Vision Statement
Corning Community College will be a premier community college where learning transforms lives.

Mission Statement
Corning Community College serves lifelong learners in our region by providing access to high-quality, affordable transfer, career, and workforce development educational opportunities. Our learning environment fosters empowerment, leadership, and teamwork for academic, professional, and personal success. We collaborate locally and promote global awareness for social, environmental, and economic sustainability.

Accreditation
The degree programs described in this catalog are registered with the New York State Education Department and are approved by the State University of New York Board of Trustees. The College is accredited by the Middle States Association of Colleges and Secondary Schools. The Nursing Program is accredited by the Accreditation Commission for Education in Nursing, Inc., 3343 Peachtree Road NE, Suite 850, Atlanta, Georgia, 30326. It may be contacted at (404) 975-5000 for program information. CCC is fully accredited by the Veterans Administration for educational benefits to qualified veterans under existing applicable public laws. Corning is also accredited under Chapter 35, Title 38, U.S.C. (a program of educational aid for children, spouses, and survivors of veterans whose deaths or permanent total disabilities were a result of injuries or diseases received from their military service).

CCC Institutional Learning Outcomes
CCC’s Institutional Learning Outcomes are the expectation of student achievement through curricular and co-curricular activities

1. Demonstrate critical thinking.
2. Communicate effectively orally and in writing, and through other modes of expression.
3. Utilize research, apply scientific reasoning and mathematical concepts, and employ creative techniques to solve problems
4. Demonstrate knowledge and skill proficiency in their program of study.
5. Apply information literacy skills necessary to support continuous, lifelong learning.
6. Demonstrate cultural and global awareness and civic knowledge.
7. Demonstrate growth in professional and personal development.

Non-Discrimination Notice
Corning Community College is committed to fostering a diverse community of outstanding faculty, staff, and students, as well as ensuring equal educational and employment opportunity and access to services, programs, and activities without regard to an individual’s race, color, national origin, religion, age, disability, sex, gender identity, sexual orientation, pregnancy, predisposing genetic characteristics, military status, criminal conviction, or any other protected characteristic. Employees, students, applicants, or other members of the College community (including, but not limited to vendors, visitors, and guests) may not be subjected to harassment that is prohibited by law or treated adversely or retaliated against based upon a protected characteristic.

The College’s policy is in accordance with federal and state law and regulations prohibiting discrimination and harassment. These laws include the Americans with Disabilities Act (ADA), Section 504 of the Rehabilitation Act of 1973, Title IX of the Education Amendments of 1972, Title VII of the Civil Rights Act of 1964 as amended by the Equal Employment Opportunity Act of 1972, and the NYS Human Rights Law. These laws prohibit discrimination and harassment, including sexual harassment and sexual violence. Inquiries regarding the application of Title IX and other laws, regulations, and policies prohibiting discrimination may be directed to: R. Nannette Nicholas, Director of Human Resources/Title IX Coordinator, 1 Academic Drive, Corning, NY 14830, nicholas@corning-cc.edu, (607) 962-9444. Inquiries may also be directed to the United States Department of Education’s Office for Civil Rights, 32 Old Slip, 26th Floor, New York, NY 10005-2500, OCR.NewYork@ed.gov, (646) 428-3800. The College’s complete Equal Employment and Education Opportunity Policy, which includes the procedure for filing complaints of discrimination and harassment, is available in Appendix B of this catalog.

Catalog Information
Every effort is made to ensure that the information provided in this catalog is accurate and current at the time of publication. Corning Community College reserves the right to correct errors and to add, withdraw or modify programs or courses based on changing needs or circumstances consistent with SUNY and NYS Education Department policy. Changes will be posted in the addendum section of the catalog as they occur. The information in this catalog was frozen as of 4/6/16.
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Learning transforms lives.
### Telephone Directory

- **Main number**: 607-962-9CCC
- **Toll free**: 800-358-7171
- **Voice/TDD Service**: use 711 relay
- **FAX**:
  - **Accelerated College Education Program (ACE)**: 962-9146
  - **Academic Affairs**: 962-9231
  - **Academic & Workforce Development Center**: 936-5500
  - **Admissions**: 962-9151
  - **Advising, Counseling, Career and Transfer Services**: 962-9434
  - **Airport Corporate Park**: 936-7397
  - **Alumni Relations**: 962-9473
  - **Arthur A. Houghton, Jr. Library**: 962-9251
  - **Athletics**: 962-9318
  - **Bookstore**: 962-9322
  - **Continuing Education**: 936-7397
  - **Enrollment Advisement Center**
    - (financial aid, registration, bills): 962-9875
  - **Goff Road Facility/Criminal Justice Center**: 937-1307
  - **Honors Program**: 962-9202
  - **Housing Information**: 962-9528
  - **Human Resources**: 962-9229
  - **Humanities & Social Science Division**: 962-9271
  - **Information Technology (Help Desk)**: 962-9555
  - **Institutional Advancement**: 962-9458
  - **Intramurals & Recreation**: 962-9476
  - **President**: 962-9232
  - **Professional Studies Division**: 962-9239
  - **Public Safety**: 962-9000
  - **STEM Division**: 962-9243
  - **Student Development**: 962-9264
  - **Student Disability Services**: 962-9262
  - **Student Life**: 962-9245
  - **Student Support Services**: 962-9459
  - **Student Transcripts**: 962-9230
  - **Workforce Education and Academic Pathways**: 962-9276
Calendar
The following calendar indicates important dates for traditional semesters. Courses offered at different times would follow a modified schedule. The Calendar is subject to change.

2016-17

Fall 2016
Classes begin.................................................................August 22
No classes-Labor Day holiday..................................... September 5
Early alerts submitted.................................................September 11
Warning grades submitted........................................October 9
No classes-Columbus Day break.................................October 10-15
Last day to drop a full-term course..............................October 30
No classes-Thanksgiving break.................................November 21-26
Last day of classes......................................................December 10
Final examinations ......................................................December 12-17

Spring 2017
Classes begin.................................................................January 17
Early alerts submitted................................................February 5
No classes-President’s Day break...............................February 20-25
Warning grades submitted........................................March 12
Last day to drop a full-term course..............................March 26
No classes-Spring break..............................................April 3-8
Last day of classes.......................................................May 6
Final examinations ......................................................May 8-13
Commencement..........................................................May 14

Winter 2017 Sessions
Classes in session.................................................December 19-January 12

Summer 2017 Sessions
Classes begin.............................................................May 30
Last day of classes......................................................August 12

Day and evening summer sessions of varying lengths are offered throughout the summer. Specific information is available from Enrollment Advisement Center.

College Closing
If the college closes due to inclement weather or other emergency, an announcement will be posted on the CCC website (https://www.corning-cc.edu) and released to local radio and television stations. Please help avoid overloading campus phone lines by going online or tuning in to a media station in your area. You can sign up to receive text messages about college closing and emergencies on campus by: Text “ccc” to 31996.
Academic Policies and Procedures

These policies and procedures will guide and benefit you as you proceed through your studies. This section is arranged alphabetically for your convenience.

Consult Advising & Counseling Services, an educational planner, or an adviser for assistance with interpretation of these policies. In matters where an educational judgment is necessary, Advising & Counseling Services or the appropriate Associate Dean can provide clarification. If you should disagree with the interpretation which you receive, the final source of appeal is the Vice President and Dean of Academic Affairs. Please ask questions about any policy which concerns you.

Academic Appeals

Any student has the right to appeal to the Academic Standards Committee for an exception to academic policies and procedures. The appeal process is readily available and each appeal is given careful individual consideration. The written appeal should clearly state the desired action and the reasons for the request. All appeals are submitted to the EAC where they will be forwarded to the appropriate individual for review. Academic advisers or educational planners are willing to assist in preparing an appeal. An appeal form can be obtained from MyCCC on your student tab or from the EAC.

Academic Progress Policy

Standards of Academic Progress

The Standards of Academic Progress at Corning Community College require students to maintain a standard of progress to keep matriculation in a degree program and eligibility for financial aid. Good academic standing is important to all students. To be considered in good academic standing and make progress toward a degree or certificate, students must maintain a 2.0 grade point average and successfully complete 60% of their attempted credit/credit equivalent hours each semester. At least once each semester, students are encouraged to meet with their faculty adviser or with an educational planner in Advising & Counseling Services to review their academic progress.

Matriculated CCC students (full-time and part-time) will be evaluated at the end of each fall and spring semester of attendance on the following criteria and must meet both the GPA and passed hours requirements to remain in good academic standing. If the standard of progress in not achieved, a student will be placed on academic probation or academic suspension as indicated in the chart below.

Students should be aware that grades of A, A-, B+, B, B-, C+, C, D, F, and, I, N, P, W, R, S, U, and X count as “hours attempted,” under the Academic Progress Policy. Passed hours include grades of A through D, and P.

How Academic Standing is Determined

a. GPA Requirements:

Students’ GPA will be used to determine their academic progress status based on total hours attempted as follows:

<table>
<thead>
<tr>
<th>GPA</th>
<th>0-1.40</th>
<th>1.41-1.60</th>
<th>1.61-1.99</th>
<th>2.0+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total HA</td>
<td>Probation</td>
<td>Probation</td>
<td>Probation</td>
<td>Good Standing*</td>
</tr>
<tr>
<td>0.50-32.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33-48.5</td>
<td>Suspension</td>
<td>Probation</td>
<td>Probation</td>
<td>Good Standing*</td>
</tr>
<tr>
<td>49+</td>
<td>Suspension</td>
<td>Suspension</td>
<td>Probation</td>
<td>Good Standing*</td>
</tr>
</tbody>
</table>

b. Passed Hours Requirement

Students meeting the GPA requirement for “Good Standing” must also pass 60% of hours attempted in the semester being evaluated. Students who do not pass 60% of hours attempted, in the semester being evaluated, will be placed on probation regardless of GPA.

Probation

Academic probation serves as warning that a student is in academic jeopardy. Students may be placed on academic probation either by their GPA, according to the above chart, or by not passing 60% of their attempted hours within a semester. Students placed on academic probation must meet with their faculty adviser or with an educational planner in Advising & Counseling Services to discuss the requirements for good academic standing, to register for courses, and to create an academic success plan. A student placed on academic probation will be limited to 13 credit hours for the subsequent semester unless an Academic Progress Appeal is submitted to and approved (see Academic Appeal Process below).

Suspension

Students will be placed on academic suspension when their GPA fails to meet the requirements of the above chart based on the total number of hours they have attempted. Academic suspension means that the student is no longer in a degree program, loses all financial aid, and is not eligible to return to CCC for one full academic semester. If the student had pre-registered for courses, his or her schedule will be deleted. A student placed on academic suspension at the conclusion of the fall semester may not enroll in the subsequent winter session or spring semester. Likewise, a student placed on academic suspension at the conclusion of the spring semester may not enroll in the subsequent summer session or fall semester. A student will remain on academic suspension until an Academic Progress Appeal has been submitted and
Academic Appeal Process
Students who are seeking a change in status and/or credit limit need to complete and submit an Academic Progress Appeal. As part of the appeal process, students must submit a plan for academic success that identifies the causes of their poor academic performance and demonstrate that actions have been taken to avoid or eliminate these causes. To begin the appeal process, a student must meet with his or her faculty adviser or an educational planner in Advising & Counseling Services to create a plan for academic success and to complete the Academic Progress Appeal. The Academic Progress Appeal is then submitted to the EAC where it will be forwarded to the appropriate individual for review. Academic Progress Appeals are available online or from Advising and Counseling.

Reinstatement
A student who has been placed on academic suspension may appeal this action if extenuating circumstances have led to the lack of progress toward a degree/certificate. As part of the appeal process, students must submit a plan for academic success that identifies the causes of their poor academic performance and demonstrate that they have taken actions to avoid or eliminate these causes. To begin the appeal process a student must meet with their faculty adviser or an educational planner in Advising & Counseling Services to create a plan for academic success and to complete the Academic Progress Appeal. The Academic Progress Appeal is then submitted to the EAC where it will be forwarded to the appropriate individual for review. Academic Progress Appeals are available online and in Advising and Counseling Services.

When an appeal is granted, the student will be reinstated with probationary status. This status limits the number of credit hours for which the student may register. Once reinstated, a student will be re-evaluated at the conclusion of the semester in accordance with the Standards of Academic Progress, as noted above. Moreover, if a re-instated student earns a semester GPA of 2.0 or higher and has completed at least 60% of the hours attempted in that semester and still falls in suspension status, the student will continue with probationary status.

Readmission for Students with Load Hour Limits
a. Following a period of one or more semesters of non-attendance at CCC, students must re-apply to the College through the Admissions office. Any prior academic status and credit limit is still in place. Students who wish a change in status must complete and submit a Readmit Appeal to the EAC. If the Appeal is approved, the student will be enrolled in probationary status and be limited to the number of hours they can register.

b. If two or more years have elapsed since last attendance, students will be readmitted in good standing with no credit limit. However, subsequent academic progress will be reviewed in accordance with the policy, unless a student has earned a 2.0 or higher semester GPA and completed at least 60% of the hours attempted in the semester of the student’s return.

Adding Courses
Students can register for a course through their academic adviser or their MyCCC account. Registration occurs continuously throughout the academic year on a rolling semester basis. At the time of registration, course pre-requisites and enrollment capacity are checked. Once a course has started, it may be added only with the instructor’s permission. Usually courses cannot be added after the first week of classes. To submit an add request to the instructor for a course that has already started, the student submits an online add request through MyCCC.

Advanced Standing
Advanced standing may be granted to transfer students from other colleges or post-secondary schools, applicants with credit for life experiences and those who have shown proficiency in specific subject areas through standardized examination programs. (See Credit/Advanced Standing section below).

Animal Use In Courses Policy
Some majors-level courses and programs, within the STEM Division, require vertebrate dissection and/or the use of living animals. Unless required by a specific program, participation in dissection in non-majors courses, within the STEM Division, is not mandatory. Alternatives to dissection may be provided where necessary. Please see individual catalog descriptions for courses that may require participation in this activity.

Appeals Protocol to this Policy:
• Objections to this policy will first be brought, in writing, to the Sciences Department Chairperson for discussion and a decision.
• If this decision is not satisfactory, the individual may refer the objection, in writing within five days, to the Associate Dean of the STEM Division for a decision.
• If this decision is not satisfactory, the individual may refer the objection, in writing within five days, to a committee composed of the Vice President and Dean of Academic Affairs, one faculty member from the Sciences Department (other than the one teaching the course in question), and one Associate Dean (other than the Asso-
Attendence
Success in courses is directly related to attendance. Regular attendence in class and laboratory sessions is expected of all students; however, instructors determine student attendance requirements for their courses. These attendance requirements, along with their relationship to final grades, should be clearly stated in the course syllabus. Attendance also affects eligibility for financial aid, and it is important that students attend classes on a regular basis to avoid loss of financial aid.

Students should contact the Health Office to report health-related absences if they are unable to attend classes for three or more consecutive days. The Health Office will notify instructors: students are responsible for missed assignments or lectures and students should discuss prolonged absences with instructors, who are not required to alter their attendance requirements.

