisite: ENG 1530. Eligibility: C+ or better in PHE 1500. J occasionally; C occasionally. 4 credit hours.

PHE 2060 Intramural Assistant Internship Students will receive on the job experience working in the intramural department. 2-3 credit hours.

PHE 2460 Physical Education for Law Enforcement Designed specifically for the basic recruit school trainee, this course emphasizes weight training and fitness for life. Students are required to complete successfully various exercises which include timed running, sit-ups, push-ups, swimming, and maintaining a measured program throughout the semester. Also studies the need for fitness and the ideal of daily exercise. Corequisites: CRI 2250, CRI 2380, CRI 2470, and compliance with NYS regulations. J fall. 3 credit hours.

PHE 2470 Defensive Tactics/Law Enforcement Students are given the knowledge, skills, and abilities to defend themselves during physical altercations while staying within the proper force/level of resistance matrix. Defensive tactics, mechanics of an arrest, transportation of prisoners, and searches are emphasized. Demonstration of learned skills by students is required. Eligibility: Student must be current Chautauqua County Sheriff’s Academy recruit. New York state police/peace officer may be accepted with approval of the academy director. J occasionally. 2 credit hours.

PHE 2501-2508 Athletic Participation: Sophomore Students, who successfully complete participation in a NJCAA sport season, will learn about the competitive fundamentals of participation in an NJCAA certified sport. Students will be involved in a variety of learning experiences in the classroom, on the practice field, and during athletic contests. Through hand-on applications, students involved in team sports will learn group dynamics, problem solving, and time management skills. The course of study will focus on physical training and statistical and skill analysis which is sport specific. No prerequisites. J occasionally; C occasionally. 1 credit hour.

PHE 2590 Fitness Seminar Students will learn how to set up a safe exercise program for their particular needs. Students will also learn various ways to exercise and methods best suited to specific results. Students will develop an understanding of how the body responds to exercise, diet, stress, and other influences. No prerequisites. J occasionally. 3 credit hours.

PHYSICS

PHY 1250 Technical Physics I Students will use various laboratory experiments to learn the fundamental phenomena, principles, and laws of physics. They will study motion, Newton’s Laws, conceptual viewpoint where verbal reasoning is emphasized and a minimum of algebra is used. Motion, heat, forces, light, energy, electricity, and magnetism are studied with the underlying theme being energy transfer. Each topic will emphasize hands-on investigations and lab experiments. Prerequisite: PHY 1250. J spring. 4 credit hours.

PHY 1260 Technical Physics II Students will continue their investigation into physical phenomena by focusing on electric and magnetic integrations and the structure of matter. They will study electrostatics, DC circuits, specific electrical components (such as DC motors and generators), and magnetism. Students will also study applications of these concepts in various fields of manufacturing. Prerequisite: PHY 1250. J spring. 4 credit hours.

PHY 1510 Understanding Physics Students in this one-semester Introductory course will learn how physics is the foundation for all other sciences. Students will look at physics from a conceptual viewpoint where verbal reasoning is emphasized and a minimum of algebra is used. Motion, heat, forces, light, energy, electricity, and magnetism are studied with the underlying theme being energy transfer. Each topic will emphasize hands-on investigations and lab experiences. Prerequisite: MAT 0500; must meet minimum college level reading score: Accuplacer 80+. J spring. 4 credit hours.

PHY 1610 General Physics I Students will use computer-based sensors and probes to learn the fundamental phenomena, principles, and laws of physics. They will investigate Newtonian mechanics, rotational motion, simple harmonic oscillators and wave motion. Students will become aware of physics in everything they do and see. A tutorial session is available and strongly recommended. Prerequisite: high school physics or PHY 1510. Corequisite: MAT 1600; Eligibility: ENG 1530. J fall; C occasionally. 4 credit hours.

PHY 1620 General Physics II Students will continue their investigative approach to understanding the principles of physics. They will further their comprehension of wave phenomena, including sound waves, and will study electricity and magnetism, light and optics, and selected topics in modern physics such as relativity. A tutorial session is available and strongly recommended. Prerequisites: PHY 1610 and MAT 1600. J spring; C occasionally. 4 credit hours.

PHY 1710 Analytical Physics I Students will use computer-based laboratory techniques to learn about Newtonian mechanics. They will learn good problem-solving strategies as well as good laboratory practices. They will use vector analysis and calculus to study linear kinematics, dynamics, and conservation laws for momentum and energy. Students will investigate rotating systems and rigid bodies, including solving problems which use angular momentum, torque, center of mass and moment of inertia concepts. They will also explore simple harmonic oscillators and wave motion. This is the first semester in a three semester sequence of physics courses designed for students planning to major in physics, chemistry, mathematics, engi...
neering science, or computer science. Students will begin to become aware of physics in everything they do and see. A tutorial session is available and strongly recommended. Eligibility: ENG 1530; Prerequisite: MAT 1710 and high school physics or PHY 1510 or PHY 1610. J spring. 4 credit hours.

PHY 2010-2020 Physics Internship Students will receive on-the-job experience consisting of 135 hours of supervised activity in a local business or industry. Students will work in conjunction with a faculty mentor and a supervisor at the job site. All guidelines and regulations of the original college internship policy will be followed. Prerequisite: at least a 2.0 GPA and either sophomore standing or one semester completion in an appropriate certificate program. J occasionally. 3 credit hours.

PHY 2510 Thermodynamics Students will continue investigations into mechanics with extensive study in thermodynamic systems. Students will analyze and solve problems involving fluid dynamics, energy conservation, and thermodynamic processes. Prerequisite: PHY 1610 or 1710 and MAT 1720. J occasionally. 4 credit hours.

PHY 2710 Analytical Physics II Students continue their investigation into physical phenomenon by focusing on electric and magnetic interactions and the structure of matter. Students will develop an understanding of Maxwell’s equations from a detailed treatment of the laws of Coulomb, Ampere, and Faraday. They will use an investigative approach to get an intuitive understanding of electric and magnetic fields and their interactions with charged matter. Students will use vector calculus concepts such as line and surface integrals and will become familiar with the operation of meters, oscilloscopes, and solid state devices. Students will also study geometric and physical optics. The course will end with perplexing problems of noncovariance of the electromagnetic theory of Maxwell. The answers to these questions lead to the study of modern physics topics. Prerequisite: PHY 1710; Corequisite: MAT 2680. J fall. 4 credit hours.

PHY 2720 Modern Physics Students will study three major themes: the development of the theory of relativity; the old quantum theory of Planck, Einstein, Bohr, and Sommerfeld; and the new quantum physics of Schroedinger, Heisenberg, Dirac, and Pauli. Students’ interest in relativity theory is motivated by the noncovariance problems discovered in the electromagnetic theory of Maxwell and Lorentz and by the null result of the Michelson-Morley experiment. The early quantum theory is developed from Planck’s analysis of the problem of blackbody radiation and from Einstein’s study of the photoelectric effect. This is followed by a careful study of the Schroedinger theory of quantum mechanics and solutions to the Schroedinger equation. In the laboratory students will repeat a number of historical experiments including the determination of the speed of light, the charge and charge to mass ratio of the electron, the Planck constant, and the Rydberg constant. Students may also perform the Franck-Hertz experiment. The last part of the semester in the modern lab is devoted to a special, student-designed project. Prerequisite: PHY 2710; Corequisite: MAT 2680. J spring. 4 credit hours.

POLITICAL SCIENCE

POL 1510 American Politics Students will study and examine national, state, and local government and politics with an emphasis on national public policy making. Students will learn the different types of democracy, the varieties of political culture and ideology, the role and history of U.S. political parties, the structure of the U.S. constitution, including federalism, and the functioning of the political economy. Eligibility: ENG 1510; must meet minimum college level reading score: Accuplacer 80+. J fall, spring; C spring. 3 credit hours.

POL 1520 World Politics Students will study world politics in the post-cold war era by focusing on a variety of political “actors” including, but not limited to, nation-states, non-governmental organizations, and intergovernmental organizations including transnational organizations such as the United Nations and supranational organizations such as the European Union. Students develop an understanding of idealism and realism as the two major theories for organizing the study of world politics. Eligibility: ENG 1510; must meet minimum college level reading score: Accuplacer 80+. J occasionally. 3 credit hours.

POL 1550 Introduction to Labor Studies In this survey course, students examine labor history and politics, and the evolution of philosophy, and practice of collective bargaining. Social psychological principles for collective leadership, team-building, and organization are investigated. Eligibility: ENG 1510; must meet minimum college level reading score: Accuplacer 80+. J occasionally. 3 credit hours.

POL 2530 Law & Civil Rights Using the case method, students will demonstrate how to “brief” significant cases in First Amendment law involving freedom of religion, freedom of speech, freedom of press, and freedom of association. Students will also learn the difference between natural rights and citizenship rights. Eligibility: ENG 1530. J fall, spring. 3 credit hours.

POL 2570 State & Local Government Students will examine the historical development and political roles of state, county, city, town, and village government with an emphasis on New York State. Students will complete the course by participating in a simulation of city government. Eligibility: ENG 1530. J occasionally. 3 credit hours.

POL 2800 Government Internship Students will work a minimum of 150 hours in a governmental agency at the local, state, or national level learning how government in the “real” world works. Students will acquire skills necessary to attain jobs in government. Students find their own internships with the guidance of the internship coordinator. Eligibility: ENG 1530. J occasionally. 3 credit hours.

POL 2860 European Union Students will examine the history, politics, and economics of the European Union. Students will complete the course by participating in a simulation of the decision-making bodies (European parliament, European Council, Council of Ministers, Economic and Social Committee, etc.). In odd-numbered years the simulation is held in March or April at SUNY Brockport and in even-numbered years the simulation is held in January in Belgium. Prerequisite: permission of instructor; Eligibility: ENG 1530. J occasionally. 3 credit hours.

PUBLIC SAFETY TECHNOLOGY

PST 1020 Introduction to Fire Protection Technology This course provides basic information that enables the student to comprehend and evaluate good fire protection practices, including fire prevention and extinguishment and the application of scientific principles to the studies of fire protection technology and development of career positions. Related occupations that draw from the fire sciences include sprinkler protection engineer, fire detection and alarm system design, manufacture and sales, fire safety protection engineer, fire investigator, and firefighter. No prerequisites. J occasionally. 3 credit hours.