Audit of a Course
Auditing a course means a student is not taking a course for credit, is not required to submit assignments or take tests, and any assignments submitted might not be graded by the instructor. A grade of T will be given to a student auditing a course. A student may audit a course with the permission of the instructor, but the decision to audit must be declared at the time of registration for the course. Enrollment for students auditing a course begins two weeks before the course starts. The last day for adding an audit course will be the same as that for adding any course for credit. The student may retake such a course for credit in a subsequent semester but may not receive a grade other than T in the semester in which intent to audit has been declared. Any person over 55 years of age can audit a course without paying tuition, though lab or other course fees still apply. In all other cases, a non-refundable fee will be charged.

Catalog Changes
CCC’s Course Catalog and Information Guide is compiled and published each academic year during the Spring semester. The policies and procedures contained in the catalog are in effect as of August of the academic year of the catalog. Every effort is made to ensure that the information provided in this catalog is accurate and current at the time of publication. Corning Community College reserves the right to correct errors and to add, withdraw, or modify programs or courses based on changing needs or circumstances consistent with SUNY and NYS Education Department policy. Changes will be posted in the addendum section of the catalog as they occur. If policy or procedure changes are made during the academic year that take effect during the current catalog’s timeframe, the change will also be posted to the addendum section of the catalog.

Changing Programs
Students who wish to change from one program to another should begin by meeting with their adviser. Forms necessary for recording a change of program are available from MyCCC, advisers, or the Enrollment Advisement Center (EAC). Program change requests require a student signature and are submitted to the EAC.

Course Cancellations
Weather: On days when the weather is bad, College officials will make every effort to announce class cancellations no less than two hours prior to the effected class. Listen to local radio stations for the latest information on closings or visit www.corning-cc.edu.

Instructor absence: When an instructor is absent and the class is cancelled, a notice will be posted on MyCCC, if time permits. Furthermore, the appropriate division secretary will post an official notice of class cancellation using a standardized printed poster. If there is no notice and an instructor does not appear during the first ten minutes of a class, students may leave.

Insufficient enrollment: If first-week registration in any course is insufficient, the course may be cancelled at the discretion of the Associate Dean of Instruction and/or Vice President and Dean of Academic Affairs.

Course Shelf Life
It is important that CCC graduates have the most current knowledge and skills required in their field of study. Skills acquired in a course previously taken are subject to course shelf life limitations as stipulated in the course description found in the College catalog. Any course used to meet a program requirement will need to be repeated if its course shelf life has been exceeded. A student repeating a course due to the course shelf life policy will pay full tuition charges for the course. The course will count towards the student’s requirements and enrollment status for determining financial aid eligibility. (Also see Repeat Courses information.)

Transferability of courses from other institutions would follow the same shelf life requirements as approved for CCC courses. Any appeals are to follow the current policy and procedure used for course waivers and substitutions.

Course Substitutions
Under special conditions, other courses can be substituted for program requirements. Inquiries should be made to the Associate Dean of the academic division that oversees the program. When necessary consultation will be made with the Associate Dean overseeing the course being considered for substitution.
If determination is made that a suitable course can be substituted, the Associate Dean overseeing the program will notify the Registrar.

Course waiver requests for wellness awareness (HLTH, HEPD, WELL) requirements should be initiated through the Associate Dean of the Professional Studies Division. Course waiver requests for wellness awareness (REPD, PEPD) and wellness activity (PFIT, RECC) requirements should be initiated through the Associate Dean of the Professional Studies Division. If the course waiver is due to a medical condition, the College Nurse, located in the Health Office, will initiate the waiver. Any waivers for the wellness requirements will then be sent to either the Associate Dean of the Professional Studies Division.

Course waiver requests for foreign language requirements should be initiated through the Associate Dean of the Humanities and Social Sciences Division. An educational planner for students with disabilities will be consulted when a documented disability is the basis for the request.

Credit / Advanced Standing

Some students come to CCC already having proficiency in one or more courses. Credit can be received for prior course work, life experience, or examination. When considering students for advanced standing, the College is guided by the recommendations of the American Council on Education and the American Association of Collegiate Registrars and Admissions Officers and reserves the right to evaluate all academic work in terms of current validity. The learning experience must be at the college level.

Degree candidates must complete a minimum of 30 program hours of credit in residence at CCC.

There are several methods by which credit is granted:

1. Transfer Credit

Credit-bearing transfer courses (at C level or above) may be accepted from any regionally accredited, candidate, or correspondent institution of higher education or NYS Education Department chartered degree-granting institution. There shall be no limit on the number of transfer credits accepted. However some programs have special requirements regarding transfer credit.

Transfer credit can be awarded for course work taken from a foreign institutions. The transcript from the foreign institution must be evaluated by an approved agency (World Education Services or Education Evaluators International). The foreign institution must be accredited and a grade of C or better must have been achieved for the course work.

An applicant who has attended other colleges or post-secondary schools and wishes to receive transfer credit for work completed must provide the Admissions Office with an official transcript from each school.

2. Credit by Examination

Credit may be awarded to students who earn an appropriate grade in any of the following exams: CCC challenge exams, Excelsior College exams, Advanced Placement exams offered through the College Board, International Baccalaureate Exams, College Level Examination Program (CLEP) and DANTES/DSST exams. In some cases, CCC course work or other demonstration of skills may be required before credit is granted. You may obtain credit for these courses by successfully completing the exam (provided the academic divisions have comprehensive examinations available). Your transcript will show the credit earned. No letter grade is given; this credit will not affect your GPA (Grade Point Average). There is no limit to the amount of credit that can be earned in this manner; however, this credit does not apply to the residency requirement. Make arrangements through the appropriate academic division. Contact the Admissions Office or an academic adviser for information.

3. Credit for Prior Learning

Credit through portfolio assessment is granted by an academic division. Persons who have gained college-level learning through work or other experiences may demonstrate that knowledge through various methods (performance, oral, or written). These credits are not considered CCC residency credits but are treated as transfer credit. There is a fee for credits awarded. See Admissions or an academic adviser for information.

Credit for Military or Other Training Programs

See Transfer Credit or Credit for Prior Learning. For consideration of credit for military service, submit an official academic transcript to the Office of Admissions.

Credit Through Portfolio Assessment

See Credit for Prior Learning.

Dean’s and President’s Lists

To be eligible for Dean’s List for a given semester, students must meet all the following criteria:

1. A semester GPA of 3.5 or higher
2. Twelve or more hours of earned credit (equivalent credit hours are not included)
3. No grade lower than C
4. No I or N grades

Part-time students will be considered for Dean’s List in a semester in which they have earned at least six credit hours of course work.
work during the semester in accordance with the above requirements.

To be eligible for President’s List for a given semester, students must meet all the following criteria:
1. A semester GPA of 3.75 or higher
2. Twelve or more hours of earned credit (equivalent credit hours are not included)
3. No grade lower than C
4. No I or N grades

Part-time students will be considered for President’s List in a semester in which they have earned at least six credit hours of course work during the semester in accordance with the above requirements.

A student who completes an incomplete (I) will be awarded Dean’s or President’s List status retroactively in the semester in which the I was originally assigned, if all other criteria are met.

**Developmental Progress Policy**

**Developmental Placements**
All CCC college-level courses require proficiency in reading, writing, mathematical, verbal or other skills. To help students enroll in courses best suited to their skills, placement testing or assessments are used to determine appropriate courses. When learning needs are identified, students are required to take developmental courses. Developmental courses are credit-equivalent courses, meaning that they count towards the student’s load hours for full-time status and financial aid, but they do not meet program requirements and are not calculated in the Grade Point Average (GPA).

**Developmental Progress Policy**
Based on placement, students may be required to take ENGL 0980, or the ENGL 0999/1010 support combination before taking ENGL 1010, and take MATH 0960 or MATH 0860 before taking a credit class. If students are placed into ENGL 0980 Reasoning, Reading, and Writing for Academic Studies, they will receive instruction in both reading and writing strategies; the grade is either fail or pass. Students earning the minimum pass in ENGL 0980 are required to take ENGL 0999/1010 co-requisite. Students with consistent high-quality classwork will be reviewed for ENGL 1010 alone.

If a learning need is identified in mathematics, students must register in MATH 0860 (Basic Math Review) or MATH 0960 (Pre-Algebra) as determined by the placement test. Students placed into either course must complete it with a grade of B- or higher.

Upon successful completion of either course, the student will be prepared to take MATH 1015 - Introductory Algebra. Even if a program does not require a credit-bearing Mathematics course, students must demonstrate entry-level college mathematics skills through assessment or by passing MATH 0860 or 0960 before they graduate.

All full- and part-time students placed in one or more developmental classes will also be placed in FYEX 1000 (First Year Experience 3 credit hours).

Students (new and continuing) placed in any developmental courses will be limited to no more than a 16 hour load until they have successfully passed these developmental courses. Credit and equivalent credit count toward the 16 hour limit.

Students who are placed in any developmental courses based on an assessed need should enroll in the appropriate course(s), including FYEX 1000, in their first semester. Students who do not successfully complete their developmental course(s) and FYEX 1000 in their first semester must re-register for them in their second semester.

The list of students who do not complete the required developmental courses and FYEX 1000 in three full-time (or equivalent) semesters will be reviewed to determine if dismissal is warranted. Those students who are dismissed (developmental dismissal) can register for further study at CCC only under the following conditions: (1) one year has elapsed since dismissal and (2) assessment testing determines that they place out of all developmental courses. Developmental dismissal may be challenged by a student by submitting an appeal to the Academic Standards Committee. For further information regarding this policy, contact Advising & Counseling Services.

**Dropping a Course**

**Process:**
The College realizes that students sometimes need to drop courses after classes begin. Students who have begun attendance in a course may drop the course without the instructor’s signature. To drop a class the student submits an online drop form through MyCCC.

Before dropping any course it is strongly recommended that the student:
1. Discuss the decision with their instructor, adviser, coach, and/or counselor.
2. Check with the Enrollment Advisement Center (EAC) to determine any effects on financial aid, billing, academic progress, and/or developmental progress.
3. The date EAC is notified of the drop will be the official drop date.

**Financial Aid:**
Check with a representative in EAC before dropping a course. In some cases, course withdrawal can jeopardize eligibility to receive financial aid. Refer to related information under Financial Aid.

**Deadline:**
A course can be dropped up until 60% of the length of the course. For clarification of exact deadline dates, see the course instructor or a representative of EAC. All student drops submitted after the official drop date must have the approval of the Vice President and Dean of Academic Affairs. After 60% of a the length of a course has passed, students still have the option of officially withdrawing from the College. (See Withdrawal from College.)

**Academic Record:**
A course dropped in the first 20% of the length of the course will not appear on the student’s academic transcript. Courses dropped between 20% and 60% of the length of the course will appear on the student’s academic transcript with a W indicating “withdrawal.” After 60% of a course has passed a course may not be dropped and a final grade will be recorded on the student’s academic transcript. For full term courses (15 weeks) a student has 3 weeks to drop the course without the course appearing on his or her transcript and ninth weeks to drop it with a W grade.

**Drops by Instructor**
Faculty members may drop students from their courses for non-attendance. Refer to the course syllabus and instructor.

**Early Alert**
Within the first three weeks of each semester, faculty identify students who are showing signs of problems that could result in their being unable to successfully complete the course. The faculty will specify an area of concern (i.e., attendance, preparation, effort, etc.) and report them to Advising and Counseling Services. Students who are identified receive an email notification that specifies the area of concern (i.e., attendance, preparation, effort, etc) along with suggestions for improvement. Contact Advising and Counseling Services for more information.

**Email**
Students and employees are given a CCC email account. The College uses email as an official communication tool. As the College may send official correspondence to users via electronic mail; students, faculty, and staff, are expected to maintain available space in their @corning-cc.edu email account and are responsible for regularly reading any such correspondence as may be transmitted. For more information, refer to the College’s Acceptable Use Policy which can be found in MyCCC.

**Final Exams**
The last week of the Fall and Spring semester is final exam week. Courses that run through the last week of these semesters will have a final exam scheduled in a three-hour time block. Final exams for evening and weekend courses will be held in the course’s last regularly scheduled class period and regularly scheduled room. Internet courses may have a final exam time scheduled. Refer to the course instructor for information. For courses that do not run through the last week of the Fall and Spring semester and for classes in the Winter and Summer semesters, final exams are arranged by instructors with their students.

The final exam schedule will be posted in MyCCC. Students who have exam time conflicts should see their instructor.

**Cancellations:**
In the event a day of classes is cancelled during Final Exam week, the day shall be made up on the Monday of the following week. If multiple days are missed during Final Exam week, the second day missed shall be made up on Tuesday of the following week and so forth.

**Fresh Start**
Fresh Start provides an opportunity for students who left the College after experiencing academic difficulties to continue their studies with their GPA set to 0.0. Students are eligible for Fresh Start if they meet the following requirements:

1. Their GPA was below 2.0 when they left the College.
2. One calendar year has elapsed since their last attendance at CCC.
3. They have achieved a 2.5 GPA in the first 12 credits earned (excluding developmental and wellness activity courses) upon returning to CCC. If more than 12 credits are earned, then all earned credits (excluding developmental and wellness activity courses) up to and including that semester will be used to calculated GPA.
4. They have completed all developmental coursework and have no outstanding incompletes.
They must complete and submit an application for a Fresh Start to the Enrollment Advisement Center.

Students may apply for Fresh Start only once. It cannot be applied to a previous degree. If granted Fresh Start, there may still be implications for financial aid, veteran’s benefits, and transferability. Once granted, Fresh Start may not be rescinded. All course work will remain on the transcript with the notation, “Fresh Start Granted.” No prior course work grades will be used in the calculation of the student’s GPA. Students will receive credit for the courses in which they achieved a C or better so that these credits can be used in program evaluations. Any prior course work in which students have earned a D grade cannot be used to meet degree requirements. Credits for courses in which a C or better has been achieved in work prior to the Fresh Start cannot be used to fulfill residency requirements. Once Fresh Start is granted, the GPA will be calculated with grades received only since the student’s return to the College. For more information or to apply, contact Advising & Counseling Services.

State University of New York (SUNY) General Education Requirement

The State University of New York (SUNY) requires students intending to receive a baccalaureate degree from a SUNY college or university to fulfill specific general education requirements. At least 30 credits must be earned in courses approved in the following ten areas: mathematics, natural science, social science, American history, western civilization, other world civilizations, humanities, arts, foreign languages and basic communication. CCC students in Associate in Arts or Associate in Science programs, except the Engineering Science program which is waived from the requirement, will be able to complete seven of ten SUNY General Education Requirement academic areas (including mathematics and basic communication), two competency areas, and 30 credits of SUNY General Education courses in all transfer programs. Once certified as meeting these general education requirements at CCC, students will not be required to complete them again upon transfer to any baccalaureate granting SUNY institution. Courses which have been approved as meeting the general education criteria are identified in their course description. On the following page is a chart indicating approved CCC courses and the approved SUNY general education category it fulfills.
<table>
<thead>
<tr>
<th>Mathematics (M)</th>
<th>Natural Sciences (NS)</th>
<th>Social Sciences (SS)</th>
<th>American History (AH)</th>
<th>Western Civilization (WC)</th>
<th>Other World Civilizations (OWC)</th>
<th>Humanities (H)</th>
<th>Humanities (H)</th>
<th>The Arts (A)</th>
<th>Foreign Language (FL)</th>
<th>Basic Communication (BC)</th>
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</tbody>
</table>
Grades
Grades, as follow, will be issued at the end of each semester.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
<th>Achievement in Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.0</td>
<td>Comprehensive knowledge, understanding; marked perception, originality.</td>
</tr>
<tr>
<td>A-</td>
<td>3.7</td>
<td></td>
</tr>
<tr>
<td>B+</td>
<td>3.3</td>
<td>Moderately broad knowledge, understanding; noticeable perception, originality.</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>B-</td>
<td>2.7</td>
<td></td>
</tr>
<tr>
<td>C+</td>
<td>2.3</td>
<td>Reasonable knowledge, understanding; some perception, originality.</td>
</tr>
<tr>
<td>C</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>1.0</td>
<td>Minimum knowledge, understanding; limited perception, originality.</td>
</tr>
<tr>
<td>F</td>
<td>0.0</td>
<td>Unacceptable knowledge, understanding; failing work.</td>
</tr>
</tbody>
</table>

The following grades and administrative notations are not used to determine grade point average:

- **H** Honors work. Appears next to course.
- **I** Incomplete. May be assigned at the discretion of the instructor in special circumstances in which course requirements have not been completed by a student who has clearly demonstrated potential for successfully completing the course. A written statement of requirements for completing the course must be given to the student and the faculty member’s ADI by the faculty member. Credit hours and grade points are not assigned for an I grade. When the requirements have been completed, the faculty member will submit a grade change from the I to another letter grade. Course requirements for the I grades must be completed within one calendar year; however, the instructor has the prerogative of establishing an earlier deadline.
- **N** No grade/no credit.
- **P** Passing work at a C level or higher.
- **R** Official withdrawal from College.
- **S** Satisfactory. For courses not counted for degree credit.
- **T** Audit.
- **U** Unsatisfactory. Courses not counted for degree credit.
- **W** Official withdrawal from course.

Grade Point Average (GPA)
To determine a grade point average (GPA), divide the total number of grade points earned by the number of credit hours taken.

Example:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Grade</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1020</td>
<td>3 cr. hr.</td>
<td>A (4.0 pts.)</td>
<td>12.0</td>
</tr>
<tr>
<td>HIST 1110</td>
<td>3 cr. hr.</td>
<td>C+ (2.3 pts.)</td>
<td>6.9</td>
</tr>
<tr>
<td>MATH 1000</td>
<td>1 cr. hr.</td>
<td>P (no value)</td>
<td>0.0</td>
</tr>
<tr>
<td>MATH 1110</td>
<td>3 cr. hr.</td>
<td>F (0.0 pts.)</td>
<td>0.0</td>
</tr>
<tr>
<td>RECC 1010</td>
<td>1 cr. hr.</td>
<td>B (3.0 pts.)</td>
<td>3.0</td>
</tr>
</tbody>
</table>

11 cr. hr. total pts. = 21.9

Dividing 21.9 points by 10 credits equals 2.19 GPA.

Grade Point Average (GPA):
For each credit hour, points are assigned based on the grade received. This average is calculated by dividing the total grade points earned by the number of credit hours taken. For repeated courses, the most recent grade is used in the calculation. For students granted Fresh Start status, only grades earned upon return to CCC will be calculated in the GPA. Developmental courses are not calculated in the GPA.

Program Grade Point Average (PGPA):
Each graduating student must earn a minimum 2.0 program grade point average. The PGPA will be determined by calculating the grade point average of the courses used to fulfill the program requirements as outlined in the College catalog and based on only those courses used to meet program and degree requirements, including program electives and free electives. Transfer credits are not calculated in the PGPA.

Grading Practices
If at any time you disagree with your instructor over a final grade, make an appointment with the instructor so that you can discuss the reason for your grade. You are entitled to know the basis upon which you are graded.

If you are not satisfied with the resolution of the grading problem after talking with your instructor, you have the right to discuss the matter with the division’s associate dean. If you are still not satisfied with the resolution of the grading problem, the final appeal rests with the Vice President and Dean of Academic Affairs.

Time Limit for Grade Change:
A student has the right to challenge a final grade given by a faculty member within one year of the awarding of the grade. Only the faculty member who awarded a grade can authorize a change,
with the approval of the division’s associate dean. If a faculty member is unavailable, you can discuss this matter with the appropriate associate dean. After the one-year time limit has passed, all grade changes must be requested by submitting an academic appeal to the Academic Standards Committee (see Academic Appeals for process information).

**Graduation Application and Review**
A full semester before intended graduation, students should submit a degree application to the Enrollment Advisement Center. Their academic record will then be reviewed to determine that all degree requirements are met.

**Graduation Requirements**
Each graduating student must:
- Complete all of the requirements for the program as described in the catalog; and,
- Complete a minimum of 60 semester credit hours for degrees and the minimum required semester credit hours for certificates, (some programs require more than 60 credit hours); and,
- Earn a minimum 2.0 PGPA, and,
- Meet the College’s Residency requirement of 30 program credit hours for degrees and 50% of program credit hours for certificates.

It is the student’s responsibility to make certain that all requirements for graduation have been met. Students have the right to come under the regulations published in the catalog in effect during the first semester of their matriculation at CCC or, if they choose, a catalog published after they have matriculated at CCC.

**Graduation honors:**
- Summa cum laude, students must have a GPA of 4.0;
- Cum laude requires a GPA of at least 3.5.
To be eligible for program honors, graduates must have a Program Grade Point Average (PGPA) of at least 3.5. The award will be presented to the graduate with the highest PGPA in each program. In order to wear the Phi Theta Kappa gold stole at commencement, students must have completed all graduation requirements with a total GPA of 3.5 or higher and be a member of PTK.

Any student within six credit hours of completion of the degree or certificate and who has a minimum PGPA of 2.0 at the time of commencement will be allowed to participate in commencement exercises. The degree or certificate will be conferred and the diploma will be issued in August, January or May following completion of all requirements.

**Independent Study**
These courses are supervised by Instructors with permission of the appropriate Associate Dean. Interested students should contact the Instructor to find out if an independent study in a given subject area is possible. Once approved by the Instructor and the Associate Dean, the student adds for the course through MyCCC.

**Multiple Programs**
Students may be permitted to earn more than one degree or complete the requirements for more than one program. You can initiate that action by completing a program change form or meeting with the Associate Dean responsible for the new program. A degree can be awarded only once, but more than one program can be earned within any degree. It is recommended that students consult with financial aid before pursuing multiple programs.

The requirements for earning multiple programs are:
- All of the requirements for each program must be met.
- At least 15 additional credit hours must be earned for each additional program, at least nine of which have been earned in residence at CCC.

**Pass/No Grade-No Credit Option**
Students who have been named to the President’s List or Dean’s List may enroll the next semester in any one free elective course under the pass/no grade option. This course will not affect the GPA, and it will be noted as pass/no grade on the transcript. When choosing this option, students must notify Enrollment Advisement Center within two weeks of the beginning of the course in a 15-week semester (or equivalent). If, by the end of the 13th week (or equivalent), students wish to receive a standard grade, they may do so by notifying Enrollment Advisement Center. Students can continue to use this option as long as they remain on the President’s List or Dean’s List. This option will be used for free electives only; however, if a student subsequently changes programs, courses with the P grade, already taken, can fulfill the new program’s requirement.

**Placement into Courses**
Except in special circumstances, students entering CCC are required to take assessment tests to determine their level of reading, writing, and mathematical ability for placement into appropriate entry-level courses. The course number of a developmental course will begin with a zero. If students are placed into and required to take a developmental course, they will be monitored under CCC’s Developmental Progress Policy. Students can retake assessment tests once. See Enrollment Advisement Center for details.

**Registration**
In order for a student to receive credit in a course, the student must be properly registered for that course. Enrollment in a
course is not official until proper registration materials have been filed with Enrollment Advisement Center. Also see Add a Course, Auditing a Course, Dropping a Course

**Blocks to registration:** Further registration in courses may not be permitted until outstanding requirements are met. Examples of reasons for students’ registrations being blocked are satisfying the College’s academic, developmental, health and financial requirements.

It is a general College practice that when credit has been received for a course which requires a prerequisite, credit may not later be received for the prerequisite course or its equivalent, unless previously approved by the appropriate associate dean.

**Online Registration:** Online registration is available through MyCCC. Most continuing students in good academic standing will be permitted to register online during open registration periods. Students who meet with an academic adviser will be permitted to register prior to open registration. First-time full-time students, students with pending developmental requirements, students on probation, and students who are not in good academic standing are strongly encouraged to consult with an adviser before registering for courses.

Student-initiated online registration will be blocked for courses requiring instructor consent and courses for which prerequisites have not been met.

**Repeat Courses**
A student may repeat a course or take an equivalent course for a letter grade. For any repeated course the original grade together with the repeat grade will be recorded on the student’s transcripts but only the most recent grade, even if it is lower than the original grade, will be used to compute the GPA. If, the student repeats the course due to an expired shelf life, the new grade will be used in the calculation of the student’s PGPA.

Students should note: because the most recent grade is used, if they repeat a course and earn a lower grade, their GPA will go down. Likewise, if they fail the course or earn a grade that does not fulfill the requirement, they risk having to take the course once again.

The TAP award will count repeat courses toward full-time attendance if a student earns a D or higher in a course with shelf life or a course required to continue in a program. However, if a student repeats a course in which he/she earns a D or higher and the course does not have a shelf life or the shelf life has not expired, the student must have 12 or more hours of other courses to be considered a full-time student for TAP.

For questions about repeat courses, contact Advising & Counseling Services.

**Residency Requirement**
Students pursuing an associate degree must complete a minimum of 30 program hours of credit for a degree at CCC. For certificate students, 50% of the program hours of credit must be completed at CCC.

**Semester Schedule Limits and Course Loads**
The minimum full-time load is 12 load hours, usually four courses. An average load is 15 credit hours. If you take fewer than 12 load hours a semester, you are a part-time student. Permission from the Associate Dean of Instruction is required to take more than 19 hours. Students who plan to work while taking classes should talk with their academic adviser or a College counselor to realistically plan how much time can be committed to college studies, work obligations and home responsibilities.

Most associate degree programs require 62-72 credit hours of course work. In order to graduate in two years a student should plan to take 15-18 hours per semester. Each hour of work in class can be expected to require at least two hours of study outside of class. Students with no outside employment or other major responsibilities can generally carry a full-time load. If a student intends to work more than 15 hours a week, the College recommends that the student reduce academic load and plan to take more than two years to complete a degree.

**Recommended levels of work and study are as follows:**
- If you work 1 to 10 hours per week, CCC recommends you schedule 13-16 credit hours.
- If you work 11 to 20 hours per week, CCC recommends you schedule 9-13 credit hours.
- If you work 21 to 30 hours per week, CCC recommends you schedule 6-9 credit hours.
- If you work 31 to 40 hours per week, CCC recommends you schedule 3-6 credit hours

**Student Progress Policy**
See Academic Progress Policy

**Transcript of Courses**
An official academic record listing courses and grades for each student each semester is kept in the Office of the Registrar. Requests for an official transcript should be addressed to the Enrollment Advisement Center (EAC). Students can access their unofficial transcript through their MyCCC account. Any student who has not satisfied obligations to the College may have the transcript of record withheld until such obligation is satisfied.
Transfer Credit
See Credit/Advance Standing

Warning Grades
At mid-semester, students with D or F averages in any course will be notified of their standing. This grade is only to encourage those students to get help in the course and is not an additional grade on their records. Students who get a warning grade should go immediately to their instructor or adviser to discuss what to do about it. Tutoring help, study skills help, or seeing an educational planner for assistance are possible solutions. Contact Advising & Counseling Services for further information.

Withdrawal from College
Official withdrawal from the College is possible any time prior to the start of final exams. Obtain withdrawal information from Advising and Counseling, Enrollment Advisement Center, or an adviser. An exit interview with a counselor is strongly suggested and should be arranged at Advising and Counseling. To officially withdraw from College, the student must notify EAC by submitting an online drop request for each registered course through his or her MyCCC account. The date EAC is notified is the official withdraw date.

Before withdrawing it is strongly recommended that students discuss the decision with their instructor, adviser, coach, and/or counselor and check with EAC to determine any effect on their financial aid, bill, academic progress, and academic record.

A grade of R may be placed on the record for each course being taken at the time of withdrawal. If there are any outstanding obligations, your academic records will be held until they are satisfactorily fulfilled; until that time no transcript requests will be processed.

Withdrawal from Courses
See Dropping a Course

Writing-Process and Writing-in-Content-Areas Courses
To uphold its commitment to the continuing development of students’ skills in written communication, CCC has designated courses as Writing-Process (WP) or Writing-in-Content-Areas (WCA) if those courses meet the following criteria:

Writing-Process (WP)
At least 60 percent of a student’s final grade must be determined from structured writing assignments: essays, research projects, technical and laboratory reports, etc. The assignments are designed to develop, reflect and reinforce writing expertise appropriate to college-level learning and thinking required in a particular discipline. Structured writing assignments must total at least 3,000 words throughout a semester.

All structured assignments are read and evaluated by the classroom instructor. Assignments are graded not solely on content, but also on aspects of writing skills: focus, structure, development, standard written English, etc. Assignments emphasize writing process, including planning, shaping, drafting, revising, proofreading and editing. A specific revision policy for enhancing and honing student writing skills is provided.

Classroom time is devoted to topics directly related to writing in the discipline.

Writing-in-Content-Areas (WCA)
Thirty to 100 percent of a student’s final grade must be determined by writing: essays, essay examinations, technical and laboratory reports, observation reports, journals, concept illustrations (tie-ins), etc. The assignments are designed to evaluate, apply, reflect and reinforce course concepts. The writing should be appropriate to college-level learning and thinking required in a particular discipline. Structured writing assignments must total at least 1,500 words throughout a semester.

All structured assignments are read and evaluated by the classroom instructor. Assignments are graded mostly on content, coherence and standard written English.
**Accelerated College Education Program (ACE)**

ACE is a concurrent enrollment program for high school juniors and seniors who have a strong academic background (i.e., cumulative “B” high school average or higher). The program is nationally accredited through the National Alliance for Concurrent Enrollment Partnership (NACEP) and is one of only 57 colleges in the country to have achieved this status.

Students take college-level courses at their home school and earn Corning Community College (CCC) credits at a substantially reduced tuition cost. These credits generate a CCC transcript and transfer directly to Corning Community College and over 300 colleges nationwide.