PST 1030 Legal Issues for Volunteer Fire Service This course introduces many of the legal concepts and issues that affect the volunteer fire service. Topics include an overview of the legal system, structure of and differences in fire departments and fire districts, organizational and membership issues, firematic training and operational liability issues, PESH and OSHA compliance, apparatus and motor vehicle operations, legal issues in emergency medical service training and delivery of services, youth programs, role of fire department legal counsel and what happens when litigation strikes. Classroom work is combined with problem solving exercises. Prerequisite: student must be a member of a certified professional/volunteer fire department, law enforcement agency or by permission of program director. Successful completion of Firefighter I or equivalent is required. J occasionally. 1 credit hour.

PST 1040 Conducting Live Fire Training Evolutions This course provides an in-depth analysis into the requirements outlined in NFPA 1403 as they pertain to conducting a live fire operation. This course examines live fire evolutions within traditional training centers as well as gas fired training buildings, vehicle fires, exterior props, and exterior Class B fires. This course is particularly beneficial to fire command staff who conduct live fire training drills. Special attention will be placed on regulation and legal issues surrounding these types of trainings. Prerequisite: student must be a member of a certified professional/volunteer fire department, law enforcement agency, or by permission of program director. Successful completion of Firefighter I or equivalent is required. J occasionally. 5 credit hours.

PST 1100 Scene Support Operations This course is intended for fire service personnel who do not wish to seek Firefighter I or Interior Firefighter certification, but wish to assist in exterior operations. This course will examine support fire activities which are crucial to successful firefighting operations. Topics such as fire, tool and scene safety, fire behavior, and incident command system and truck company operations as related to exterior operations are covered. Students will examine accepted procedures used in fire investigation, prevention, and suppression. Prerequisite: student must be a member of a certified professional/volunteer fire department, law enforcement agency, or by permission of program director. J occasionally. 1.5 credit hours.

PST 1120 Principles of Building Construction: Combustible This course introduces basic construction principles and the special characteristics
of wood and ordinary construction techniques as they concern the fire service. This course places emphasis on the student’s ability to ensure safety by recognizing common causes and indicators of building failure and other hazards. Prerequisite: student must be a member of a certified professional/volunteer fire department, law enforcement agency, or by permission of program director. J occasionally. 1 credit hour.

PST 1130 Principles of Building Construction: Noncombustible This course addresses the unique characteristics of noncombustibles and fire resistive construction. This course places emphasis on improving the student’s ability to ensure firefighter safety by recognizing common causes and indicators of building failure and other hazards within burning structures. Students will have a better understanding of how to predict the overall reaction of a building to fire. Prerequisite: student must be a member of a certified professional/volunteer fire department, law enforcement agency, or by permission of program director. Successful completion of Scene Support Operations or Firefighter I or equivalent is required for attendance. 1 credit hour.

PST 1140 Fire Behavior/Arson Awareness This course provides a basic understanding of fire behavior. The course examines the basic concepts of fire chemistry and normal fire behavior and accepted procedures used in determining the cause of fires. Issues relating to scene preservation and fire patterns will also be discussed. Prerequisite: student must be a member of a certified professional/volunteer fire department, law enforcement agency, or by permission of program director. J occasionally. .5 credit hours.

PST 1200 Incident Command System (I-200) This course provides response managers with the basic skills necessary to organize activities and conduct operations within the incident command system. This course examines the complexities of multiagency and multifunctional operations and how the incident command system can manage such complex issues. This course is a standardized component of the National Training Curriculum and is the prerequisite to the Intermediate ICS-300 and the Advanced ICS-400 courses. Prerequisite: student must be a member of a certified professional/volunteer fire department, law enforcement agency, or by permission of program director. J occasionally. 1 credit hour.

PST 1300 Introduction to Fire Officer This course is the first in the series addressing the command and management within the contemporary fire service. This course gives prospective first line officers the skills necessary to effectively supervise fire companies. Special attention is given to the role of the company officer and the transition a first line officer makes from firefighter to supervisor. Prerequisite: student must be a member of a certified professional/volunteer fire department, law enforcement agency, or by permission of program director. Successful completion of Firefighter I or its equivalent is required. J occasionally. 2 credit hours.

PST 1400 Incidence Safety Officer This course examines the safety officer’s role at emergency response incidents. The primary focus is on developing decision making skills through the recognition of cues that affect personal safety. This course is based on incident specific, scene oriented training concepts designed to teach what a safety officer at an incident needs to know. This course also examines the safety officer’s role within the Incident Command System. Prerequisite: student must be a member of a certified professional/volunteer fire department, law enforcement agency, or by permission of program director. J occasionally. 1 credit hour.

PST 1500 Hazardous Materials First Responders Operation This course prepares emergency responders to effectively and safely respond to and stabilize hazardous materials incidents from a defensive position. This course meets the training requirements of OSHA 1910.120 both at the awareness and operations levels. It includes recognizing and identifying hazardous materials, classifications and the hazards of each class, transport vehicles and associated hazards, planning for incidents, personal protective equipment and its limitations, confinement methods and decontamination procedures. Prerequisite: student must be a member of a certified professional/volunteer fire department, law enforcement agency, or by permission of program director. J occasionally. 1 credit hour.

PST 1700 Basic Fire Police This course provides an overview of the duties and responsibilities of fire police officers. This course meets the requirements outlined for all fire police by the General Municipal Law 209-c. Topics include defining and interpreting terms, oath of office, peace officer status, maintaining scene safety, traffic control, and legal issues. Prerequisite: student must be a member of a certified professional/volunteer fire department, law enforcement agency, or by permission of program director. Successful completion of Firefighter I or equivalent or Scene Support Operations is required. J occasionally. 5 credit hours.

PST 1800 Advanced Fire Police The advanced fire police course is designed to give a volunteer fire police officer a solid understanding of the laws as they pertain to this position. NYS penal and criminal procedure laws, NYS article 35 use of force and deadly physical force, and NYS criminal procedure laws regarding the right to take custody of firearms are studied. Must be a member of a municipal volunteer fire department and completed the basic fire police training (PST 1700). 5 credit hours.

PST 2000 Firefighter I This course offers the student a comprehensive study in the duties and responsibilities of an entry-level firefighter. This course trains the student as an interior structural firefighter and responsibilities pertaining to in accordance with current regulations. Prerequisite: student must be a member of a certified professional/volunteer fire department, law enforcement agency, or by permission of program director. J occasionally. 6 credit hours.

PST 2100 Firefighter II This course offers the student a continuation in training regarding a firefighter’s responsibilities in fire and rescue operations. The objective of this course is to give the student the ability to act as a team leader within the emergency and operate without direct supervision. Prerequisite: student must be a member of a certified professional/volunteer fire department, law enforcement agency, or by permission of program director. J occasionally. 2 credit hours.

PST 2110 Mask Confidence This course provides solid indoctrination into Self Contained Breathing Apparatus (SCBA) and its use. Students will have extensive hands-on training in relation to donning these essential pieces of equipment. Topics include safety issues, search procedures, time computation, air supply, and emergency procedures. Prerequisite: student must be a member of a certified professional/volunteer fire department, law enforcement agency, or by permission of program director. SCBA Certified and physically capable of working with SCBA. Possess current medical clearance for SCBA use. Firefighter I, or its equivalent, must be completed prior to taking this course. J occasionally. 1 credit hour.

PST 2120 Confined Space Awareness/Safety This course provides identification and awareness information to allow students to make reasonable judgments in confined space rescue situations. This course examines how to identify potential hazards and preparing rescue plans. Air quality and monitoring issues will be examined as well as regulations. Prerequisite: student must be a member of a certified professional/volunteer fire department, law enforcement agency, or by permission of program director. Successful completion of Scene Support Operations or Firefighter I or equivalent is required for attendance. J occasionally. 5 credit hours.

PST 2150 Firefighter Assist/Search Team This course offers the student a comprehensive study in the duties and responsibilities of a search and rescue team. The FAST member will identify the tools, staffing requirements, and rescue plan for missing, lost, or trapped firefighters. The course trains the student to conduct several different types of search and rescues techniques. Prerequisite: student must be a member of a certified professional/volunteer fire department, law enforcement agency, or by permission of program director. Medical clearance for SCBA use is mandated. Successful completion of Firefighter I course is required. J occasionally. 1 credit hour.

PST 2170 Firefighter Survival Course This course provides instruction in self rescue and trapped firefighter techniques used in modern fire service. This course examines how to identify potential events which may cause firefighter disorientation and/or entrapment. Skills in rescue operations and safety techniques are stressed. This course requires students to perform a number of practical evolutions wearing self-contained breathing apparatus. Prerequisite: student must be a member of a certified professional/volunteer fire department, law enforcement agency, or by permission of program director. Successful completion of Firefighter I or equivalent and medical clearance is required for attendance. J occasionally. 1 credit hour.

PST 2200 Incident Command System (I-300) This course provides more advanced training for response managers in regards to the skills necessary to organize activities and conduct operations within the incident command system. This course examines the complexities of multi agency and multifunctional operations and how the incident command system can manage such complex issues. Special attention is given to organization and staffing, incident resource management and incident event planning. This course is a standardized component of the National Training Curriculum.
and is the prerequisite of the advanced ICS-400 courses. Prerequisite: student must be a member of a certified professional/volunteer fire department, law enforcement agency, or by permission of program director. Successful completion of both ICS 100 & ICS 200 courses are required for attendance. J occasionally. 1.5 credit hours.

PST 2300 Fire Officer I This course is the second in the series addressing command and management of fire services. This course meets the requirements of NFPA Standard 1021 and is intended to build on the skills needed to transition from a firefighter to a supervisor. Prerequisite: student must be a member of a certified professional/volunteer fire department, law enforcement agency, or by permission of program director. Successful completion of Introduction to Fire Officer is required for attendance. J occasionally. 1.5 credit hours.

PST 2350 Hazardous Materials Technician This course is an in-depth examination into hazardous materials and the fire service response to incidents. This course prepares emergency personnel to effectively and safely respond to and stabilize hazardous material incidents in an offensive manner. This course meets the requirements found in OSHA 29, CFR 1910.120. Prerequisite: student must be a member of a certified professional/volunteer fire department, law enforcement agency, or by permission of program director. J occasionally. 3 credit hours.

PST 2500 Hazardous Material Safety Officer This course examines the safety officer’s role at emergency response incidents that involve hazardous materials as outlined in OSHA 29, CFR 1910.120. The course also examines the incident command system as it relates to hazardous materials and the safety considerations of responders. Prerequisite: student must be a member of a certified professional/volunteer fire department, law enforcement agency, or by permission of program director. J occasionally. 1.5 credit hours.