Students must meet the prerequisites for the courses, as described in the course section of this catalog. If a course requires eligibility to enroll in ENGL 1010 and the student has not taken that course, he or she must demonstrate proficiency through basic skills assessments in reading and writing.

For more information about the program, and cost savings students can benefit from, please contact the Office of Academic Outreach at (607) 962-9140; or visit the ACE website at www.corning-cc.edu/ace.

**Honors Program**

The Honors Program offers motivated students the opportunity to sharpen their research skills, broaden their knowledge across disciplines, and create unique projects tailored to their specific career goals and academic interests while collaborating with other students and in cooperation with faculty. In pursuit of academic excellence, students will be challenged to think critically, creatively, and in divergent ways.

**Eligibility:**

Entering freshmen with a high school GPA of 3.5 or equivalent and CCC students with a cumulative GPA of 3.5 and at least 12 credit hours earned are eligible to take Honors courses, either toward and Honors diploma or to simply enhance their academic work across disciplines.

**Honors Courses:**

Any student who is Honors-eligible can enroll in an Honors course whether he or she intends on completing an Honors diploma or not. Honors courses fall into the following categories:

**Existing courses taken for Honors credit:**

Any CCC course can be taken for Honors credit provided that the student and instructor agree on the additional curriculum and work that must be completed in order for the student to earn honors credit. To take an existing course for Honors credit, an interested student should approach his or her instructor within the first five weeks of the semester and ask if he or she can take the course for Honors credit. The student and instructor should write up and sign a brief “Honors Contract” that outlines the additional curriculum, work and instructor-student contact time that the student must complete and forward it to the Honors Program Coordinator for approval by the Honors Committee.

**Honors Forums:**

The Honors Forum is a seminar for the discussion of various ideas and topics arising from outside readings or activities. Emphasis is on the preparation, presentation, discussion, and analysis of these topics, as well as on effective communication of ideas. Guest speakers and field trips are also often part of the Forum. Students can repeat the Honors Forum twice and earn three credit hours each time. The Honors Forum is listed in the CCC Catalog and Class Schedule as Honors Forum I (HONS 2960) and Honors Forum II (HONS 2961.)

**Honors Service Learning and Independent Study:**

Service Learning and Independent Study courses can also be developed for Honors students. Eligible students who are interested should meet with the appropriate instructor and discuss the parameters of such a course. If the instructor agrees, an “Honors Contract” should be drawn up and submitted as described above.

**Honors Diploma:**

To earn an Honors Diploma, a student must complete no fewer than 15 credit hours of Honors course work, from the type of Honors courses listed above. Up to three credits can be taken as Service Learning or Independent Study.

**Presidential Scholar**

The Presidential Scholars award goes to students who graduate from high school ranked in the top ten percent of their graduating class. See the website for details: https://www.corning-cc.edu/presidential-scholars.
Admission
Corning Community College offers support services to help applicants find areas of study best suited to their interests, aptitudes, and abilities. Those who have previously done well in school can expect challenge and growth at CCC. Those who may need assistance developing reading, writing, or mathematics skills will find support and services are available here to help build the foundation which leads to success in college.

Application Process
Please refer to the Office of Admissions official web page for the current application process at https://www.corning-cc.edu/apply. Those who wish to have an interview should contact the Office of Admissions for an appointment. All accepted students will be informed of assessment, advising, and orientation procedures.

Before a student can be considered as an eligible candidate for a degree or certificate, a student must be matriculated. Non-matriculated students may take a full time course load. However, non-matriculated students are strongly recommended to matriculate as programs of study and requirements may change.

Admission policies are the same for full and part-time status.
- Full-time (12 credit hours or more)
- Part-time (11.5 credit hours or less)

Students may enroll without having definite plans for the future. Academic advisers offer guidance and support, and they can help select appropriate courses for the first semester. Applicants interested in career planning services may contact Advising & Counseling for assistance in the career decision-making process.

Many students take a course or two for their own interest or because other obligations preclude full-time study. Students planning to attend as a non-matriculated student are not required to go through the admission process and can enroll for courses by registering through the Enrollment Advisement Center.

Students who are working toward a degree or who will be applying for financial aid need to complete the application process described on the college’s official web page.

Admission Policy
1. Preliminary Education Requirements
Applicants for matriculation must have a diploma from an accredited high school; equivalency diploma (i.e., GED or EDP); certification of completion of four year high school course as a home schooled student; or an associates or higher degree from a regionally accredited post-secondary institution (AOS degrees are not considered for matriculation purposes but students may receive transfer credit if applicable). Applicants who have attended post-secondary must request an official transcript be sent to Corning Community College. An official transcript from each previously attended institution must be received in order to grant transfer credit.

Admission into certain programs may require additional prerequisites. See program descriptions for details.

2. Correspondence Schools
As of March 2008, we will only accept correspondence school degrees if the student resided in the correspondence school’s state at the time of schooling and the school is registered with the department of education in that state.

Applicants who have completed an out of state correspondence school for their high school requirements may not meet the preliminary education requirement set by the New York State Department of Education.

3. Assessment / Placement Testing
Most entering students will be required to take basic skills assessments in reading, writing, and mathematics before registering for courses. The results will determine the courses students will take in these areas.

If students are not academically prepared, the College will work with them to carefully select courses to prepare them for college-level work. This may mean that one or more semesters of developmental courses will be required before they are allowed to register for credit courses.

Students with disabilities can make arrangements for accommodations by contacting the Student Disability Services Office well in advance of taking the assessments.

Entrance examinations such as Scholastic Aptitude Test (SAT) or American College Testing (ACT) are not required.

4. Accelerated Senior Year
Applicants who have substantially met high school graduation requirements at the end of their junior year may be considered for full-time study during their traditional 12th grade academic year only when the Director of Admissions judges the student to be academically prepared and capable of success. Decisions will be based on the following criteria:
- An academic background that includes three years of English, social studies, mathematics, and science at the Regents level. Candidates should have an 85 average or higher in these academic disciplines. Other appropriate courses may be included when calculating the academic average.
b. A written recommendation from the high school principal or counselor which includes (1) a statement endorsing study at CCC, and (2) high school acceptance of CCC credits to meet graduation requirements.

c. A written recommendation from parent or guardian.

d. A written letter from the student addressing his/her academic goals and reason for attending.

e. Completed Accelerated Senior Year Form

f. A meeting with an admissions representative.

It is imperative that applicants considering early admission are academically prepared to take college-level courses.

High school students who enroll at CCC while completing requirements for their high school diploma are not eligible for any federal or state financial aid, including federal student loans.

5. Home Schooled Applicants

We recommend that all home schooled applicants meet with an admissions representative to discuss the process.

a. Home schooled applicants seeking admission to the college must submit certification of an equivalent of a four year high school course of study. Applicants home schooled in New York State (who do not have an equivalent diploma) are required to submit CCC’s Superintendent Form for Home Schooled Applicants. This form must be completed by the superintendent of the school district in which the student resided. The form must include the superintendent’s signature and school district seal to be valid.

b. Applicants completing their home school requirements outside of NYS, must provide a letter or other documentation from officials in the school district of their residence certifying the completion of a program of home instruction meeting the requirements of the state of residence for the recognized equivalent of a high school diploma.

c. Applicants who are under the compulsory age of attendance will be eligible for consideration for admission only if they can provide verification of an equivalent of a four year high school course of study.

d. Home schooled applicants beyond compulsory school age (completion of the school year in which the student turned 16, or older if required by the school district of residence) who cannot obtain certification of completion will not be eligible for financial aid or for matriculation. However, applicants may choose the following alternate paths towards matriculation:

1. Take courses that satisfy the New York State option for college coursework (see section 8); or

2. Earn a General Equivalency Diploma.

   Once one of the above is completed, applicants would be considered for admission. (Applicants must notify the Office of Admissions for consideration).

6. Readmission

Matriculated students who have withdrawn from the College, have not been in attendance for two semesters exclusive of the summer and winter terms, have graduated from CCC, or have been academically separated must apply for readmission to return as students and will be considered for readmission under the current catalog requirements. Transcripts submitted prior to the Fall of 2002 may need to be resubmitted. Please inquire with the Office of Admissions if you have questions as to the need for submission of transcripts.

7. International Applicants

International applicants must follow the application process as outlined for full-time matriculated students. In addition, they must submit scores from the Test of English as a Foreign Language (TOEFL) and satisfactory evidence that they have sufficient funding to finance both living and college expenses. Applicants with coursework taken at foreign institutions must provide the Office of Admissions with an official evaluation from an approved educational evaluation service. Contact the Office of Admissions to find out which evaluators are approved. See details of the international admissions process and deadlines on the college’s official web page.

8. Applicants who do not meet the preliminary education requirements

Although applicants without a high school diploma or its equivalent may not matriculate, an individual may take courses without federal financial aid or student loans. Individuals can satisfy New York State’s requirements for an equivalency diploma by completing 24 hours of college credits. The 24 credits must be in these subject areas: English–6 credits, math–3 credits, natural sciences–3 credits, social sciences–3 credits, humanities–3 credits, and credit hours in any other courses within the degree requirements–6 credits. New York State determines which 24 credit hours are used for the equivalency diploma. For more information on how college courses can be used to earn an equivalency diploma: http://www.acces.nysed.gov/ged.

9. Taking Courses Without Matriculating

Individuals who wish to take courses without matriculating are not required to go through the admissions process, however must speak with an Admissions Representative or an ACE Representative.

10. Additional Information

Health form. Each student must complete a self-reporting health questionnaire and submit it to the Health Office. Students may be accepted and register prior to receiving immunization records. However, immunization requirements must be met or a hold will be placed on the student’s record. All applicants born January 1, 1957 or after and taking 6 or more hours must
have up-to-date vaccinations for measles, mumps, and rubella in order to be registered for classes. Health forms are available on the college’s web page. New health forms will be required of applicants who have not attended during the prior year.

Applicants in the Nursing Program or the Athletic Program must request a special health form that requires a complete physical by their Health Care Provider. Persons with physical limitations must have statements from their doctors and must contact the Health Office if excused from physical education activities.

Applicants affirming a prior felony conviction or prior disciplinary dismissal from another institution on their application for admission to the college will be required to follow the procedures outlined by the Admission Review Committee and the Vice President and Dean of Student Development and Enrollment Management. Students will be notified within a week of their application of the procedures in writing to the address they provide on their application. Although every attempt will be made to review a student’s application, application materials received within 30 days of the start of classes are not guaranteed ample time to review the materials for decision.

In addition to a review of the submitted application packet, applicants may be asked to come in for an interview, as a part of the Admissions Review Team’s consideration. Applicants who are accepted may or may not have conditions as part of their acceptance to the college. Failure to adhere to the conditions could result in dismissal from the college. Applicants may be denied acceptance to the college based on the Admissions Review Team’s recommendations.

Applicants who have applied but have their application reprocessed for a future term may be required to submit a new supplemental application (including required documents) if the original submission date exceeds one year.

Applications will not be reviewed by the Admissions Review Team unless they are complete.

**Bills, Cost and Payment**

After registering for courses, students receive an electronic bill for tuition and fees, which will also indicate a payment due date. To be eligible for New York State tuition rates, submit the Certificate of Residence. Tuition and fees may be paid by MasterCard, Visa, cash, check, money order, online or through the mail. Checks should be made payable to Corning Community College.

If payment is not made by the due date, a one percent per month late fee will be charged to the student’s account. Students with delinquent accounts will be blocked from registering for future courses, and a hold will be placed on transcripts until all past due balances are paid in full. If action is necessary to enforce collection, all reasonable collection fees, including attorney fees, will be charged to the student. Students should seek the personal attention of the staff in the Enrollment Advisement Center if they have any questions or difficulties in making full payment by the payment due date.

**Certificate of Residence**

A Certificate of Residence qualifies students to pay the in-state tuition rate. Without a Certificate of Residence, the out-of-state tuition rate is also charged. To qualify for the in-state tuition rate, students must submit a Certificate of Residence issued by the county in which they reside.

To qualify for a Certificate of Residence, students must have lived in New York State for the past 12 months. Residency is verified by the county in which they have lived for the six months prior to attending college. If they have lived in more than one New York State county during those six months, verification from each county will be required. If a student moves to New York State from another state specifically to attend college, he/she does not qualify for the in-state tuition rate.

An application for the Certificate of Residence will be sent by the College at the appropriate time. Since each county follows its own procedures for issuing certificates, follow the procedures for the appropriate county as outlined on the back of the application form. Certificates must be on file within 30 days from the start of class. On the main campus and at the Elmira Center, certificates may be completed in the Enrollment Advisement Center. Note: the Certificate is valid for one academic year only; a new certificate is required for each academic year of attendance.

**Installment Plan**

The purpose of an installment plan is to help make college affordable. It allows students to spread their payments for tuition and fees over a four-month period. Students who wish to participate in the installment plan must complete financial aid applications and the Certificate of Residence to be eligible. There is a processing fee of $30. Students with delinquent accounts are ineligible for the installment plan. Questions about the installment plan may be directed to Enrollment Advisement Center.

**Emergency Loans**

The purpose of an emergency loan is to provide a “bridge” for students who have financial needs at the beginning of a semester, while financial aid or other financial resources are being processed. These loans provide interim resources for necessary purchases, such as books and supplies. Students who wish to apply for an emergency loan must complete financial aid applications
and the Certificate of Residence to be eligible. Students with delinquent accounts are ineligible. Questions about these loans may be directed to the Enrollment Advisement Center.

**Taxpayer Relief Act**

Taxpayers may be eligible for tax credits based on payment of qualified tuition and related expenses to CCC. For further information concerning the American Opportunity Credit or Lifetime Learning tax credits, please contact the IRS or a tax consultant. Information is also available at the following website: www.ed.gov.

**Refund of Tuition and Fees**

If students drop courses within the first three weeks of classes, but do not completely withdraw from the College, they may be eligible for a refund of tuition and fees. Those who completely withdraw from classes may receive a partial refund of tuition and fees. The withdrawal date is determined by the date Enrollment Advisement Center is officially notified of the withdrawal.

The following schedule illustrates the percentage to be refunded for completely withdrawing from the semester:

<table>
<thead>
<tr>
<th>Semester</th>
<th>Week of Withdrawal</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall or spring</td>
<td>1st week</td>
<td>75%</td>
</tr>
<tr>
<td></td>
<td>2nd week</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>3rd week</td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td>4th week and after</td>
<td>0%</td>
</tr>
<tr>
<td>Winter</td>
<td>Day of Withdrawal</td>
<td>Percentage</td>
</tr>
<tr>
<td></td>
<td>1st week</td>
<td>75%</td>
</tr>
<tr>
<td></td>
<td>2nd week and after</td>
<td>0%</td>
</tr>
<tr>
<td>Summer</td>
<td>Week of Withdrawal</td>
<td>Percentage</td>
</tr>
<tr>
<td></td>
<td>1st week</td>
<td>75%</td>
</tr>
<tr>
<td></td>
<td>2nd week and after</td>
<td>0%</td>
</tr>
</tbody>
</table>

Amounts to be refunded shall first be credited to outstanding balances and to any loss or reduction of awards under financial aid assistance programs.

If students withdraw from a full-time course load, an administrative fee of $50 is charged to their account. If they withdraw from a part-time course load, a $25 fee will be charged. If students withdraw and still have financial obligations, their records (i.e. academic transcripts) will be held until those obligations are satisfied. Students who are dismissed from the College for other than academic reasons are not entitled to a refund.

**Costs** (refer to the CCC website for the exact fee schedule, www.corning-cc.edu)

<table>
<thead>
<tr>
<th>Tuition (Subject to change)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Full-time students (12 or more credit or equivalent credit hours)</strong></td>
<td></td>
</tr>
<tr>
<td>New York State Resident with valid Certificate of Residence</td>
<td>$2,115.00 per semester</td>
</tr>
<tr>
<td>New York State Resident without valid Certificate of Residence</td>
<td>$4,230.00 per semester</td>
</tr>
<tr>
<td>Out-of-State Resident</td>
<td>$4,230.00 per semester</td>
</tr>
<tr>
<td><strong>Part-time students (fewer than 12 credit hours or equivalent credit hours)</strong></td>
<td></td>
</tr>
<tr>
<td>New York State Resident with valid Certificate of Residence</td>
<td>$177.00 per credit</td>
</tr>
<tr>
<td>New York State Resident without valid Certificate of Residence</td>
<td>$354.00 per credit</td>
</tr>
<tr>
<td>Out-of-State Resident</td>
<td>$354.00 per credit</td>
</tr>
</tbody>
</table>

**Non-credit courses**

Fees vary. Check the current registration publications for the exact fee schedules.
Special Fees (Subject to change)
(Some courses are assigned an extra fee. Read course descriptions carefully.)

<table>
<thead>
<tr>
<th>Fee</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accident Insurance (mandatory)</td>
<td>$8.50 per semester</td>
</tr>
<tr>
<td>Advising, assessment, records</td>
<td>$7.50 per semester</td>
</tr>
<tr>
<td>4.5-6.5 credit hours</td>
<td>$15.00 per semester</td>
</tr>
<tr>
<td>7-11.5 credit hours</td>
<td>$30.00 per semester</td>
</tr>
<tr>
<td>Audit</td>
<td>$177.00 per credit</td>
</tr>
<tr>
<td>Challenge exam</td>
<td>$75.00 per credit</td>
</tr>
<tr>
<td>Credit for prior learning (Portfolio assessment)</td>
<td>$75.00 per credit</td>
</tr>
<tr>
<td>Family Development Credentialing (HUSR 1220)</td>
<td>$250.00 exam fee</td>
</tr>
</tbody>
</table>

Health

<table>
<thead>
<tr>
<th>Fee</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-11.5 credit hours</td>
<td>$5.00 per semester</td>
</tr>
<tr>
<td>12 or more credit hours</td>
<td>$10.00 per semester</td>
</tr>
<tr>
<td>Health Insurance (optional)</td>
<td>$1,530.00 per year</td>
</tr>
<tr>
<td>College ID card</td>
<td>$10.00 per semester</td>
</tr>
<tr>
<td>Independent Study (with NYS residency)</td>
<td>$177.00 per credit</td>
</tr>
<tr>
<td>Laboratory fees (unless otherwise noted)</td>
<td>$30.00 per credit</td>
</tr>
<tr>
<td>Up to a maximum of</td>
<td>$180.00 per semester</td>
</tr>
<tr>
<td>Late payment</td>
<td>1% per month</td>
</tr>
<tr>
<td>Nursing liability insurance</td>
<td>$7.50 per semester</td>
</tr>
<tr>
<td>Nursing program fee (NURS 1100, 1500, 2100, 2500)</td>
<td>$250.00 per semester</td>
</tr>
<tr>
<td>Parking</td>
<td>$20.00 per year</td>
</tr>
<tr>
<td>Physical education</td>
<td>$8.00 per semester</td>
</tr>
<tr>
<td>Returned check</td>
<td>$25.00 per check</td>
</tr>
<tr>
<td>Student Athletic Fee</td>
<td>$3.55 per credit</td>
</tr>
<tr>
<td>Up to a maximum of</td>
<td>$42.60 per semester</td>
</tr>
<tr>
<td>Student Activities Fee</td>
<td>$5.25 per credit</td>
</tr>
<tr>
<td>Up to a maximum of</td>
<td>$63.00 per semester</td>
</tr>
</tbody>
</table>

Technology

<table>
<thead>
<tr>
<th>Fee</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-11.5 credit hours</td>
<td>$50.00 per semester</td>
</tr>
<tr>
<td>12 or more credit hours</td>
<td>$100.00 per semester</td>
</tr>
</tbody>
</table>

Related Expenses (estimated)

<table>
<thead>
<tr>
<th>Fee</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Books and Supplies</td>
<td>$1,000.00 per year</td>
</tr>
</tbody>
</table>

Housing Costs

<table>
<thead>
<tr>
<th>Fee</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Super Single</td>
<td>$4,100.00 per semester</td>
</tr>
<tr>
<td>Single Room Rate</td>
<td>$3,900.00 per semester</td>
</tr>
<tr>
<td>Double Room Rate</td>
<td>$3,100.00 per semester</td>
</tr>
<tr>
<td>Meal Plan (including $150.00 in flex dollars)</td>
<td>$1,400.00 per semester</td>
</tr>
<tr>
<td>Resident Hall Program Fee</td>
<td>$25.00 per semester</td>
</tr>
<tr>
<td>Housing Deposit</td>
<td>$250.00</td>
</tr>
<tr>
<td>Uniforms, other (nursing)</td>
<td>$60.00 initial cost</td>
</tr>
</tbody>
</table>
Financial Aid Awards and Procedures:
The primary obligation for meeting college costs lies with the student and the student’s parents. However, financial aid, through the state and federal government and CCC Scholarships, provides funds to eligible students that can be combined or used separately to help meet the cost of attendance at CCC. While the financial aid process is sometimes complicated, helpful staff are available to assist students and parents with the process.

Types of Aid:
Financial assistance falls into three basic groups:

- **Grants and scholarships:** No repayment. Grants based on need. Scholarships based on need and student’s academic performance or special talents.
- **Loans:** Repayment at a specified time. Usually charge low interest.
- **Employment:** (Work-Study) Certain number of hours per week in on- or off-campus work.

Applying for State and Federal Aid:
To apply for most state and federal aid programs students must file the Free Application for Federal Student Aid (FAFSA) electronically at www.fafsa.gov. Students/parents should first apply for a FSAID at studentaid.gov/fsaid. The FSAID is used as their electronic signature. CCC’s federal code is 002863; enter this on the FAFSA. Once the FAFSA is processed, students receive a Student Aid Report (SAR).

New York State residents may apply for the New York State Tuition Assistance Program (TAP). When completing your FAFSA on the Web, the confirmation page will provide a link to the TAP on the Web application. The CCC school code for NYS is 2042. You may also apply online at www.tapweb.org once your FAFSA is processed. If you are unable to complete the application electronically, you may request a paper Express TAP Application (ETA) from the CCC Financial Aid Office once your FAFSA is processed.

The Financial Aid Office will receive your FAFSA data electronically from the federal processor. You may be required to submit additional information or documentation to complete your application. If so, we will notify you once your FAFSA is received. Once your application is complete and correct, we will verify your admission status, academic progress and your expected enrollment status to determine your eligibility for financial aid. We will send you an award letter indicating your eligibility and instructions for your next steps to accept/decline your awards.

When to Apply:
You must apply for state and federal aid every year. Whether you are a new or continuing student, it is strongly suggested that you complete your FAFSA by April 1 if you will be enrolling in the fall semester and October 1 if you will not enroll until the spring semester of the academic year.

How Eligibility is Determined:
You must be officially accepted by the CCC Admissions Office in a degree program. Eligibility for all federal and state aid is awarded for enrollment in courses that are degree/program requirements. Students should review their “degree evaluation” on MyCCC to make certain that the courses they have registered for are degree/program requirements of their current primary program of study. TAP and the Pell Grants are awarded directly by their respective governmental agencies.

Please note there are strict limitations on awarding federal aid retroactively after the student has ceased attendance so completion of the FAFSA and all other federal aid requirements prior to the beginning of the academic year is strongly suggested.

### Enrollment Status (*hours in program of study)

<table>
<thead>
<tr>
<th>Award</th>
<th>12 or more hours*</th>
<th>9-11.5 hours*</th>
<th>6-8.5 hours*</th>
<th>.5-5.5 hours*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pell Grant</td>
<td>100% of eligible</td>
<td>75% of eligible</td>
<td>50% of eligible</td>
<td>0-25% of eligible</td>
</tr>
<tr>
<td></td>
<td>award</td>
<td>award</td>
<td>award</td>
<td>award</td>
</tr>
<tr>
<td>TAP</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Direct Loan</td>
<td>100% of eligible</td>
<td>100% of eligible</td>
<td>100% of eligible</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>award</td>
<td>award</td>
<td>award</td>
<td></td>
</tr>
</tbody>
</table>

Campus-based aid and Direct Stafford Loans are awarded on the basis of the student’s financial need (Cost of Education minus Family Contribution equals Financial Need). A student’s financial need is also adjusted for the receipt of private scholarships or grants, and it is the student’s responsibility to notify EAC if they are receiving assistance of this type. Also, benefits received from outside programs such as the Trade Adjustment Act, Workforce Investment Act, ACCESS (VESID), etc. will be used in determining a student’s financial need. Federal PLUS (parent loans) are available to assist families to bridge the gap between cost of education and student financial aid eligibility.

High school students who are enrolled at the College while completing requirements for their high school diploma are not eligible for any state or federal aid.
Disbursement of Federal Aid

Federal aid is generally disbursed beginning the fifth week of the semester to students who have completed all federal aid requirements and continues weekly throughout the academic year for late applicants who are eligible for federal aid. Also, excess federal aid over and above charges for tuition, fees, housing, etc. may be used in the College Bookstore and will be made available to students, who have completed all requirements, two weeks prior to the beginning of the semester. Students who have been awarded Pell Grant and have excess Pell Grant funds over and above their charges for tuition and fees who wish to purchase books through other retailers may apply for an emergency loan.

For more information, contact the Enrollment Advisement Center.

Basic Financial Aid Programs:

Pell Grant
Students accepted in a program and enrolled in courses that are degree/program requirements of their primary program of study should apply. Eligibility is determined by family size, income, assets, etc.; continued eligibility is affected by academic progress. Amounts range from approximately $626 to $5,775 per academic year depending on enrollment status. Available to both full- and part-time students. Complete the FAFSA. Students must also meet College’s and federal financial aid academic progress requirements to be eligible.

Tuition Assistance Program (TAP)
New York State residents who are accepted in a program, enrolled in 12 or more program hours and are in good academic standing should apply for this grant. Usually students are eligible if their family’s state net taxable income is no more than $80,000. For independent students with no dependents, the net taxable income limit is $11,000. Incomes may be higher if more than one family member is in college full-time. Annual awards range from $425 to 100 percent of tuition. Students may use up to six semesters of TAP eligibility to pursue an associate degree. Complete the FAFSA and Express TAP applications.

A student may be eligible to receive TAP for part-time enrollment if they are certified under the Americans with Disabilities Act (ADA). ADA defines a person with a disability as anyone with physical or mental impairment that substantially limits one or more major life activity, such as caring for oneself, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning and working. The disability must be documented with CCC’s Office of Student Disability Services before the student is considered for TAP for part-time enrollment.

Part-Time Tuition Assistance Program
Beginning with the 2006-2007 academic year, New York State residents who were accepted in a program as first-time freshmen, have earned 12 credits or more in each of two consecutive semesters, maintained a 2.0 cumulative GPA, and enrolled between 6 and 11 credit hours in their program of study should apply for this grant. Income guidelines are the same as the Tuition Assistance Program. Awards are based on a prorated schedule through NYSHESC. Complete the FAFSA and the Express TAP application.

Additional Financial Aid Programs:

Federal College Work-Study (FWS):
Jobs for students attending at least 6 credit hours. The total amount depends on need, other aid received, the availability of jobs and the number of hours a student can reasonably be expected to work. Complete the FAFSA.

Federal Supplemental Educational Opportunity Grant (SEOG):
From $300 to $600 per academic year and awarded to the neediest students attending at least 6 credit hours who are also Pell Grant eligible. Complete the FAFSA.

Aid for Part-Time Study (APTS):
This grant is for matriculated part-time students enrolled in at least 3 credit hours; however, priority is given to half-time students. Applicants must be New York State residents and be in good academic standing prior to applying. For dependent students or married students with dependents, the family net taxable income can range up to $50,500. Independent students must have a net taxable income of $34,250 or less. Students are not eligible if they have already used all semesters of TAP eligibility. Remedial courses can be counted toward a student’s part-time load hours if the student is also enrolled in at least three credit hours. Amounts: up to $1,000 per semester. APTS applications are available from EAC or on the web at https://www.corning-cc.edu/financial-aid-scholarships. Completed applications are submitted to Student Administrative Services.

Educational Loans:
CCC participates in the Federal Direct Stafford Loan Program for students and the Direct Parent Loans for Undergraduate Students (Direct PLUS). Funding for your student loan and/or parent loan will come directly from the U.S. Department of Education. Direct Loans may be used for any related educational expense. Students must be accepted in a program and registered for at least 6 credits
of degree/program requirements in their primary program of study each semester. Loans are available to students with recognized financial need.

**Federal Direct Loans (Subsidized/Unsubsidized):**
“Subsidized” loans up to $3,500 for freshmen and $4,500 for sophomores (26 or more credit hours earned) per year are available depending on financial need. The federal government will pay the interest on “subsidized” loans while the student is in school. However, students must complete their educational program within 150% of the length to remain eligible for the interest subsidy. Additional “unsubsidized” loan funds may be available up to $2,000 per year for dependent students and $4,000 per year for independent students, however, interest accrues to the student from the time of disbursement of the loan. Loans are subject to an origination fee which is deducted from the proceeds of the loan. The interest rate is fixed for first-time borrowers, and repayment begins six months after leaving school. Minimum annual repayment is $600. Complete the FAFSA. For more information about these programs and to complete the Direct Loan Master Promissory Note and Entrance Counseling for first-time borrowers go to www.studentloans.gov.

**Loan Repayment Example - 10 years (120 months)**

<table>
<thead>
<tr>
<th>Loan Amount</th>
<th>Monthly Payment at 8% interest</th>
<th>Total repaid</th>
</tr>
</thead>
<tbody>
<tr>
<td>$5,000</td>
<td>$61</td>
<td>$7,320</td>
</tr>
<tr>
<td>$10,000</td>
<td>$121</td>
<td>$14,520</td>
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<tr>
<td>$15,000</td>
<td>$182</td>
<td>$21,840</td>
</tr>
<tr>
<td>$20,000</td>
<td>$243</td>
<td>$29,160</td>
</tr>
</tbody>
</table>

**Direct Parent Loans for Undergraduate Students (Direct PLUS):**
Up to total educational expense minus financial aid per academic year on behalf of each dependent undergraduate. Interest rate is variable, and there is an origination fee. Repayment begins 60 days from the receipt of second disbursement of the loan. Complete the FAFSA. For more information and to complete a Direct Loan PLUS Promissory Note/Application go to www.studentloans.gov.