PST 2510 Apparatus Operator-Emergency Vehicle Operations This course is based upon NFPA 1002 chapter 2 as it relates to fire apparatus driver operations. The primary focus is on the responsibilities and duties of the fire service engine/truck operator. Special attention is given to safety issues related to the operation of emergency vehicles. Specialized training consists of instruction in such areas as: legal issues, theory and principles of defensive driving, vehicle inspections, and state and local regulations. A practical evolution is part of this course. Prerequisite: student must be a member of a certified professional/volunteer fire department, law enforcement agency, or permission of program director. Successful completion of Scene Support Operations or Firefighter I or equivalent and a valid driver’s license is required for attendance. J occasionally. 1 credit hour.

PST 2520 Apparatus Operator-Pump This course is based upon NFPA 1002 as it relates to pump operations. The primary focus is on the responsibilities and duties of the fire service pump operator. Specialized training consists of hydraulics and friction loss theories and calculations, pump control and accessories, stream production, relay pumping and pumping from draft. Prerequisite: student must be a member of a certified professional/volunteer fire department, law enforcement agency, or permission of program director. Successful completion of Scene Support Operations or Firefighter I or equivalent and Apparatus Operator and Emergency Vehicle Operations and a valid driver’s license is required for attendance. J occasionally. 1.5 credit hours.

PST 2530 Apparatus Operator-Aerial Devices This course is based upon NFPA 1002 as it relates to aerial device operations. The course primary focus is on the responsibilities and duties of the fire service aerial engine operator. Specialized training consist of instruction in the aerial device and their functions and limitations. Prerequisite: student must be a member of a certified professional/volunteer fire department, law enforcement agency, or by permission of program director. Apparatus Operator/Pump and Scene Support Operations or Firefighter I or Basic Firefighter. J occasionally. 1 credit hour.

PST 2660 Truck Company Operation In-Service This course provides in-service instruction in fire truck company operations. It will include duties and responsibilities of the ladder/truck company and operating and maintaining specialized tools, with specific hands on instruction on ventilation, search and rescue and forcible entry. Prerequisites: student must be a member of a certified professional/volunteer fire department, law enforcement agency, or permission of program director. Successful completion of Scene Support Operations or Firefighter I or equivalent and Apparatus Operator and Emergency Vehicle Operations and a valid driver’s license is required for attendance. J occasionally. 1.5 credit hours.

PST 2700 Basic Rescue Technician This course provides a base of knowledge from which to prepare students for a wide range of possible rescue operations. Instruction will include such topics as: pre-hospital assessment, risk and priority assessment, search and rescue, use of ropes and applicable knot systems, low angle rescue systems, establishment of landing zones and helicopter operations. Prerequisites: student must be a member of a certified professional/volunteer fire department, law enforcement agency, or by permission of program director. Successful completion of Basic Firefighter I or equivalent is required for attendance. J occasionally. 1 credit hour.

PST 2730 Intermediate Rope Rescue This course offers the student education and skills to adequately perform basic vertical rope rescue techniques in an urban/suburban environment. While many of the techniques and skills taught in this program are applicable to the wilderness environment, this is not the intent of this program. The overall objective is to improve rescue awareness of the safety concerns at rope rescue situations and to develop basic skills in rappelling and high-angle rescue systems. Topics include safety orientation, risk assessment, equipment, basic rappelling and ascending, anchoring, belaying, mechanical advantage, patient packaging, incident management, skills evaluation and testing. Prerequisites: student must be a member of a certified professional/volunteer fire department, law enforcement agency, or by permission of program director. Successful completion of Basic Firefighter I or equivalent is required for attendance. J occasionally. 2.5 credit hours.

PSYCHOLOGY

PSY 1510 General Psychology Students will demonstrate an understanding of theories and research as they apply to fundamental concepts in psychology. As they complete readings and activities on the history of psychology, models of learning, biology and behavior, personality
theory, psychological disorders, social psychology and other selected topics students will apply their knowledge to better understand the causes of thought, feeling, and behavior. They will be able to comprehend and apply the methods of scientific inquiry to the science of psychology. Eligibility: ENG 1510; must meet minimum college level reading score: Accuplacer 80+. J spring, C fall, spring; online fall, spring. 3 credit hours.

PSY 1550 Stress & Coping Students will demonstrate an understanding of the sources of common kinds of stress and the terminology associated with the areas of both stress and coping. They are expected to engage in critical thinking involving the physiology of stress and the understanding that certain situations are stressful to some and not others. Students will distinguish effective coping mechanisms from maladaptive, self-defeating approaches. Students are expected to apply what they have learned to their own lives. Eligibility: ENG 1510; must meet minimum college level reading score: Accuplacer 80+. J occasionally; C fall. 3 credit hours.

PSY 1610 Death & Dying An introduction to how we view and cope with the concept and reality of death and dying, examining the psychological, social, and cultural responses. The course discusses the process of dying, including terminal illness, sudden death, the grieving process, and the importance of working through grief. Also, children of various ages and how they deal with death will be explored. Eligibility: ENG 1510; must meet minimum college level reading score: Accuplacer 80+. C fall. 3 credit hours.

PSY 2500 Psychology of Personality Students will demonstrate mastery of theories and research in the field of personality psychology. The aim of the course is to explore the many factors which make up and influence personality. Topics include shyness, thrill-seeking, gender differences, and extraversion. Students will apply class material to real-life situations and will demonstrate an understanding of cultural diversity and interpersonal processes as they relate to individual personality. Prerequisite: PSY 1510; Corequisite: ENG 1530. J spring, C spring. 3 credit hours.

PSY 2510 Life Span Development Students will demonstrate an understanding of human development from conception to late adulthood. Students are expected to engage in critical thinking concerning the developmental processes and issues characterizing the various stages of the life cycle. Emphasis will be placed on integrating theory and research and applying the practical application of life span development to real-life concerns and problems. Prerequisite: PSY 1510; Corequisite: ENG 1530. J fall, spring; C fall, spring; online fall, spring. 3 credit hours.

PSY 2520 Child Development Students will demonstrate an understanding of development from conception to adolescence, including knowledge of theories, research, and factual information. They will apply that knowledge to important issues that affect children from diverse cultural, ethnic, and socioeconomic backgrounds. Through a series of exercises, students will improve their ability to observe children and write about what they observe. Prerequisite: PSY 1510; Corequisite: ENG 1530. J fall, spring; C fall, spring; online fall, spring. 3 credit hours.

PSY 2530 Social Psychology Students will demonstrate mastery of theories and research in the field of social psychology. The course focuses on the influence of groups on individuals. Topics include prejudice, aggression, conformity, group decision making, and leadership. Students apply class material to real-life situations and will demonstrate an understanding of cultural diversity, including ethnic, racial, and gender issues. Prerequisite: PSY 1510 or SOC 1510; Corequisite: ENG 1530. J fall, spring; C fall, spring; online spring. 3 credit hours.

PSY 2540 Interpersonal/Group Dynamics Students will demonstrate mastery of the theories involved in both interpersonal relations and group dynamics and will be able to apply those theories to their own lives. They will be familiar with the research in both areas and be able to critically analyze various types of group process. Students will do a process observation of an interpersonal and/or group interaction. Students will be committed to learning by experiential and more traditional methods. Prerequisite: PSY 1510 or PSY 1520; Corequisite: ENG 1530. J fall, spring; C fall, spring, C spring. 3 credit hours.

PSY 2550 Psychology of Adolescence Students will demonstrate an understanding of human development from the onset of puberty to adulthood, this understanding will cover physical, psychological, and cognitive development. Through exams and exercises, the student will demonstrate knowledge in personality development, physical development, adolescent sexuality, the achievement of autonomy, development of self, and developmental and behavioral problems of adolescence. Prerequisite: PSY 1510; Corequisite: ENG 1530. J fall, spring; C fall. 3 credit hours.

PSY 2560 Abnormal Behavior Students will demonstrate mastery of past and current theoretical perspectives on abnormal behavior. Students will critically evaluate issues relating to the classification, etiology, and treatment of basic abnormal behavior categories identified in the most current diagnostic and statistical manual of mental disorders. Applications are made to specific case studies. Prerequisite: PSY 1510; Corequisite: ENG 1530. J fall, spring; C fall, spring; online fall, spring. 3 credit hours.

PSY 2570 Human Sexuality Students will gain an understanding concerning male and female sexual anatomy and physiology, abortion, childbirth, contraception, AIDS, and other sexually transmitted diseases. Students will also show knowledge and understanding through exams and a project, in the areas of sexual arousal, sexual attitudes, adolescence and childhood sexuality, and marital, premarital, and extramarital sexual interactions. Prerequisites: one course in biology or sociology and PST 1510; Corequisite: ENG 1530. J fall; C spring. 3 credit hours.

PSY 2580 Psychology and the Law Students will apply the methods and theories of psychology to the criminal justice (legal) system. Specifically, students will gain and understanding of how the field of psychology and psychological research has been applied in law enforcement, the judicial process, and the corrections process. Issues of morality, the criminal personality, eyewitness testimony, the use of psychological evaluation, jury selection, criminal profiling, child custody evaluation, police, and inmate counseling are among several major topics covered. Since this course focuses on the criminal justice system, it will not include civil litigation. Prerequisite: PSY 1510; Corequisite: ENG 1530. J spring; C fall. 3 credit hours.

PSY 2600 Psychology of Intimate Relationships Students will learn social psychological research findings about the meanings, characteristics, and development of intimate relationships. Students will understand love and friendship in a global, cross-cultural perspective. Students will develop critical thinking about special issues in relationships, such as intimate communication, male-female differences in communication, conflict, jealousy, trust, loneliness, and shyness. Prerequisite: PSY 1510; Corequisite: ENG 1530. J occasionally. 3 credit hours.

PSY 2710 Transpersonal Psychology Students will demonstrate knowledge of the study of consciousness and different states of awareness. Research in the areas of ESP, dreaming, drug experiences, meditation, and peak experiences is studied. Students apply class material in class exercises and/or projects. Students will also demonstrate an understanding of cultural diversity as it relates to studies of consciousness. Prerequisite: PSY 1510; Corequisite: ENG 1530. J occasionally. 3 credit hours.

RELIGION

REL 1510 Introduction Hebrew Bible/Old Testament Students will examine the background, settings, and writing styles of various authors of the Old Testament books. The basic content of the Old Testament books and how they interrelate will be discussed. Special consideration will be given to the major views of the authorship of the Pentateuch. Eligibility: ENG 1510; must meet minimum college level reading score: Accuplacer 80+. J fall. 3 credit hours.