**Scholarships, Awards and Loans:**
CCC administers a number of scholarships, awards and loan funds provided by the CCC Development Foundation Inc., Office of Institutional Advancement, Alumni Association, academic divisions, as well as community members and organizations. They vary in amount and are based on a variety of factors including high school record, academic record at CCC, academic program and need. Application requirements and deadlines vary.

**Scholarships:**
These funds are intended for costs associated with attending CCC. They are presented to students currently enrolled at CCC at the annual Scholarship Ceremony in the fall.

**Awards:**
These awards are presented to students graduating from CCC at the annual Awards Luncheon in May.

**Loans:**
Emergency funds are established to provide students with loans for books and other educational needs. Because of the personal nature of loans, the names of recipients are not publicly announced. For current information about specific scholarships, awards and loans administered by CCC, visit https://www.corning-cc.edu/scholarships.

**Veterans’ Benefits:**
In addition to the traditional forms of financial aid, students who are military veterans, members of the Reserves or National Guard may be eligible for education benefits from the Department of Veterans Affairs. The Veteran’s Certification Representative at CCC is available to assist you in the application and payment process. The Department of Veterans Affairs provides educational assistance allowance to veterans eligible for:

- Montgomery GI Bill Active Duty (Ch. 30)
- Montgomery GI Bill Selected Reserve (Ch. 1606)
- Reserve Educational Assistance Program (REAP) (Ch. 1607)
- Post-9/11 GI Bill (Ch. 33) – eligible veterans receive housing allowance, book stipend and tuition benefit.

If you are currently active duty you may be eligible for the Department of Defense Tuition Assistance Program. All branches of service have their own criteria for eligibility, obligated service, application process and restrictions.

Please consult the GI Bill Website (www.benefits.va.gov/gibill) for application procedures, eligibility requirements, payment rates, and additional information regarding VA benefits. You may also contact Tara Bauman, VA School Certifying Official by phone at 607-962-9433, toll free 800-358-7171, ext. 9433 or email bauman@corning-cc.edu.

**Disabled Veterans** with at least a 20 percent service connected disability may be eligible for Vocational Rehabilitation. Interested veterans should visit www.vba.va.gov/bln/vre for additional information and application.
Veteran Dependents may be eligible for the following benefits please consult the GI Bill website (www.benefits.va.gov/gibill) for application procedures, eligibility requirements and payment rates.

Post -9/11 GI Bill Transfer of Entitlement: Veterans may be eligible to transfer their Post-9/11 GI Bill Benefits to their children and/or spouse.

Post 9/11 GI Bill: Marine Gunnery Sergeant John David Fry Scholarship: Children of an active duty member of the Armed Forces who had died in the line of duty or after September 11, 2001, are eligible for this benefit. A child may be married or over 23 and still be eligible.

Survivors’ and Dependents’ Educational Assistance Program (Ch. 35): Spouse/Widow or Child of a veteran who is permanently and totally disabled or died as a result of a service connected disability may be eligible.

New York State residents may qualify for the Veterans Tuition Award: Eligible students are those who are New York State residents discharged under honorable conditions from the U.S. Armed forces and who are: Vietnam Veterans who served in Indochina between December 22, 1961 and May 7, 1975. Persian Gulf Veterans who served in the Persian Gulf from August 2, 1990. Afghanistan Veterans who served in Afghanistan during hostilities on or after September 11, 2001. Veterans of the armed forces of the United States who served in hostilities that occurred after February 28, 1961 as evidenced by receipt of an Armed Forces Expeditionary Medal, Navy Expeditionary Medal or a Marine Corps Expeditionary Medal. Amounts: Awards are 100% of tuition. If the veteran also receives TAP, the combination of the two awards cannot exceed tuition. Students should complete the New York State Veterans Tuition Award (VTA) the FAFSA and the Express TAP application. The VTA form is available at www.hesc.ny.gov. Additional state aid includes Military Service Recognition Scholarship (Child/Spouse), Regents Awards for Children of Deceased & Disabled Veterans. Recruitment Incentive and Retention Program (Army & Air National Guard, and Naval Militia). For more information regarding eligibility for these programs visit www.hesc.ny.gov.

Policies Affecting Eligibility for Financial Aid:
Program of Study & Financial Aid Eligibility
As stated previously, state and federal financial aid award amounts (TAP, PT-TAP, APTS, PELL Grant, Stafford Loans, etc.) are based on hours in program. College policy allows students to change their primary program of study or, if in a dual program, add/ change their secondary program of study at any time. However, the policy governing state and federal financial aid eligibility is as follows:

To determine financial aid eligibility, the College must verify a student’s hours of study are applicable to the degree/program requirements of their “official” primary or secondary program(s) of study. Enrollment status for students in both a primary and secondary program will be based on the program for which the greatest number of hours apply. Enrollment status will not be based on hours that are split between two programs. Meeting this requirement is ultimately the student’s responsibility.

Primary Programs & Financial Aid Eligibility Issues:
To resolve an “audit” issue, when courses do not apply to your program of study, students will have until the end of the ninth week of classes to officially change their current primary program of study for TAP, and the last day of classes for federal aid (however it is not recommended that you wait).

Secondary Programs & Financial Aid Eligibility Issues:
Adding or changing a secondary program of study will not resolve an “audit” issue for that current semester once the semester has begun. However, the new secondary program will be used in evaluating the student’s eligibility for subsequent semesters.

Program Hours & Financial Aid Eligibility:
Financial aid awards are determined based on hours applicable to the student’s program of study. Semester awards will be recalculated for changes in enrollment status through the end of the third week of classes and at that time, the student’s enrollment status will be “frozen.” After the student’s enrollment status is frozen, there will be no recalculation of the student’s federal aid if the student adds courses (with the exception of the Federal Direct Loan program and requirement for half-time enrollment status.) However, failure to attend or dropping a late starting course may result in recalculation of state and/or federal aid for the semester. Also, recalculation of federal aid awards may occur throughout the semester if the student withdraws from all courses or if the student receives F grades in all courses and the College determines that the student did not attend past the 60% point of the semester.

Full-time New York State TAP awards require a student to carry 12 hours or more of new study within the program of record and meet all academic and pursuit of program guidelines to maintain eligibility. If a student fails to maintain full-time status in program, the full-time award will be canceled.
The only exception to the requirement of being full-time in program for NYS TAP eligibility is the special consideration given in the student’s graduating term. If the student does not need 12 or more hours in program to meet the degree requirements and graduate, courses that would qualify as free electives can be added to establish full-time status except any previously passed course.

For example, if the student only needs a 3 credit hour liberal arts course to meet the degree requirements and graduate, the student can add any “free elective” course(s) for consideration of full-time status for NYS requirements. Essentially, this means courses OTHER than physical education courses (PFIT).

This does not apply to the federal aid programs. Students attending for only one semester during the academic year or summer term to complete degree/program requirements will only receive federal aid, if eligible, for courses that are required for program completion.

**Repeat Courses & Financial Aid Eligibility**

**State Aid**
Courses that have been previously passed with a D or higher are not typically covered by state financial aid unless one of the following circumstances applies:

a) The student is repeating a course that requires a minimum grade to continue in program, or the repeat course has a shelf life that has expired.

b) Students repeating a course only to better their cumulative grade point average or to affect their enrollment status should understand that this repeated course will not be considered when determining financial aid enrollment status or eligibility.

**Federal Aid**

Repeat credit courses that have been previously passed (D or higher) may be included in student’s enrollment status one time for federal aid eligibility. Repeat of passed remedial courses will not count in a student’s enrollment status.

**Academic Progress Policy for Federal Financial Aid**

Academic progress for continued federal financial aid eligibility is based on the College’s Academic Progress Policy, however, there are several exceptions relative to multiple probation semesters, Fresh Start and program completion requirements which are explained below.

For continued federal financial aid eligibility, academic progress will be reviewed at the end of each semester of enrollment. All semesters of attendance are included in the review regardless of whether or not the student received federal aid in all semesters of attendance.

**Status: Good Standing for Federal Aid Eligibility:**

To meet this standard for continued federal aid eligibility, the student must have a 2.0 grade point average and have passed 67% of the hours attempted in the prior semester of attendance. Passed hours include grades of A - D and P. (See exception regarding students granted “Fresh Start” by the College.)

**Status: Probation for the College**

**Federal Aid Warning**

The first time that students who have been in “Good Standing” fail to pass 67% of their attempted hours in the prior semester or their overall GPA drops below a 2.0, they will be placed on “federal aid warning” and will maintain federal financial aid eligibility for their next semester of enrollment. To maintain federal aid eligibility the student must return to “Good Standing” by the end of the next semester.

The number of “federal aid warning” semesters is not limited. A student who returns to “Good Standing” and then is later placed on “Probation” by the College would be placed on “financial aid warning” in the next semester of attendance and so on.

**Federal Aid Probation**

Students who fail to return to “Good Standing” at the end of the “federal aid warning” semester will not be eligible for further federal financial aid (regardless of whether or not the student received federal financial aid while on “financial aid warning”). The student would have two options for the next semester of attendance. The student may attend without federal financial aid in an effort to return to “Good Standing” on their own or they may appeal for reinstatement of their federal financial aid and if approved would be placed on “federal aid probation”.

Approval of appeals is not automatic and would be based on the student’s academic plan as outlined in their appeal and the ability to return to “Good Standing” by the next semester or within a reasonable time-frame.

**Status: Suspension for the College and Federal Aid Eligibility**

Students who are placed on “Suspension” may appeal for reinstatement of their federal financial aid. Students may submit to Enrollment Advisement Center, Financial Aid Office, a copy of the appeal form that is submitted to the Academic Standards Committee to appeal their suspension.

This should not be construed to assume that federal financial aid eligibility will automatically be reinstated even if the College approves the student’s reinstatement to “Probation” status. However, if the College does reinstate a student who is on “Suspension” to “Probation” status then the Enrollment Advisement Center, Financial Aid Office will review the student’s appeal and notify
the student of their decision regarding reinstatement of federal financial aid. The decision will be based on the student’s academic plan and ability to return to “Good Standing” by the next semester or within a reasonable time-frame.

Program Completion Requirement (150% Rule) for Federal Financial Aid Eligibility
For federal aid eligibility, students must complete their program of study within a time-frame not greater than 150% of the published hours required for graduation. Attempted hours are used to evaluate the 150% point. Hours for all graded courses (A, A-, B+, B, B-, C+, C, D, F, and I, N, P, W, R, S, U, X and graded remedial courses) count as “hours attempted”. Transfer and remedial course hours are used to evaluate the 150% point. Hours for all graded courses (A, A-, B+, B, B-, C+, C, D, F, and I, N, P, W, R, S, U, X and graded remedial courses) count as “hours attempted”. Transfer courses applicable to the student’s program of study also count in hours attempted. For example, if the program requires 62 hours for completion, once the student has attempted 93 hours, including transfer hours applicable to the program, they are no longer eligible for federal aid at CCC. Once the student has graduated from one program of study at CCC, federal aid eligibility may be reinstated for pursuit of a subsequent program of study, provided they meet all other requirements for federal aid eligibility (academic progress, etc.)

Total hours and specific course requirements required for graduation are published in the College Catalog which can be found on the College’s website or MyCCC.

Students who change programs, fail to pay careful attention to program requirements or have continued academic difficulty are more likely to lose federal aid eligibility by failing to complete graduation requirements within the required time-frame.

Multiple Programs of Study for Federal Aid Eligibility
Students who have completed/graduated from one program of study and are readmitted to another program of study will be evaluated based on the courses that apply to their current program in terms of total hours attempted, total hours passed and cumulative grade point average. They will be allowed to receive federal aid for an additional period of time based on 150% of the additional credit hours required for the new program of study. Students attempting to complete a third (or more) program of study may be denied further federal aid if the new program is not “substantially” different from the other programs that the student has already completed. In any case, each student will be evaluated on a case-by-case basis.

Withdrawals:
Students who withdraw totally from the institution either officially or unofficially, will not meet academic progress and will be placed on financial aid warning or probation.

Non-credit Remedial Courses:
Students who are required to take non-credit remedial courses have up to three full-time semesters to complete these requirements as per College policy. Remedial course hours will count toward hours attempted. As they will be counted toward the 150% time frame (see Program Completion Requirements Rule), a student may appeal for an extension of eligibility for federal aid for one semester to complete graduation requirements. Approval of an appeal is not automatic and will be based on the student’s overall academic record.

Fresh Start and Federal Aid Eligibility:
Granting of “Fresh Start” does not alter the calculation of the academic progress for federal aid. The Enrollment Advisement Center, Financial Aid Office will recalculate the student’s grade point average based on all GPA hours in the student’s academic history. This calculation of GPA will be used to determine the student’s academic progress for federal financial aid.

Cumulative Grade Point Average (CGPA):
The CGPA is the average of all course grades (excluding transfer courses) relative to their quality points.

Withdrawal from CCC and Financial Aid Obligations
Financial Aid Office recalculates federal financial aid* eligibility for any student who completely withdraws, stops attending classes, or is dismissed during the semester, prior to 60% of the semester being completed. Recalculation is based on the percent of earned federal financial aid based on the following formula:

Percent of federal aid earned = number of days completed up to the withdrawal date** divided by total days in the semester (excluding break weeks). For more specific information regarding this time frame, please contact the Enrollment Advisement Center.

Federal financial aid is returned to the federal government based on the percent of unearned aid using the following formula: aid to be returned = amount of Federal Title IV Aid disbursed minus Federal Title IV aid earned.

When federal financial aid is returned the student may owe money to CCC and may also owe funds to the federal government. If repayment is owed to a federal aid program the student will have 45 days from the date of notification to repay these funds. Failure to repay within 45 days will result in the account information
being turned over to the U.S. Department of Education for collection and future federal aid eligibility would be lost until this debt is repaid. Students should contact the Enrollment Advisement Center regarding any money owed to CCC.

*Federal financial aid for this calculation at CCC includes Federal Pell Grant, FSEOG, Federal Direct Student Loans and Federal PLUS (Parent Loan). Any unearned funds are returned to the Direct Loans first, then Pell Grant and then SEOG.

**Withdrawal date is defined as the actual date the student began the withdrawal process or the student’s last date of recorded attendance for the student who leaves without notifying CCC.

*** For students who receive all Fs or a combination of F’s and W’s, the Financial Aid Office will confirm the last date a student attended and will return funds if the last date of attendance is prior to the 60% point of the semester. The return of funds in this case would occur after the semester is over and students will be notified if they have had a recalculation performed, and if so, will be billed by the Student Accounts Office.