REL 1520 Introduction to New Testament Students will examine the content, settings, and writing styles of various authors, historical events, and the background of the New Testament. The life of Christ, missionary travels of Paul, and first century apostolic history will be discussed. Corequisite: ENG 1510; must meet minimum college level reading score: Accuplacer 80+. J fall. 3 credit hours.

REL 1530 Comparative Religion Students will examine cultural expressions of belief in the supernal, focusing specifically on people’s ideas about magic, witchcraft, and religion. This course takes a wide-ranging and cross-cultural approach to studying religious beliefs and behaviors and incorporates “world religions” such as Christianity, Judaism, and Islam, as well as the “indigenous” religions of Africa, Asia, Australia, and the Americas. Students will have the opportunity to contrast other people’s beliefs and practices with their own and develop a deeper understanding of the role of religion in the human experience. Eligibility: ENG 1510; must meet minimum college level reading score: Accuplacer 80+. J occasionally; C occasionally. 3 credit hours.

REL 2570 History of World Religions This interdisciplinary course examines the development and variety of religious belief in the past and present. Historical, pre-historic, and non-literary traditions are examined, including Native American, African, Asian, Indo-European, and Semitic beliefs. Special consideration is given to religious development,
assimilation, diffusion, practices, and phenomena. Cross-cultural comparisons and the key tenets of today’s world faiths are also emphasized. Eligibility: ENG 1530. J occasionally. 3 credit hours.

REL 2580 Survey of Islamic Studies This class will examine the Islamic religious tradition from its inception to the present. The course will culminate with a few specific modern social issues and political movements important to practitioners of the Islamic faith. Prerequisite: Reading score of 80+; Corequisite: ENG 1530. J spring. C spring. 3 credit hours.

RUSSIAN
RUS 1510 Introductory Russian I Students will learn Russian language vocabulary and grammar by completing a series of activities designed for realistic communication, both written and spoken. They will learn the reading and writing of the Cyrillic alphabet. Through reading, dialogue, and associated study, students develop an understanding of the language and cultural distinctions of Russian speakers worldwide. Eligibility: ENG 1510; must meet minimum college level reading score: Accuplacer 80+. J fall. 4 credit hours.

RUS 2560 Russian Civilization & Culture Students will develop an understanding of present-day Russia through their study of Russian history and culture. For centuries Russia has been a natural bridge between Europe and Asia. Reflective of this fact, Russian culture has borrowed equally from both and is a blend of both European rationalism and oriental spiritualism. This has resulted in what is characterized as the Russian Soul Students will gain insights into modern Russian social, artistic, and spiritual life through the examination of famous and influential Russian literature, music, art, and cinematography. This course is designed for students with limited or non-existent knowledge of Russia. Corequisite: ENG 1530. J occasionally. 3 credit hours.

SOCIOLGY
SOC 1510 Introduction to Sociology Students will use sociological perspectives to critically analyze and understand taken-for-granted aspects of our social world. The influences of culture, socialization, social groups, and institutions on human behavior are investigated. Cultural diversity and issues related to social inequalities are also explored. Eligibility: ENG 1510; must meet minimum college level reading score: Accuplacer 80+. J fall, spring; C fall, spring. 3 credit hours.

SOC 1550 Introduction to Sociology Students will learn about the sociological perspective to an understanding of major issues and conflicts in American society. They will explore the impact of social and cultural factors on the creation and definition of social problems and policies, and investigate possible solutions to these problems. Prerequisite: SOC 1510; Corequisite: ENG 1530. J occasionally; C occasionally. 3 credit hours.

SOC 2540 Deviant Behavior Deviant behavior is behavior that attracts widespread social disapproval. In this course, students gain the ability to analyze a variety of deviant behaviors from sociological, critical, and cross-cultural perspectives. Topics include homicide, rape, and family violence to prostitution, unconventional sexuality, and suicide. Prerequisite: SOC 1510; Corequisite: ENG 1530. J occasionally; C occasionally. 3 credit hours.

SOC 2560 Criminology Students will learn about criminal behavior by evaluating major sociological theories and research. Basic aspects of these theories and their relationship to values, social structures, and the criminal justice system are examined. For both the criminal justice student and those interested in social sciences. Prerequisite: SOC 1510; Corequisite: ENG 1530; must meet minimum college level reading score: Accuplacer 80+. J occasionally; C occasionally. 3 credit hours.

SOC 2580 Minorities in American Society This course helps students appreciate the multicultural basis of American society. The course is designed to improve understanding of prejudice and discrimination, explore ways to improve intergroup communication and relations, and examine challenges faced by professionals working in settings with racial, ethnic, and religious diversity. Prerequisite: SOC 1510; Corequisite: ENG 1530. J occasionally; C occasionally. 3 credit hours.
costuming, makeup, scenic design, and the light-
ing necessary to stage a show are also examined. Corequisite: ENG 1510 and a reading score of
80+. J occasionally. 3 credit hours.

THE 1520 Modern Drama Students will discover the turning point that led to a new direction for
contemporary drama. The musical in post-war America is examined, and African-American, La-
tino, Asian-American, women’s theatre, and such styles as Absurdism are investigated. Plays and
performances are viewed in class and independent reading is assigned. Playwriting styles and a dis-
cussion of directing and producing approaches will help students to discover modern ways of presen-
tation. A continuation of THE 1510. Corequisite: ENG 1530. J spring. 3 credit hours.

THE 1550 Stagecraft Students will gain a working
knowledge of the tools, equipment, language, and procedures used in set construction. Construction
documents and rigging, as well as practical application, are given special consideration. Corequisite: ENG 1530. J fall, spring. 3 credit hours.

THE 1570 Acting Students use the physical and
mental processes of acting to build self-confi-
dence. Both improvised and rehearsed scenes are practiced in class to discover how to be at home
in front of an audience. Performance skills are strengthened through acting exercises and meth-
ods. Corequisite: ENG 1510 with a reading score of 80+. J fall. 3 credit hours.

THE 1620-1623 Theatre Practicum I-IV
Through hands-on application, students involved in mounting a stage production work in teams to
learn group dynamics, problem solving, and time management skills. Students will gain a working
knowledge in either lighting, sound, costuming, publicity, or props. May be taken for a total of 4
credit hours. Prerequisite: permission of instructor required. J fall, spring. 1 credit hour.

THE 1630 London Theatre Seminar Students are introduced to the practice and production of
theatre in London, England, one of the world’s theatre centers. Following six seminar meetings,
students spend two weeks in London viewing theatre productions and visiting theatres, galleries,
and museums. No prerequisites. J occasionally. 3 credit hours.

THE 2570 Acting II Students expand upon the
growth begun in THE 1570, experiencing an in-
depth, cumulative, and progressive study of acting. An increased character exploration and the ability
to incorporate it into scene study are learned. Stud-
ents are given individual attention in voice and body control and audition techniques. Prerequi-
site: THE 1570. J spring. 3 credit hours.

WELDING

WLD 1200 Safety and Cutting Processes This course introduces oxy-fuel and plasma-arc cutting
systems. Topics include an intensive Introduction to welding safety, proper equipment setup, and op-
eration of oxy-fuel and plasma-arc cutting equip-
ment with emphasis on straight line, curve and bevel cutting. Upon completion, students should
be able to use oxy-fuel and plasma-arc cut metals of varying thicknesses as well as have an appropriate
understanding of welding safety. Corequisite: MAT 0500; must meet minimum college level reading
score: Accuplacer 70+. J fall. 3 credit hours.

WLD 1240 Applied Welding Students will learn
the three most common welding processes that are
available to perform welds, and the numerous
ways to cut various materials. The welding pro-
ces includes arc shielded metal arc welding, gas
metal arc welding, and gas tungsten arc welding. Cutting processes included are oxy-fuel, plasma,
and use of various mechanical cutting machines.
Upon completion, student will be able to perform
code quality welds on plates of various thicknesses
in all three processes, as well as perform cutting operations on plates using all cutting equipment.
Corequisite: MAT 0500; must meet minimum college level reading score: Accuplacer 80+. J spring.

WLD 1350 Shielded Metal Arc Welding This course introduces the shielded metal arc (stick)
 welding process. Emphasis is placed on puddling, fillet, and groove welds in various positions with
SMAW electrodes. Upon completion, students should be able to perform SMAW fillet and groove
welds on carbon plate with prescribed electrodes. Corequisite: MAT 0500; must meet minimum
college level reading score: Accuplacer 70+. J spring. 3 credit hours.

WLD 1360 Gas Metal Arc Welding This course introduces gas metal arc (GMAW) welding and
flux core arc welding processes (FCAW). Topics include equipment setup and fillet and groove
welds with emphasis on application of GMAW and FCAW electrodes on carbon steel plate. Upon
completion, students should be able to perform fillet welds on carbon steel in the flat, horizontal,
and overhead positions. Corequisite: MAT 0500; must meet minimum college level reading score:
Accuplacer 70+. Five hours of combined lecture and laboratory per week. J spring. 3 credit hours.

WLD 1370 Gas Tungsten Arc Welding This course introduces the gas tungsten arc (GTAW)
 welding process. Topics include correct selection of tungsten, polarity, gas, and proper filler rod with
emphasis placed on safety, equipment setup, and welding techniques. Upon completion, students
should be able to perform GTAW fillet and groove welds with various electrodes and filler materi-
als. Corequisite: MAT 0500; must meet minimum college level reading score: Accuplacer 70+. J spring.
3 credit hours.

WLD 2250 Advanced Shielded Metal Arc Welding Advanced shielded metal arc (stick)
welding techniques will be performed using mild
steel electrodes in the flat, horizontal, vertical,
and overhead positions on structural plate. Identifying and analyzing defects in welding joints is empha-
sized. Carbon steel plate is welded using shielded
metal arc welding (SMAW) to American Welding Society (AWS) Code. Students will develop skills
necessary to make quality welds on carbon steel pipe with open root and backing rings according to
AWS, American Society of Mechanical Engineers
(ASME), and American Petroleum Institute (API) code. Prerequisite: WLD 1350; Corequisite: MAT 1220 or MAT 1590 (or higher then MAT 1590). J fall. 3 credit hours.

WLD 2270 Advanced Gas Tungsten Arc Welding Advanced study and practice of the gas tungsten arc welding process are emphasized.
Advanced joint designs are mastered on carbon steel, aluminum, and stainless steel. A required
American Welding Society Workmanship sample will be fabricated and welded. Students will also
weld GTAW on pipe according to ASME (Ameri-
can Society of Mechanical Engineers) procedures.
Theory and practice of GTAW on ferrous and non-ferrous metals in all positions will be covered.
Upon completion, students should be able to perform GTAW welds with prescribed electrodes and
filler materials on various joint geometries. Prerequisite: WLD 1370; Corequisite: MAT 1220 or
MAT 1590 (or higher then MAT 1590). J fall. 3 credit hours.

WLD 2350 Fabrication Students will learn how to
read blueprints with an emphasis on weld sym-
bols, joint design, and layout techniques. Students
will be introduced to equipment such as the iron
worker, hand tools, press brake, and shear. The
principles behind bending, punching, and fastening
technologies will be discussed. Prerequisites:
WLD 2260 and PHY 1250; Eligibility: ENG 1510. J spring. 3 credit hours.

WLD 2360 Alternate Processes Machine setup and
techniques for nonferrous metals, including
aluminum and stainless steel, will be practiced.
Welding applications of special metals such as
copper, nickel, cobalt, and titanium will be dis-
cussed. Non-traditional or advanced welding and
processing procedures such as resistance welding,
plasma arc welding and cutting, and submerged
arc welding are demonstrated. Laser and electron
beam welding techniques are also reviewed.
Prerequisites: WLD 2250, WLD 2260, and WLD
2270. J spring. 3 credit hours.

WLD 2370 Metallurgy Students will learn the
basic properties, characteristics, and production of
the major metal families and processes for ferrous
and nonferrous metals. General metal properties,
testing, and heat treatments are covered, along
with crystal structures in metals, iron-carbon phase
diagrams, and isothermal transformation diagrams.
Prerequisites: PHY 1250; Corequisite: ENG 1530. J spring. 3 credit hours.

WLD 2450 Capstone Project Through research,
discussion, and presentation, students will apply
welding technology knowledge toward a real life
problem. Each student will prepare a case study
of a local industry problem or application as well
as a solution to the problem. Process selection,
joint design, cost estimating, and design of a
welded project are required. Prerequisite: student
must be within one semester of graduation or
have permission of instructor. J spring. 2 credit hours.
The first still-active institution of the State University of New York was officially founded at Potsdam in 1816. By 1862, the Morrill Act set the stage for the four Ivy League land-grant SUNY colleges that now exist at Cornell University. The actual SUNY system did not come together until February 1948 when New York was the last of the then-48 states to establish an official state university. At this time, SUNY consisted of a consolidation of 29 unaffiliated institutions with 11 of them functioning as teachers’ colleges. All of these colleges had unique histories and a common goal to serve New York state. Since then, SUNY has grown to include 64 academic institutions that had formerly been independent institutions or were directly founded by the State University of New York.

SUNY institutions include everything from world-renowned community colleges to first-rate graduate schools that include the nation’s top veterinary school. The System’s highly regarded doctorate degree granting universities boast top research programs and attract experts in a variety of fields. SUNY has expanded to include more than 418,000 students enrolled in 6,688 programs of study. The scope of SUNY continues to increase.

Today, extensive study abroad opportunities exist, and majors range from childhood education to biomedical engineering. International students from over 160 countries attend a SUNY school.

SUNY has also created the SUNY Learning Network, one of the nation’s largest distance learning programs which provides educational opportunities to more than 70,000 students through 4,000 courses and offers sixty degree and certificate programs.

The State University motto is: “To Learn-To Search-To Serve.”

University Centers & Doctoral Degree Granting Institutions
SUNY at Albany | SUNY College of Ceramics at Alfred | SUNY at Binghamton | Downstate Medical Center: Health Sciences Center at Brooklyn | SUNY at Buffalo | College of Agriculture and Life Sciences at Cornell University | College of Ceramics at Alfred University | College of Human Ecology at Cornell University | School of Industrial and Labor Relations at Cornell University | College of Veterinary Medicine at Cornell University | SUNY College of Optometry at New York City | SUNY at Stony Brook | Upstate Medical University: Health Sciences Center at Syracuse | SUNY College of Environmental Science and Forestry at Syracuse

University Colleges
SUNY College at Brockport | SUNY College at Buffalo | SUNY College at Cortland | Empire State College | SUNY College at Fredonia | SUNY College at Geneseo | SUNY College at New Paltz | SUNY College at Old Westbury | SUNY College at Oneonta | SUNY College at Oswego | SUNY College at Plattsburgh | SUNY College at Potsdam | SUNY College at Purchase

Technology Colleges
SUNY College of Technology at Alfred | SUNY College of Technology at Canton | SUNY College of Agriculture and Technology at Cobleskill | SUNY College of Technology at Delhi | SUNY College of Agriculture and Technology at Morrisville | Institute of Technology at Utica/Rome | Maritime College at Fort Schuyler | SUNY College of Technology at Farmingdale

Community Colleges
Adirondack Community College Glens Falls | Broome Community College Binghamton | Cayuga County Community College Auburn | Clinton Community College Plattsburgh | Columbia-Greene Community College Hudson | Corning Community College Corning | Dutchess Community College Poughkeepsie | Erie Community College Williamsville, Buffalo, Orchard Park | Fashion Institute of Technology New York City | Finger Lakes Community College Canandaigua | Fulton-Montgomery Community College Johnstown | Genesee Community College Batavia | Herkimer County Community College Herkimer | Hudson Valley Community College Troy | Jamestown Community College Jamestown, Olean | Jefferson Community College Watertown | Mohawk Valley Community College Utica | Monroe Community College Rochester | Nassau Community College Garden City | Niagara County Community College Sanborn | North Country Community College Saranac Lake | Onondaga Community College Syracuse | Orange County Community College Middletown | Rockland Community College Suffern | Schenectady County Community College Schenectady | Suffolk County Community College Selden, Riverhead, Brentwood | Sullivan County Community College Loch Sheldrake | Tompkins-Cortland Community College Dryden | Ulster County Community College Stone Ridge | Westchester Community College Valhalla

Board of Trustees
Joseph Belluck
Ronald Ehrenberg
Tina Good
Eunice Ashman Lewin
Marshall A. Lichtman
H. Carl McCall, Chairperson
John L. Murad, Jr.
Gerri Warren-Merrick
Kenneth O’Brien
Linda Sanford
Carl Spielvogel
Cary Staller

SUNY Administration
Chancellor
Nancy L. Zimpher
Executive Vice Chancellor & Provost
David K. Lavallee
Senior Vice Chancellor, Community Colleges
Johanna Duncan-Poitier
Senior Vice Chancellor, General Counsel
William F. Howard
Vice Chancellor, Academic Programs & Planning
Elizabeth L. Bringsjord
Vice Chancellor, Capital Facilities
Robert Haelen
Vice Chancellor, Financial Services; Chief Financial Officer
Brian Hutzley
Vice Chancellor, Global Affairs
Mitch Leventhal
Vice Chancellor, Human Resources
Curtis L. Lloyd
Jamestown Community College is supported by a regional partnership among Cattaraugus County, Chautauqua County, and the City of Jamestown.

Norman Marsh  Chairperson, Cattaraugus County Legislature
Gregory J. Edwards  Chautauqua County Executive
Samuel Teresi  Mayor of Jamestown

Administration
GREGORY T. DECINQUE (1994)  President
B.A., Montclair State College
M.A., New York University
Ph.D., University of Texas at Austin

JOHN GARFOOT, CPA (2007)  Vice President & Dean, Administration
B.S., Saint Bonaventure University
M.S., Canisius College

MARILYN C. GERACE (2005)  Assistant Dean, Business & Social Sciences; Assistant Professor, Criminal Justice; Director, Criminal Justice; Cattaraugus County Campus
A.A., Jamestown Community College
B.A., SUNY Fredonia
M.S., Buffalo State College

EILEEN GOODLING (2007)  Vice President & Dean, Student Development
B.M., Oberlin College
M.A., Edinboro University of Pennsylvania
Ed.D., SUNY Binghamton

ROSLIN NEWTON (1991)  Assistant Dean, Arts, Humanities & Health Sciences;
Associate Professor, Nursing
B.S., Capital University
M.S., SUNY Buffalo
SUNY Chancellor’s Award for Excellence in Professional Service, 2005

FRANK J. PORPIGLIA (1988)  Director, North County Center
A.S., Jamestown Community College
B.S., SUNY Fredonia
SUNY Chancellor’s Award for Excellence in Professional Service, 1998

BARBARA RUSSELL (2007)  Assistant Dean, Research & Planning
B.A., Alfred University
M.S., University of South Carolina

JOHN J. SAYEGH (2009)  Vice President & Dean, Cattaraugus County Campus, Continuing Education, & External Partnerships
A.A., Miami Dade Community College
B.B.A., Florida International University
M.B.A., Saint Bonaventure University

JEAN SCHRADER (1984)  Assistant Dean, Science, Technology, Engineering & Mathematics; Professor, Mathematics & Computer Science
B.A., SUNY Geneseo
M.S., Ed., SUNY Fredonia

TAMMY SMITH (2006)  Assistant Dean, Student Development; Assistant Professor: Counselor
B.A., SUNY Fredonia
M.S., Old Dominion University

MARILYN A. ZAGORA (1974)  Vice President & Dean, Academic Affairs; Professor; Counselor
B.A., M.S., Ph.D., SUNY Buffalo
SUNY Chancellor’s Award for Excellence in Teaching, 2007

Faculty
LAURA ANDERSON (2004)  Assistant Professor, Spanish
Cattaraugus County Campus
B.A., Ohio University
M.A., SUNY Buffalo

DAWN BABBAGE (2002)  Associate Professor, Nursing
A.A., Jamestown Community College
B.S., SUNY College at Utica/Rome
M.S., SUNY Buffalo

THERESA BAGINSKI (2002)  Associate Professor, Spanish; Coordinator, Modern Languages
B.A., Niagara University
M.A., SUNY Buffalo
M.S., U.S. Army War College

BRIAN BARONE (2004)  Assistant Professor, Criminal Justice;
Coordinator, Modern Languages
B.A., A.A., Jamestown Community College
B.A., SUNY Fredonia
M.S., Mercyhurst College

AMANDA BARTELS (2011)  Instructor, Mathematics
B.A., M.S., University of Albany

CARMELLA R. BARTIMOLE (1998)  Associate Professor; Counselor; Coordinator, Advisement;
Coordinator, Counseling & Career Planning Center
Cattaraugus County Campus
B.S., Sacred Heart University
M.S.Ed., Saint Bonaventure University
Ph.D., SUNY Buffalo