Academic Progress Requirements for New York State Aid
For determining continuing eligibility for state aid, refer to the following chart. The standard consists of three components: credits earned*, cumulative GPA and minimum percentage of hours that must be completed with a grade. (*Remedial courses are not included in credits earned.)

Students are measured based on the NYS aid payment for which they are being certified. For each payment, the student will be required to have earned a certain number of credits with a minimum cumulative GPA and complete a minimum percentage of hours with a grade of A-F (I grades do not count in total) in the previous semester. To receive NYS aid, students must be enrolled in appropriate course work that applies toward their program of study.

Students receiving APTS or part-time TAP for Students with Disabilities will be evaluated based on the requirements that pertain to their full-time equivalent semesters based on the number of payments received.
Chart #1: Satisfactory academic progress for NYS TAP/Pursuit of Program Requirements (applies to all NYS students who received First TAP payment PRIOR to Spring 2010).

<table>
<thead>
<tr>
<th>Calendar: Semester</th>
<th>0pts</th>
<th>6pts</th>
<th>12pts</th>
<th>18pts</th>
<th>24pts</th>
<th>30pts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pts. Accrued</td>
<td>1st</td>
<td>2nd</td>
<td>3rd</td>
<td>4th</td>
<td>5th</td>
<td>6th</td>
</tr>
<tr>
<td>Seeking the 1st payment</td>
<td>0</td>
<td>6</td>
<td>15</td>
<td>27</td>
<td>39</td>
<td>51</td>
</tr>
<tr>
<td>With at least this many credits</td>
<td>0</td>
<td>1.3</td>
<td>1.5</td>
<td>1.8</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Pursuit of program</td>
<td>0</td>
<td>6hrs comp to grade</td>
<td>6hrs comp to grade</td>
<td>9hrs comp to grade</td>
<td>9hrs comp to grade</td>
<td>12hrs comp to grade</td>
</tr>
</tbody>
</table>

Subject to change as mandated by NYS Higher Education Services Corporation and NYS Department of Education.

Repeat Courses:
See Policies Affecting Eligibility for Financial Aid.

Remedial Courses:
For students who are required to take remedial course work, the “credit hour” equivalent of the courses will be used to determine enrollment status (full-time, part-time) for both state and federal aid. For TAP eligibility, first-time TAP recipients must be registered for, and successfully complete, at least 3 credit hours in addition to the remedial courses in that first semester to maintain TAP eligibility. If TAP has been received previously, even at another college, students must be registered for 6 credit hours in addition to remedial courses. Remember that you must have a minimum of 12 hours of degree/program requirements.

For federal aid, once you have taken 30 hours of remedial courses, these courses will no longer count towards your enrollment status.

Registration/Attendance:
Only registered students are eligible for financial aid. Class attendance and official verification of that attendance will ultimately determine eligibility for financial aid. If attendance cannot be verified, then financial aid awards may be revised and students will be billed for any funds that are owed for tuition and fees or for cash disbursements that are no longer covered by awards.

Any changes in the number of registered hours can impact financial aid eligibility for that semester and for future semesters (academic progress). It is the student’s responsibility to maintain registration status and attendance for financial aid purposes and to promptly report any changes to Enrollment Advisement Center.

For TAP, any courses dropped within the refund period may result in a loss of the full TAP award. To be eligible for full-time TAP, students must be attending 12 hours of degree/program requirements and have incurred full-time tuition charges by the end of the third week of the semester. As TAP awards are not prorated, the whole TAP award will be cancelled.

One-time Waiver
New York State Commissioner of Education regulations permit students to receive a one-time waiver of the good academic standing requirement as an undergraduate. The institution issues the waiver if there are extenuating circumstances. The waiver is not automatic and is intended only to accommodate extraordinary or unusual cases. The waiver is only applicable when there is a reasonable expectation that the student will meet future requirements. The waiver provision does not exist to provide one additional term of eligibility for all students who fail to meet pursuit requirements.
of progress requirements. It is expected that most students who fail to meet pursuit of progress requirements will not be granted the waiver and will not receive any further state awards until they have regained good academic standing.

If appropriate, the student would obtain, complete and return the New York State TAP Waiver Form available in EAC. Specific details regarding the extenuating circumstance(s) need to be reported, such as specific events and dates, and the appropriate third party documentation is required whenever possible. The Director of Financial Aid will review the appeal and make a determination.

Waiver of C-Average Requirement
Students who have received the equivalent of two or more full years of state-funded student financial aid (at any New York State school) must have and maintain a cumulative GPA of 2.0 or better to be eligible for continued state-funded assistance.

The C-average requirement may be waived for undue hardship based on the student’s personal illness or injury or other extenuating circumstances.

Documented circumstances must have directly affected the student’s ability to achieve a cumulative GPA of 2.0 as of the end of a particular semester or term. The C-average waiver is separate from the one-time good academic standing waiver and may be granted more than once if circumstances warrant, however, it is only applicable when there is a reasonable expectation that the student will meet future requirements.

The student would obtain, complete and return a New York State TAP Waiver of the C-Average Requirement Form available in EAC. Specific details regarding the extenuating circumstance(s) need to be reported, such as specific events and dates, and the appropriate third party documentation is required whenever possible. The Director of Financial Aid will review the appeal and make a determination.

Readmitted Students:
Students who have received two or more years of payment of any state awards and who are readmitted to CCC must have a cumulative GPA of 2.0 or better to receive any further state-sponsored student aid. The cumulative GPA would be based on prior grades earned at CCC.

Regaining Eligibility:
Students who are denied an award for failing to achieve a cumulative GPA of 2.0 can regain award eligibility by completing appropriate coursework - without state support - to achieve a cumulative GPA of 2.0. Students cannot regain eligibility by remaining out of school for a period of time.
Degree Requirements
CCC offers the following degrees:
• Associate in Arts
• Associate in Science
• Associate in Applied Science
• Associate in Occupational Studies Certificate

Associate in Arts Degree (AA)
Associate in Arts programs must contain from 60 to 64 credit hours with more than 75% of the required credits drawn from the Liberal Arts and Sciences. Approved waivers may allow an Associate in Arts program to exceed 64 credits. Associate in Arts programs must provide for the completion of seven of the ten SUNY General Education areas and for completion of thirty credits of approved SUNY General Education courses.

Curriculum requirements for AA:
• six credits of English (three in rhetoric and three in literature)
• three credits of mathematics
• six credits of laboratory science
• six credits of social sciences
• six credits of humanities and
• sufficient liberal arts and sciences requirements or electives to achieve the 75% minimum

Any remaining credits can be assigned to free electives or other program requirements. A minimum of nine credits must be upper-level. These specific requirements may be modified if there is demonstrated evidence that the modifications are warranted by transfer requirements, but the requirements must still conform to SUNY and NYS Education Department regulations.

Associate in Science Degree (AS)
Associate in Science programs must contain from 60 to 64 credit hours with between 50% and 75% of the required credits drawn from the Liberal Arts and Sciences. Approved waivers may allow an Associate in Science program to exceed 64 credits. Associate in Science programs must provide for the completion of seven of the ten SUNY General Education areas and for completion of thirty credits of approved SUNY General Education courses.

Curriculum requirements for AS:
• six credits of English (three in rhetoric and three in literature)
• three credits of mathematics
• three credits of laboratory science
• six credits of social sciences or three credits of social sciences and three credits of humanities and
• sufficient liberal arts and sciences requirements or electives to achieve the 25% minimum

Any remaining credits can be assigned to free electives or other program requirements. These specific requirements may be modified if there is demonstrated evidence that the modifications are warranted by career or transfer requirements, but the requirements must still conform to SUNY and NYS Education Department regulations.

Associate in Applied Science Degree (AAS)
Associate in Applied Science programs must contain from 60 to 64 credit hours with between 25% and 50% of the required credits drawn from the Liberal Arts and Sciences. Approved waivers may allow an Associate in Applied Science program to exceed 64 credits.

Curriculum requirements for AAS:
• six credits of English (three in rhetoric and three in literature)
• three credits of mathematics
• three credits of laboratory science
• six credits of social sciences or three credits of social sciences and three credits of humanities and
• sufficient liberal arts and sciences requirements or electives to achieve the 25% minimum

Any remaining credits can be assigned to free electives or other program requirements. These specific requirements may be modified if there is demonstrated evidence that the modifications are warranted by transfer requirements, but the requirements must still conform to SUNY and NYS Education Department regulations.

Associate in Occupational Studies Degree (AOS)
Associate in Occupational Studies programs must contain a minimum of 60 credit hours and a program grade point average of 2.0 must be achieved for graduation. This degree has no liberal arts requirement but does require minimum competencies in communication and quantitative skills.

Curriculum requirements for AOS:
A program core or concentration of courses ranging from 48 to 57 credit hours, based upon the specific career. This concentration is designed to prepare students for entry-level positions by focusing on the methods, techniques and skills necessary to find employment upon graduation. Each program allows a minimum of nine credit hours of technical electives, which may include any credit course the College offers.

Certificates
Certificate programs require approximately 30 hours of coursework in a specific career area. Students do not earn an Associate’s degree, but most courses can be applied toward a degree if a student wishes to take additional courses later.
# Program Link to Career or Transfer Paths

Use this guide to determine the best program of study for you.

For a Career In .......................................................... Enroll in the following Program of Study

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Learning transforms lives.
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*Learning transforms lives.*
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Learning transforms lives.
Sociology ......................................................Liberal Arts & Sciences: Humanities & Social Sciences (Social Sciences)
Speech ........................................................Liberal Arts & Sciences: Humanities & Social Sciences (Communications/Humanities)
Speech Therapy ........................................Liberal Arts & Sciences: Mathematics & Sciences
Sports Management ...............................Liberal Arts & Sciences: Humanities & Social Sciences (Communications/Humanities)
........................................................................Business Administration
Statistics ......................................................Liberal Arts & Sciences: Mathematics & Sciences
Teaching Assistant .....................................Teaching Assistant
Television .....................................................Liberal Arts & Sciences: Humanities & Social Sciences (Communications/Humanities)
Theatre (Tech/Playwright) .........................Liberal Arts & Sciences: Humanities & Social Sciences (Communications/Humanities)
Toxicology .....................................................Liberal Arts & Sciences: Mathematics & Sciences
Veterinary Medicine ..................................Liberal Arts & Sciences: Mathematics & Sciences
Wildlife Biology/Zoology .........................Liberal Arts & Sciences: Mathematics & Sciences
Three academic divisions offer more than 40 programs and more than 800 credit and non-credit courses. In addition to daytime offerings on campus, a wide variety of credit and non-credit courses are taught in the evening and during the summer at various locations throughout Steuben, Chemung, Schuyler, Tioga and Yates counties. Specific preparation for programs will be found on the program pages. To be eligible to receive financial aid, students must be accepted in one of the following approved programs.

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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Childhood Ed/Teacher Ed Transfer</td>
<td>Transfer</td>
<td>AS</td>
<td>5608</td>
</tr>
<tr>
<td>Education/Childhood Education</td>
<td>Transfer</td>
<td>AS</td>
<td>5608</td>
</tr>
<tr>
<td>Humanities &amp; Social Sciences</td>
<td>Transfer</td>
<td>AA</td>
<td>5649</td>
</tr>
<tr>
<td>Humanities &amp; Social Sciences</td>
<td>Transfer</td>
<td>AS</td>
<td>5649</td>
</tr>
<tr>
<td>Mathematics &amp; Science</td>
<td>Transfer</td>
<td>AS</td>
<td>5649</td>
</tr>
<tr>
<td>Machine Tool Technology</td>
<td>Career</td>
<td>AAS</td>
<td>53036</td>
</tr>
</tbody>
</table>

Learning transforms lives.
Machine Tool Technology........................................... Career..........Certificate.....5303
Manufacturing Technology........................................... Career ..........AAS .......5315
Mechanical Technology: CAD Design.......................... Career ..........AAS .......5315
Nursing........................................................................ Career ..........AAS ..........5208.10
Police Basic Training.................................................... Career ..........Certificate....5505
Recreation Studies........................................................ Transfer ......AS ..........5506
Teaching Assistant....................................................... Career ..........Certificate.....5503

*See the program page for details.
Accounting
Associate in Applied Science Degree, Career program
Division of Professional Studies, Associate Dean Deborah Beall
Department Chair: Barbara Squires

The AAS in Accounting program is designed to prepare students for immediate entry level positions in accounting. Graduates have found jobs in recordkeeping. Positions include complete general ledger accounting for a small business as well as working in a section of a large business such as payroll accounting, accounts receivable, accounts payable or inventory.

Graduates are able to:
• Develop the basic skills required in designing and maintaining a moderately complex, double entry set of accounting records;
• Describe the theoretical foundations of the accounting discipline;
• Develop basic quantitative skills required by those who are employed in entry-level accounting positions;
• Understand basic written and oral communication skills required by those who are employed in entry-level accounting positions;
• Expose our graduates to “alternative” accounting systems;
• Understand computer technology and its relationship to the accounting field.

Program Requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010 and 1020)*</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics (MATH 1015, 1215, or higher)*</td>
<td>3</td>
</tr>
<tr>
<td>Social Sciences elective</td>
<td>3</td>
</tr>
<tr>
<td>Economics elective</td>
<td>3</td>
</tr>
<tr>
<td>Liberal Arts and Sciences elective</td>
<td>3</td>
</tr>
<tr>
<td>Laboratory Science elective</td>
<td>3</td>
</tr>
<tr>
<td>Program elective (see list below)</td>
<td>3</td>
</tr>
<tr>
<td>Accounting (ACCT 1030, 1040, 1060, 2030, 2050, 2090 or 1100, 2100)</td>
<td>24</td>
</tr>
<tr>
<td>Microcomputer modules1</td>
<td>5</td>
</tr>
<tr>
<td>Business Law II (BUSN 1232)</td>
<td>3</td>
</tr>
<tr>
<td>Management elective (MGMT 2041, 2042, 2045, or 2047)</td>
<td>3</td>
</tr>
<tr>
<td>General Business (BUSN 1030)</td>
<td>3</td>
</tr>
<tr>
<td>Wellness</td>
<td>2</td>
</tr>
<tr>
<td>Total hours</td>
<td>64</td>
</tr>
</tbody>
</table>

Sample Sequence: (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters).