SHANNON E. BESSETTE (2000)  Associate Professor, Anthropology;
Coordinator, Anthropology, Sociology, Geography
B.A., Cornell University
M.A., University of Oklahoma

JANIS L. BOWMAN (1998)  Associate Professor, Biology;
Co-Coordinator, Science - Health Science
A.A., Jamestown Community College
B.S., M.S., SUNY Fredonia
SUNY Chancellor’s Award for Excellence in Teaching, 2007

Directories
<table>
<thead>
<tr>
<th>Name</th>
<th>Title/Position</th>
<th>Institution(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NANCY BRYANT (1987)</td>
<td>Professor, Chemistry; Coordinator, Assessment; Director, Sciences</td>
<td>Cattaraugus County Campus; B.S., Northern Illinois University; M.S., University of Utah</td>
</tr>
<tr>
<td>HEATHER BURRELL (2011)</td>
<td>Instructor, Nursing</td>
<td>Cattaraugus County Campus; B.S., Florida Hospital College of Health Sciences</td>
</tr>
<tr>
<td>MARY ROSE CHASLER (1999)</td>
<td>Associate Professor, Nursing</td>
<td>B.S., Indiana University of Pennsylvania; M.S., University of Pittsburgh</td>
</tr>
<tr>
<td>JAMES J. CHIMENTI (1988)</td>
<td>Professor, Business; Director, Business</td>
<td>B.A., Grove City College; M.B.A., Gannon University</td>
</tr>
<tr>
<td>DAWN COLUMBARE (1992)</td>
<td>Professor, Nursing; Director, Nursing</td>
<td>B.S., Syracuse University; M.S., SUNY Buffalo; Ph.D., Case Western Reserve University</td>
</tr>
<tr>
<td>FRANK CORAPI (2006)</td>
<td>Assistant Professor, Psychology; Co-Director, Social Sciences; Coordinator, Psychology; Coordinator, Committee for Excellence in Learning and Teaching</td>
<td>B.S., M.S., Gannon University</td>
</tr>
<tr>
<td>GERARD J. CRINNIN (1993)</td>
<td>Professor, English</td>
<td>North County Center; B.A., Ph.D., SUNY Binghamton; M.A., Brown University</td>
</tr>
<tr>
<td>JACQUELINE M. CRISMAN (2007)</td>
<td>Associate Professor, Biology; Coordinator, Biotechnology</td>
<td>B.S., SUNY Geneseo; M.S., Ph.D., Ohio State University; Ph.D., Ohio State University</td>
</tr>
<tr>
<td>JEFFREY R. DAVIS (2001)</td>
<td>Assistant Professor, Mathematics &amp; Computer Science; Director, Computer &amp; Information Sciences</td>
<td>Cattaraugus County Campus; A.A.S., Jamestown Community College; B.S., SUNY Fredonia; M.S., Capitol College</td>
</tr>
<tr>
<td>H. KREIG ELICKER (1989)</td>
<td>Assistant Professor, Registrar</td>
<td>B.S.Ed., M.S., Slippery Rock University</td>
</tr>
<tr>
<td>RENEE FUNKE (2009)</td>
<td>Instructor, Education; Coordinator, Teacher Education Field Placement</td>
<td>B.S., M.S., SUNY Fredonia</td>
</tr>
<tr>
<td>GAEL E. GROSSMAN (2001)</td>
<td>Professor, English; Director, English, Philosophy, Religion, Modern Languages; Coordinator, English, Modern Languages, Music, Philosophy, VAPA</td>
<td>B.A., University of Michigan; M.A., Ph.D., Michigan State University</td>
</tr>
<tr>
<td>BRENT HARKNESS (2007)</td>
<td>Assistant Professor, Welding</td>
<td>A.S., Alfred State University; B.S., Ferris State University</td>
</tr>
<tr>
<td>JUSTYNE HARRIS (2009)</td>
<td>Instructor, Psychology</td>
<td>Cattaraugus County Campus; B.A., Canisius College; M.A., John Jay College; M.S., SUNY Buffalo</td>
</tr>
<tr>
<td>JOHN HEARN (1981)</td>
<td>Professor, Sociology</td>
<td>B.A., Southeastern Massachusetts University</td>
</tr>
<tr>
<td>CINDY L. HINZ (2005)</td>
<td>Assistant Professor, Business; Coordinator, Business</td>
<td>Cattaraugus County Campus; B.S., University of Virginia; M.B.A., Saint Bonaventure University</td>
</tr>
<tr>
<td>CATHERINE IANNELLO (2003)</td>
<td>Assistant Professor, Human Services; Director, Human Services</td>
<td>B.A., SUNY at Buffalo; M.S.W., University of Kentucky</td>
</tr>
<tr>
<td>SHAWN E. IRLAND (2010)</td>
<td>Instructor, English</td>
<td>B.A., SUNY Potsdam; M.A., University of Maine</td>
</tr>
<tr>
<td>DAVID T. JEFFERY (2001)</td>
<td>Associate Professor, Computer Science</td>
<td>B.S., Pennsylvania State University; M.S., Regis University</td>
</tr>
<tr>
<td>MARY L. JERMANNE (1983)</td>
<td>Associate Professor; Coordinator, Library; Reference Librarian</td>
<td>Cattaraugus County Campus; B.A., Saint Bonaventure University; M.S.L.S., Clarion University</td>
</tr>
<tr>
<td>JEANNE L. JOHNSTON (2001)</td>
<td>Assistant Professor, Business &amp; Office Technology; Director, Office Technology &amp; Medical Technology</td>
<td>A.S., SUNY Regents College; B.S., SUNY Empire State College; M.S., SUNY College at Buffalo</td>
</tr>
<tr>
<td>AMBER R. KAUTZMAN (2000)</td>
<td>Associate Professor, Mathematics &amp; Computer Science</td>
<td>B.A., Mercyhurst College; M.A., Miami University</td>
</tr>
<tr>
<td>MICHAEL F. KELLY (1974)</td>
<td>Professor, Music; Coordinator, Music</td>
<td>B.M., Ithaca College; M.S., SUNY Potsdam</td>
</tr>
<tr>
<td>Name</td>
<td>Position/Department</td>
<td>Degrees</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>--------------------------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>TRACI LANGWORTHY</td>
<td>Assistant Professor, History</td>
<td>B.A., Oberlin College</td>
</tr>
<tr>
<td>DEBORAH A. LANNI</td>
<td>Professor, Communication/Media Arts</td>
<td>B.A., Alfred University</td>
</tr>
<tr>
<td>LINDA LARKIN</td>
<td>Associate Professor, Director of Libraries</td>
<td>B.A., Alfred University</td>
</tr>
<tr>
<td>WILLIAM G. LASHER</td>
<td>Professor, Business Administration</td>
<td>B.A., Lycoming College</td>
</tr>
<tr>
<td>SUNG JONG (DAVID) LEE</td>
<td>Assistant Professor, Computer Science</td>
<td>B.S., Korea Military Academy</td>
</tr>
<tr>
<td>ELLEN LEHNING</td>
<td>Associate Professor, Biology</td>
<td>B.S., M.S., Michigan State University</td>
</tr>
<tr>
<td>BETH LISI</td>
<td>Instructor, Coordinator, Learning</td>
<td>B.S., St. Bonaventure University</td>
</tr>
<tr>
<td>ANNE LUCE</td>
<td>Professor, Psychology</td>
<td>B.S., Cornell University</td>
</tr>
<tr>
<td>JUSTIN MARCH</td>
<td>Instructor, Reading</td>
<td>B.S., Skidmore College</td>
</tr>
<tr>
<td>CHARLOTTE MARTINES-CAPPELLINI</td>
<td>Professor, English</td>
<td>B.A., Jamestown Community College</td>
</tr>
<tr>
<td>MEGHAN McCUNE</td>
<td>Instructor, Anthropology/Sociology</td>
<td>B.A., SUNY Buffalo</td>
</tr>
<tr>
<td>CYNTHIA McKANE</td>
<td>Assistant Professor, Reference Librarian</td>
<td>B.A., SUNY Buffalo</td>
</tr>
<tr>
<td>JULIE B. MUSIAL</td>
<td>Assistant Professor, History</td>
<td>B.A., Arizona State University</td>
</tr>
<tr>
<td>SEAN NOWLING</td>
<td>Assistant Professor, Physics</td>
<td>B.S., Purdue University</td>
</tr>
<tr>
<td>REBECCA NYSTROM</td>
<td>Professor, Biology</td>
<td>B.S., University of Illinois at Urbana-Champaign</td>
</tr>
<tr>
<td>JONATHAN D. O’BRIAN</td>
<td>Associate Professor, History</td>
<td>B.A., Jamestown Community College</td>
</tr>
<tr>
<td>TAYLOR PANCOAST</td>
<td>Professor, Chemistry</td>
<td>B.S., Haverford College</td>
</tr>
<tr>
<td>HEATHER L. PANCZYKOWSKI</td>
<td>Associate Professor, Occupational Therapy</td>
<td>B.A., Keuka College</td>
</tr>
<tr>
<td>ANNE-MARIE RAY</td>
<td>Professor, English</td>
<td>B.S., SUNY College</td>
</tr>
<tr>
<td>CHRISTOPHER P. REISCH</td>
<td>Associate Professor, Mathematics &amp; Computer Science, Director, Mathematics</td>
<td>B.A., B.A., Ed.M., SUNY Buffalo</td>
</tr>
<tr>
<td>RICHARD J. RUPPRECHT</td>
<td>Professor, Mathematics</td>
<td>B.S., SUNY Brockport</td>
</tr>
<tr>
<td>ROBERT PHILLIPS</td>
<td>Professor, Biology</td>
<td>B.S., SUNY Buffalo</td>
</tr>
<tr>
<td>DEBORAH L. McMILLEN</td>
<td>Instructor, Nursing</td>
<td>A.A.S., Jamestown Community College</td>
</tr>
<tr>
<td>JULIE B. MUSIAL</td>
<td>Assistant Professor, History</td>
<td>B.A., Arizona State University</td>
</tr>
<tr>
<td>SEAN NOWLING</td>
<td>Assistant Professor, Physics</td>
<td>B.S., Purdue University</td>
</tr>
<tr>
<td>REBECCA NYSTROM</td>
<td>Professor, Biology</td>
<td>B.S., University of Illinois at Urbana-Champaign</td>
</tr>
<tr>
<td>ROBERT J. RATTERMAN</td>
<td>Professor, Biology</td>
<td>B.A., Loras College</td>
</tr>
<tr>
<td>ANNE-MARIE RAY</td>
<td>Professor, English</td>
<td>B.A., M.A., SUNY Fredonia</td>
</tr>
<tr>
<td>CHRISTOPHER P. REISCH</td>
<td>Associate Professor, Mathematics &amp; Computer Science, Director, Mathematics</td>
<td>B.A., B.A., Ed.M., SUNY Buffalo</td>
</tr>
<tr>
<td>RICHARD J. RUPPRECHT</td>
<td>Professor, Mathematics</td>
<td>B.S., SUNY Brockport</td>
</tr>
<tr>
<td>ROBERT PHILLIPS</td>
<td>Professor, Biology</td>
<td>B.S., SUNY Buffalo</td>
</tr>
<tr>
<td>DEBORAH L. McMILLEN</td>
<td>Instructor, Nursing</td>
<td>A.A.S., Jamestown Community College</td>
</tr>
<tr>
<td>JULIE B. MUSIAL</td>
<td>Assistant Professor, History</td>
<td>B.A., Arizona State University</td>
</tr>
<tr>
<td>SEAN NOWLING</td>
<td>Assistant Professor, Physics</td>
<td>B.S., Purdue University</td>
</tr>
<tr>
<td>REBECCA NYSTROM</td>
<td>Professor, Biology</td>
<td>B.S., University of Illinois at Urbana-Champaign</td>
</tr>
<tr>
<td>JONATHAN D. O’BRIAN</td>
<td>Associate Professor, History</td>
<td>B.A., Jamestown Community College</td>
</tr>
<tr>
<td>TAYLOR PANCOAST</td>
<td>Professor, Chemistry</td>
<td>B.S., Haverford College</td>
</tr>
<tr>
<td>HEATHER L. PANCZYKOWSKI</td>
<td>Associate Professor, Occupational Therapy</td>
<td>B.A., Keuka College</td>
</tr>
<tr>
<td>ANNE-MARIE RAY</td>
<td>Professor, English</td>
<td>B.S., SUNY College</td>
</tr>
<tr>
<td>CHRISTOPHER P. REISCH</td>
<td>Associate Professor, Mathematics &amp; Computer Science, Director, Mathematics</td>
<td>B.A., B.A., Ed.M., SUNY Buffalo</td>
</tr>
<tr>
<td>RICHARD J. RUPPRECHT</td>
<td>Professor, Mathematics</td>
<td>B.S., SUNY Brockport</td>
</tr>
<tr>
<td>ROBERT PHILLIPS</td>
<td>Professor, Biology</td>
<td>B.S., SUNY Buffalo</td>
</tr>
</tbody>
</table>
KATHRYN STEDMAN (1987)
Associate Professor, Physical Education;
Assistant Director, Athletics;
Director, Physical Education & Dance
B.S., University of Wyoming
M.S., Eastern Kentucky University

MARY KAY SZWEJBKA (2002)
Professor, Human Services & Education;
Director, Education
B.S., M.S., SUNY Fredonia
Ed.D., SUNY Buffalo

KATHY TAYDUS (2004)
Assistant Professor, Nursing
A.A.S., Jamestown Community College
A.A.S., Erie Community College
B.S., SUNY Buffalo
M.S., SUNY College at Buffalo

RONALD A. TURAK (1987)
Professor; Placement/Transfer Counselor;
Coordinator, Counseling & Career
Development Center
A.A., Bucks County Community College
B.A., M.A., Indiana University of Pennsylvania
M.B.A., Philadelphia College of Textiles and Science
SUNY Chancellor’s Award for Excellence in Professional Service, 2010

REBECCA TYLER (2011)
Instructor, Nursing
Cattaraugus County Campus
A.A.S., Jamestown Community College
B.S., University of Pittsburgh at Bradford
M.S., Excelsior College

ELLEN VanVALKENBURGH (1987)
Associate Professor, Criminal Justice
B.A., M.S., Michigan State University

JENNIFER VISBISKY (2004)
Assistant Professor, Nursing
Cattaraugus County Campus
A.S., B.S., University of Pittsburgh
M.S.N., St. Joseph’s College

MICHAEL WEAVER (2008)
Assistant Professor, Mechanical Technology;
Director, Engineering Science & Technology
A.A.S., Jamestown Community College
B.S., Buffalo State College

KAREN J. WYANT (2001)
Assistant Professor, English;
B.A., University of Pittsburgh
M.A., Clarion University of Pennsylvania
SUNY Chancellor’s Award for Excellence in Scholarship & Creative Activities, 2011

KELLY WHITVER (2007)
Assistant Professor, Nursing
A.A.S., A.S., Jamestown Community College
B.S., M.S. Daemen College

LAURA WILLIAMS (2008)
Assistant Professor, Nursing,
Cattaraugus County Campus
A.S., Alfred State University
B.S., SUNY Brockport
M.S.N., Daemen College

KELLY WITTENBROOK (2011)
Instructor, Nursing
A.A.S., Jamestown Community College
B.S., M.S., Daemen College

DALE YERPE (1976)
Professor, English;
Cattaraugus County Campus
B.A., M.S., SUNY Fredonia
M.A., Middlebury College
SUNY Chancellor’s Award for Excellence in Teaching, 1998

KAYE YOUNG (1975)
Professor; Coordinator, Main Street
A.A.S., A.A., Jamestown Community College
B.S., Empire State College
M.A.S.S., SUNY Fredonia
SUNY Chancellor’s Award for Excellence in Professional Service, 2004

JESSE ZEIDERS (2009)
Instructor, Human Services
A.A.S., Jamestown Community College
B.S., Idaho State University
M.S.W., Roberts Wesleyan College

ERIN ZEIDERS-WEBER (2010)
Instructor, Mathematics;
Coordinator, Mathematics
A.A.S., Jamestown Community College
B.S., M.S. SUNY Potsdam

MARTHA ZENNS (1986)
Professor, Business & Social Sciences
B.S., Saint Bonaventure University
M.A., SUNY Binghamton
SUNY Chancellor’s Award for Excellence in Teaching, 2007
Locations

Jamestown Campus
716.338.1000 or 800.388.8557
525 Falconer Street, P.O. Box 20
Jamestown NY 14702-0020

Cattaraugus County Campus
716.376.7500 or 800.388.8557
260 North Union Street, PO Box 5901
Olean, NY 14760-5901

North County Center
716.363.6500
10807 Bennett Road
Dunkirk, NY 14048

Warren Center
814.723.3577
Curwen Building, Second Floor
185 Hospital Drive
N. Warren, PA 16365
## 2012-2013 Academic Calendar

### Fall 2012 | 15 weeks of day and evening classes

#### August
- 23-24: Student orientation, advisement, registration
- 27: Classes begin
- 27-31: Late registration and senior citizen registration

#### September
- 3: Labor Day - no classes
- 1: Last day to choose CR/F and audit grade options for traditional semester courses
- 8-9: Fall recess - no classes

#### October
- 1: Last day to officially withdraw from an individual class with a grade of W
- 18-19: Presidents Day recess - no classes
- 20: Last day to choose CR/F and audit grade options for traditional semester courses

#### November
- 17: Last day of classes

#### December
- 18-20: Final examinations

### Spring 2013 | 15 weeks of day and evening classes

#### January
- 10-11: Student orientation, advisement, registration
- 14: Classes begin
- 14-18: Late registration and senior citizen registration
- 21: Martin Luther King Jr. Day - no classes

#### February
- 18-19: Presidents Day recess - no classes
- 20: Last day to choose CR/F and audit grade options for traditional semester courses

#### March
- 18: Last day to change CR/F back to regular grading system for traditional semester courses
- 27-April 7: Spring recess - no classes

#### April
- 8: Classes resume
- 8: Last day to officially withdraw from an individual class with a grade of W

#### May
- 13: Last day of classes
- 14-16: Final examinations
- 17: Cattaraugus County Campus commencement
- 18: Jamestown Campus commencement

### Summer Session I 2013 | 6 weeks of day & evening classes

#### May
- 20: Classes begin
- 20-21: Late registration and senior citizen registration
- 27: Memorial Day - no classes

#### June
- 3: Last day to choose CR/F or audit grade option
- 12: Last day to change CR/F back to regular grading system

#### July
- 1: Last day to officially withdraw from an individual class with a grade of W
- 1: End of Summer Session I

### Summer Session II 2013 | 6 weeks of day & evening classes

#### July
- 8: Classes begin
- 8-9: Late registration and senior citizen registration
- 18: Last day to choose CR/F or audit grade option
- 30: Last day to change CR/F back to regular grading system

#### August
- 15: Last day to officially withdraw from an individual class with a grade of W
- 15: End of Summer Session I

## 2013-2014 Academic Calendar

### Fall 2013 | 15 weeks of day and evening classes

#### August
- 22-23: Student orientation, advisement, registration
- 26: Classes begin
- 26-30: Late registration and senior citizen registration

#### September
- 2: Labor Day - no classes
- 30: Last day to choose CR/F back to regular grading system for traditional semester courses

#### October
- 14-15: Columbus Day recess - no classes
- 28: Last day to officially withdraw from an individual class with a grade of W

#### November
- 6: Last day to officially withdraw from an individual class with a grade of W
- 27-December 1: Thanksgiving recess - no classes

#### December
- 16: Last day of classes
- 17-19: Final examinations

### Spring 2014 | 15 weeks of day and evening classes

#### January
- 9-10: Student orientation, advisement, registration
- 13: Classes begin
- 13-17: Late registration and senior citizen registration
- 20: Monday Martin Luther King Jr. Day - no classes

#### February
- 17-18: Presidents Day recess - no classes
- 19: Last day to choose CR/F or audit grade options for traditional semester courses

#### March
- 17: Last day to change CR/F back to regular grading system
- 19: Last day to officially withdraw from an individual class with a grade of W

#### April
- 7: Classes resume
- 18: College holiday - no classes

#### May
- 12: Last day of classes
- 13-15: Final examinations
- 16: Cattaraugus County Campus commencement
- 17: Jamestown Campus commencement

### Summer Session I 2014 | 6 weeks of day & evening classes

#### May
- 19: Classes begin
- 19-20: Late registration and senior citizen registration
- 26: Memorial Day - no classes

#### June
- 22: Last day to choose CR/F or audit grade options
- 30: Last day to officially withdraw from an individual class with a grade of W

#### July
- 14: Last day to officially withdraw from an individual class with a grade of W
- 14: End of Summer Session I

### Summer Session II 2014 | 6 weeks of day & evening classes

#### July
- 7: Classes begin
- 7-8: Late registration and senior citizen registration
- 17: Last day to choose CR/F or audit grade option
- 29: Last day to change CR/F back to regular grading system

#### August
- 14: Last day to officially withdraw from an individual class
- 14: End of Summer Session II
## Index

| A | Academic Advisement | 20 |
|   | Academic Calendar | 102 |
|   | Academic Information | 29-60 |
|   | Academic Programs | 40-60 |
|   | Academic Program Summary | 39 |
|   | Academic Standing | 31 |
|   | Access to Student Information | 21 |
|   | Accreditation | 3, 11, 14, 36 |
|   | Additional Degrees and/or Certificates | 32 |
|   | Adjunct Faculty | 39 |
|   | Admissions Information and Policies | 8-15 |
|   | Aid for Part-Time Study | 16 |
|   | American Sign Language Courses | 62 |
|   | Anthropology Courses | 62 |
|   | Appeal of Dismissal | 31 |
|   | Application Procedures | 8-10 |
|   | Arabic Courses | 62 |
|   | Art Courses | 62-64 |
|   | Associate in Applied Science Degree | 36, 39 |
|   | Associate in Arts Degree | 36, 39 |
|   | Associate in Science Degree | 36, 39 |
|   | Astronomy Courses | 64 |
|   | Athletics | 23 |
|   | Attendance Policy | 29 |
|   | Aviation Courses | 64-65 |
|   | Awards and Honors | 33 |
| B | Biology Courses | 65-66 |
|   | Biotechnology Degree | 40 |
|   | Business Courses | 67-68 |
|   | Business - Accounting Degree | 40 |
|   | Business - Business Administration Degrees | 41 |
| C | Campus Activity Board | 23 |
|   | Campus Life | 22 |
|   | Campus Safety | 25-26 |
|   | Campus Stores | 22 |
|   | Cattaraugus County Campus | 6 |
|   | Certificate of Residence | 18 |
|   | Certificate Programs | 36, 54-56 |
|   | Chautauqua County Sheriff’s Law Enforcement Academy | 15 |
|   | Chemistry Courses | 68 |
|   | Civility Statement | 24 |
|   | Clubs and Student Organizations | 22-23 |
|   | College Directory | 97-100 |
|   | College Connections: College Courses in High Schools | 34 |
|   | College-Level Examination Program (CLEP) | 34 |
|   | College Program Committee | 23 |
|   | Communication Courses | 68-69 |
|   | Communication Degree | 42 |
|   | Communiiversity | 28 |
|   | Computer-Aided Design & Computer Numerical Control Certificate | 54 |
|   | Computer Information Systems Degree | 42 |
|   | Computer Science Courses | 69-71 |
|   | Computer Science Degree | 42 |
|   | Continuing Education | 28 |
|   | Continuing Education Units | 28 |
|   | Cooperative Education | 35 |
|   | Cooperative Education Courses | 71 |
|   | Corrections Academy | 15 |
|   | Corrections Officer Technology Certificate | 60 |
|   | Counseling and Career Planning Services | 20 |
|   | Course Changes and Withdrawals | 29 |
|   | Course Descriptions | 63-96 |
|   | Course Information | 38 |
|   | Course Numbering | 38 |
|   | Course Requisites | 63 |
|   | Credit/Fail Policy | 30 |
|   | Credit-Free Courses | 28 |
|   | Criminal Justice Courses | 71-74 |
|   | Criminal Justice Degree | 43 |
|   | Criminal Justice-Police Degree | 43 |
|   | Culinary Arts Courses | 74 |
|   | Customized Training Programs | 28 |
|   | D | Dance Courses | 74 |
|   | Dean’s List | 33 |
|   | Degrees and Certificates | 36, 39 |
|   | Developmental Studies Program | 34 |
|   | Digital Audio Production Certificate | 54 |
|   | Digital/Computer (Electrical) Technology Courses | 74 |
|   | Diploma Charges | 32 |
|   | Dining and Vending Services | 22 |
|   | Disability Support Services | 20 |
|   | Early Admissions Policy | 9 |
|   | Early Childhood Degree | 43 |
|   | Early Childhood Development Certificate | 55 |
|   | Economics Courses | 74 |
|   | Educational Opportunity Grant Program | 16 |
|   | Electricity/Electronics Courses | 75 |
|   | Employment and Job Search Services | 20 |
|   | Engineering Courses | 77 |
|   | Engineering Science Degree | 43 |
|   | English Courses | 75-77 |
|   | English Language Instruction Courses | 77 |
|   | Entrepreneurship Certificate | 55 |
|   | Entrepreneurship Courses | 77 |
|   | Environmental Science Degree | 44 |
|   | Extension Centers | 7, 28 |
|   | Faculty Student Association | 22 |
|   | Fee Schedule | 19 |
|   | Financial Aid and Planning | 15-19 |
|   | Fine Arts: Music Degree | 44 |
|   | Fine Arts: Studio Arts Degree | 45 |
|   | Forest Technology Program | 59 |
|   | French Courses | 77 |
|   | Frequency of Course Offerings | 38 |
|   | Full Opportunity Concept | 8 |
|   | G | General Education Requirements | 32 |
|   | General Studies Certificate | 55 |
|   | Geography Courses | 77-78 |
|   | Geology Courses | 78 |
|   | Grade Appeal | 31 |
|   | Grade Point Average | 31 |
|   | Grading System | 30 |
|   | Graduate and Upper Division Courses | 28 |
|   | Graduate Job Placement | 34 |
|   | Graduation Outcomes, Requirements | 32 |
|   | Gramm-Leach-Bliley Act | 26 |
|   | H | Grants | 16 |
|   | Health Centers | 21 |
|   | High School Equivalency Diploma | 9 |
|   | History Courses | 78-79 |
|   | Human Development Courses | 79 |
|   | Human Services Courses | 79-80 |
|   | Human Services Degrees | 45-46 |
|   | Humanities Degree | 48 |
|   | Immunization Requirements | 21 |
|   | Imputed Credit | 31 |
|   | Independent Study | 35 |
|   | Individual Studies Certificate | 56 |
|   | Individual Studies Degrees | 46 |
|   | Industrial Equipment Technology Certificate | 56 |
Index

Information Technology Certificate 56
Information Technology Degree 46
Interdisciplinary Studies 35
International Students - Admission Procedure 10
Interdisciplinary Studies Courses 35, 80-81
International Education Courses 80
International Education and Study Abroad 35
Internships 35
Intramural Sports, Recreation, and Fitness 23
J
Jamestown Campus 5
K
Katharine Jackson Carnahan Scholarship 16
Kids’ College 28
Katherine Jackson Carnahan Scholarship 16
L
Land Agent Courses 81
Law Enforcement Technology Certificate 60
Learning Skills Centers 21
Liberal Arts and Sciences: Adolescence Education Degree 47
Liberal Arts and Sciences: Child Education Degree 47
Liberal Arts and Sciences: Early Childhood Education Degree 48
Liberal Arts and Sciences: Humanities Degree 48
Liberal Arts and Sciences: Mathematics and Science Degree 49
Liberal Arts and Sciences: Social Science Degree 49
Library Courses 81
Library Services 27
Life Experience Credit Assessment 35
Loans 16
Location 101
M
Machine Tool Technology 56
Main Street 21
Manufacturing Technology Institute 27
Math and Sciences Degree 50
Mathematics Courses 81-82
Mathematics for Educators Courses 81
Mechanical Technology Courses 82-83
Mechanical Technology Degree 49
Media Arts Degree 50
Medical Office Technology Certificate 56
Medical Office Technology Degree 83
Medical Office Technology Degree 83
Meteorology Courses 83
Multimedia Production Certificate 57
Music Courses 83-84
Music Program 23
N
Network Administration Certificate 57
North County Center 7
Nursing Courses 84-85
Nursing Degree 51
Nursing Program Admission Policies 10-13
NY-ALERT 26
O
Occupational Therapy Assistant Courses 85-86
Occupational Therapy Assistant Degree 51-52
Occupational Therapy Assistant Program Admission Policies 13-15
Off-Campus Study Programs 35
Office Technology Certificate 58
Office Technology Degree 52
One-Plus-One Programs 39
One-Plus-One Transfer Agreements 59
Online Courses and Degree Opportunities 34-35
Orientation 22
P
PELL Grant 16
PEP Grant 16
Philosophy Courses 86-87
Phi Theta Kappa 33
Physical Education Studies Degree 52
Physical Education Courses 87-89
Physics Courses 89
Placement Testing 9-10, 63
Political Science Courses 90
Pre-College Enrollment Program 9
Professional Enrichment Courses 28
Professional Piloting Degree 53
Protective Services Programs 60
Psychology Courses 92-93
Public Safety Technology-Fire Science Certificate & Degree 60
Public Safety Technology-Fire Science Courses 90-92
R
Recreation and Intramurals 23
Religion Courses 93
Repeating a Course 30
Requirements by Degree Chart 37
Residential Halls 24
Residential Life 24
Retention and Graduation Rates 33
Russian Courses 93
S
Satisfactory Academic Progress 31
Satisfactory Academic Progress Charts 17
Scholarships 16
Scientific Reasoning Requirement 32
Security Policies and Procedures 25
Selected Studies 38
Senior Tuition Waivers 30
Sexual Offense Policy 26
Sexually Violent Offender Registration Act 26
Small Business Assistance 28
Social Science Degree 50
Sociology Courses 93-94
Spanish Courses 94
Special Academic Programs 34-35
Special Studies Certificate 58
Stafford Loan Program 16
State Aid to Native Americans 15
State University of New York 96
Student Complaint Process 26
Student Constitution 22
Student Development Information 20-28
Student Government 22
Student Information Policies 24-25
Student Records 21
Student Success Seminar 22
SUNY General Education Requirements 33
Transferring Credits 8
Transferring Refund Policies 17-19
Tuition Assistance Program 15
Tutoring Services 21
Unified Student Assistance (USA) Scholarship 16
VEDP Requirement 32
VESID Program 16
Veterans’ Educational Assistance 16, 22
Vision, Mission, and Beliefs of JCC 4
Warning Status 31
Warren, PA Center 7
Web Access for Student Records and Registration 21
Web Design Certificate 58
Welding Courses 95
Welding Technology Certificate 58
Welding Technology Degree 53
Withdrawal Policy 16, 20
Work Study Program 16
Writing Across the Curriculum 33