First Semester
- Financial Accounting (ACCT 1030) 4
- English (ENGL 1010) 3
- Mathematics (MATH 1015, 1215, or higher) 3
- Microcomputer modules (CSST 1031, 1051, 1101) 3
- Laboratory Science elective 3
- Wellness (Awareness/Instructional Component) 1

Second Semester
- Economics elective 3
- Managerial Accounting (ACCT 1040) 4
- Fundamental Accounting Procedures (ACCT 1060) 2
- Microcomputer modules (CSST 1052 and one other) 2
- Wellness (Activity Component) 0.5

Third Semester
- Accounting (ACCT 1100 or 2090) 3
- Intermediate Accounting I (ACCT 2030) 4
- Social Sciences elective 3
- Business Communications (BUSN 1030) 3
- Liberal Arts & Sciences elective 3
- Wellness (Activity Component) 0.5

Fourth Semester
- Business Law II (BUSN 1232 ) 3
- Computerized Accounting (ACCT 2100) 3
- Cost Accounting (ACCT 2050) 4
- Program elective (see below) 3
- Management elective (see program requirements) 3

Footnotes:
* Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and Math courses.
1 Take CSST 1031, 1051, 1052, 1101 and any one of the following; BUOT 1062; CSIT 1001, 1002, 1151; CSST 1053, 1091, 1102, 1103, 1161. CSIT 1390 can be a substitute for CSST 1031, 1051, 1101 and BUOT 1062.
* Program Electives: select from ACCT 1100, 2040, 2090, 2120; BUIN 1231, 2035, 2053; CSST 1600; ECON 2002; MATH 1310; MGMT 2070.
* This program is not intended for transfer. Students looking for the first two years of a four-year degree in accounting should enroll in the Business Administration AS transfer program.
* Take MATH 1215 or higher if planning to transfer to a four-year college.
Auto Body and Collision Repair
Associate in Occupational Studies Degree, Career program
Division of STEM, Associate Dean: Bradley Cole
Department Chair: Chris Blackwell

The Associate in Occupational Studies degree program is for students who have a keen interest in the construction of the automobile. Welding, refinishing and frame repairs are strongly emphasized with a goal of returning a damaged automobile back to factory specifications. Students may specialize or seek a comprehensive course of auto body study.

Graduates are able to:
- Learn how to make repairs on any make automobile or material;
- Refinish any material applying the latest auto body procedures and refinishing products;
- Have various career opportunities with titles that include: auto body repairer, auto body electrician, auto body mechanic, collision technician, welder, frame man, industrial welder, assembler, industrial painter, automotive painter, paint mixer, auto glass installer, job estimator or damage appraiser.

Students admitted to the Auto Body program are required to meet with an auto body adviser each semester to plan their program of study. Space is limited in these classes so preference is given to auto body and automotive matriculated students who are prepared to enter MATH 1230 and ENGL 1010 or higher. Students will be required to attend an advisory session, sign a student code of conduct and maintain a valid driver’s license. All students are required to own and supply their own approved hand tools; proof of tool ownership is a requirement for final acceptance into the program (proof of purchase will be accepted.) Students will be able to purchase these tools at a discount. Prior to and during attendance student must have and maintain a valid driver’s license. Automotive students residing in Perry Hall will need to provide transportation to off-campus locations.

Program Requirements:
Auto Body Requirements 53
Technical Electives 9
Total Hours 62

Sample Sequence: (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto Body Fundamentals (ABOD 1000)</td>
<td>3</td>
</tr>
<tr>
<td>Automotive Lab I (AUTO 1000)</td>
<td>4</td>
</tr>
<tr>
<td>Automotive Electronics I (AUTO 1410)</td>
<td>4</td>
</tr>
<tr>
<td>Autobody I (ABOD 1010)</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Damage Analysis &amp; Estimation (ABOD 2040)</td>
<td>3</td>
</tr>
<tr>
<td>Auto Refinishing (ABOD 1510)</td>
<td>4</td>
</tr>
<tr>
<td>Minor Collision Repair (ABOD 2030)</td>
<td>4</td>
</tr>
<tr>
<td>Automotive Components (ABOD 2020)</td>
<td>4</td>
</tr>
</tbody>
</table>

Footnotes:
* Technical Electives: any ABOD or AUTO course or MACH 1040, ENGL 1501, ENGL 1502, CHEM 1030.
* Based on placement, students might be required to successfully complete preparatory course(s) before attempting further course or program requirements.
* While not specific program requirements, in order to graduate from this program students must demonstrate the writing skills necessary to enter ENGL 1010 and the math skills necessary to enter MATH 1230. Students should be ready for MATH 1230 by the third semester of this program.
Automotive Mechanics
Certificate, Career program
Division of STEM, Associate Dean: Bradley Cole
Department Chair: Chris Blackwell

Students interested in the automotive field may choose from three programs, each addressing a different approach to this area. The Certificate program is offered primarily to prepare students for employment in the service segment of the automotive industry. Occupational titles include, among others: line mechanic, service station mechanic, auto parts clerk. Courses focus on the fundamental systems of the automobile: cooling and heating, electrical, suspension, brakes, exhaust and emission controls. Hands-on experience is emphasized. Students spend 18 hours per week in the fall semester and 14 hours per week in the spring semester in automotive-related laboratories developing the necessary manual skills to enter this occupation. During the second semester, students take one ASE exam of their choice.

Graduates will be able to:
• Service the following automotive systems:
  cooling, air conditioning, electrical, suspension, brake, exhaust, fuel, and emission controls;
• Demonstrate the use of industry safety standards;
• Understand basic automotive history and language.

The automotive facilities are located on campus and at CCC’s Airport Corporate Park facility in Big Flats. After evaluation by CCC’s faculty, students with BOCES training may receive advanced standing. Students who have graduated from the Certificate program and elect to enter the A.O.S. degree program can complete the additional requirements in one academic year. Those selecting the A.A.S. degree program will usually need three additional semesters of academic work. In order to participate in any automotive lab, a student must maintain a valid automobile driver’s license. Students will be required to purchase a prescribed list of hand tools at the beginning of the program. See Appendix E for this tool list. Automotive students residing in Perry Hall will need to provide transportation to off-campus locations.

Program Requirements:
Technical Concentration (ABOD 1010 or 1510; AUTO 1000, 1010, 1090, 1410, 1420, 1510, 1520, 1540) 34
Total hours 34

While not specific program requirements, in order to graduate from this program, students must demonstrate the writing skills necessary to enter ENGL 1010, College Composition I, and the math skills necessary to enter MATH 1015, Introductory Algebra. Based on assessment, students may need to successfully complete ENGL 0990, Basic Writing Skills, and MATH 0960, Basic Mathematics Skills, to fulfill the graduation requirement. It is essential that students discuss this with their advisers. All 34 credit hours of this program apply towards the specific 67 credit requirement of the Automotive Technology A.O.S. program. 30 of the 34 credit hours of this program apply towards the specific 65 credit requirement of the Automotive Technology A.A.S. program. This allows a student the opportunity to apply the credits earned in the certificate towards the completion of a two-year degree.

Sample Sequence: (intended as a guide for academic planning. It need not be followed exactly or completed in two semesters.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto Lab I (AUTO 1000)</td>
<td>Chassis and Alignment Lab (AUTO 1540)</td>
</tr>
<tr>
<td>Introduction to Automotive Technology (AUTO 1010)</td>
<td>Automotive Chassis (AUTO 1090)</td>
</tr>
<tr>
<td>Automotive Electronics I (AUTO 1410)</td>
<td>Automotive Electronics II (AUTO 1510)</td>
</tr>
<tr>
<td>Fuel Systems I (AUTO 1420)</td>
<td>Fuel Systems II (AUTO 1520)</td>
</tr>
<tr>
<td>Autobody I (ABOD 1010 or 1510)</td>
<td></td>
</tr>
</tbody>
</table>

Footnotes:
* Based on placement, students might be required to successfully complete preparatory course(s) before attempting further course or program requirements. It is essential to discuss this with an adviser.
Automotive Technology
Associate in Applied Science Degree, Career program
Division of STEM, Associate Dean: Bradley Cole
Department Chair: Chris Blackwell

Students interested in the automotive field may choose from three programs, each addressing a different approach to this area. The A.A.S. degree program in Automotive Technology is a four-semester sequence designed to prepare students for a career in the automotive field or for transfer to a vocational-technical program. Career opportunities include positions as automotive technicians, service managers, shop supervisors, specialty technicians, as well as other support functions associated with automotive and industrial manufacturers. In addition, the general education courses may qualify graduates for supervisory positions dealing directly with customer relations, sales, or factory representatives. Students who transfer for a bachelor’s degree can become qualified to teach in a variety of vocational-technical programs.

Graduates will be able to:
- Service the following automotive systems:
  - cooling, air conditioning, electrical, suspension, brake, exhaust, fuel, and emission control;
- Diagnose microprocessor controls, major engine/drive train systems;
- Demonstrate the use of industry safety standards;
- Understand project management techniques;
- Qualify graduates for supervisory positions dealing directly with customer relations, sales, or factory representatives.

The automotive facilities are located on campus and at CCC’s Airport Corporate Park facility in Big Flats. After evaluation by CCC’s faculty, students with BOCES training may receive advanced standing. In order to participate in any automotive lab, a student must maintain a valid automobile driver’s license. Students will be required to purchase a prescribed list of hand tools at the beginning of the program. See Appendix E for tool list. Automotive students residing in Perry Hall will need to provide transportation to off-campus locations.

<table>
<thead>
<tr>
<th>Program Requirements:</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010 and 1020)*</td>
</tr>
<tr>
<td>Mathematics (MATH 1230-1240 or higher)*</td>
</tr>
<tr>
<td>Social Sciences electives</td>
</tr>
<tr>
<td>Physics (PHYS 1010)</td>
</tr>
<tr>
<td>Technical Concentration (AUTO 1000, 1010, 1090, 1410, 1420,</td>
</tr>
<tr>
<td>1510, 1520, 1540, 2130 or 2190, 2210)</td>
</tr>
<tr>
<td>Free elective</td>
</tr>
<tr>
<td>Wellness (Awareness or Activity)</td>
</tr>
<tr>
<td>Total hours</td>
</tr>
<tr>
<td>6</td>
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<td>3</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>64</td>
</tr>
</tbody>
</table>

Two years of mathematics are required, including algebra and either geometry or intermediate algebra. Students who do not have this preparation will be able to get it here, but it will take longer to complete the program.

Sample Sequence: (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>English</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics (MATH 1230)</td>
<td>Mathematics (MATH 1240)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Auto Lab I (AUTO 1000)</td>
<td>Chassis and Alignment Lab (AUTO 1540)</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Introduction to Automotive Technology (AUTO 1010)</td>
<td>Automotive Electronics II (AUTO 1510)</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Automotive Electronics I (AUTO 1410)</td>
<td>Automotive Chassis (AUTO 1090)</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Sciences elective</td>
<td>Social Sciences elective</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Internal Combustion Engine (AUTO 2130) or</td>
<td>Physics (PHYS 1010)</td>
</tr>
<tr>
<td>Power Transmissions (AUTO 2210)</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Electronic Engine Controls (AUTO 2190)</td>
<td>Fuel Systems II (AUTO 1520)</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Fuel Systems I (AUTO 1420)</td>
<td>Wellness (Awareness or Activity)</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Free elective</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

*Based on placement, students may be required to successfully complete preparatory course(s) before attempting further course or program requirements. Discuss with an adviser.
Automotive Technology

Associate in Occupational Studies Degree

Associate in Occupational Studies Degree, Career program
Division of STEM, Associate Dean: Bradley Cole
Department Chair: Chris Blackwell

Students interested in the automotive field may choose from three programs, each addressing a different approach to this area. The A.O.S. degree program is a four-semester curriculum consisting of 54 credit hours of automotive-related courses designed to lead directly to the workforce. It provides students with an opportunity to acquire skills in specialized phases of the automotive service industry unavailable to students in the Certificate or A.A.S. degree programs. Courses in auto body repair, courses in automotive electronics, diagnostic computer utilization, automatic and manual transmissions, major engine repair, electronic ignitions and fuel systems are required. This training program culminates in an automotive practicum that gives the student an opportunity to work and learn under the supervision of the faculty. Career opportunities encompass all phases of the automotive service industry. Some of the job titles include line mechanic, transmission and engine diagnosis technician and computerized systems analyst. Students are required to take at least two ASE certification tests prior to graduation.

Graduates will be able to:

- Service the following automotive systems:
  - cooling, air conditioning, electrical, suspension, brake, exhaust, fuel, and emission control;
- Diagnose microprocessor controls, major engine/drive train systems;
- Demonstrate the use of industry safety standards;
- Understand project management techniques;
- Understand basic automotive history and language.

The automotive facilities are located on campus and at CCC’s Airport Corporate Park facility in Big Flats. After evaluation by CCC’s faculty, students with BOCES training may receive advanced standing. In order to participate in any automotive lab, a student must maintain a valid automobile driver’s license. Students will be required to purchase a prescribed list of hand tools at the beginning of the program. See Appendix E for tool list. Automotive students residing in Perry Hall will need to provide transportation to off-campus locations.

**Program Requirements:**

<table>
<thead>
<tr>
<th>Automotive courses: (ABOD 1010; AUTO 1000, 1010, 1090, 1410, 1420, 1510 1520, 1540, 2130, 2140, 2190, 2210, 2960)</th>
<th>54</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free electives</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total hours</strong></td>
<td>63</td>
</tr>
</tbody>
</table>

**Sample Sequence:** (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters).

**First Semester**

<table>
<thead>
<tr>
<th>Auto Lab I (AUTO 1000)</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Automotive Technology (AUTO 1010)</td>
<td>3</td>
</tr>
<tr>
<td>Automotive Electronics I (AUTO 1410)</td>
<td>4</td>
</tr>
<tr>
<td>Fuel Systems I (AUTO 1420)</td>
<td>4</td>
</tr>
</tbody>
</table>

**Second Semester**

<table>
<thead>
<tr>
<th>Chassis and Alignment Lab (AUTO 1540)</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automotive Chassis (AUTO 1090)</td>
<td>3</td>
</tr>
<tr>
<td>Automotive Electronics II (AUTO 1510)</td>
<td>4</td>
</tr>
<tr>
<td>Fuel Systems II (AUTO 1520)</td>
<td>4</td>
</tr>
</tbody>
</table>

**Third Semester**

<table>
<thead>
<tr>
<th>Internal Combustion Engines (AUTO 2130)</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic Engine Controls (AUTO 2190)</td>
<td>4</td>
</tr>
<tr>
<td>Power Transmissions (AUTO 2210)</td>
<td>4</td>
</tr>
<tr>
<td>Auto Body I (ABOD 1010)</td>
<td>4</td>
</tr>
<tr>
<td>Free elective</td>
<td>3</td>
</tr>
</tbody>
</table>

**Fourth Semester**

<table>
<thead>
<tr>
<th>Drivability (AUTO 2960)</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automotive Practicum (AUTO 2140)</td>
<td>4</td>
</tr>
<tr>
<td>Free electives</td>
<td>6</td>
</tr>
</tbody>
</table>

**Footnotes:**

Based on placement, students might be required to successfully complete preparatory course(s) before attempting further course or program requirements. It is essential to discuss this with an adviser.
Business Administration
Associate in Applied Science Degree, Career program
Division of Professional Studies, Associate Dean Deborah Beall
Department Chair: Barbara Squires

The career program in Business Administration offers an excellent opportunity for students looking for employment following graduation. This program will enable students to develop the skills and abilities necessary for entry-level employment in such fields as marketing, sales, retail, office management, and hospitality, among others. For those who want to concentrate in a particular business area, this program offers specialization in sales and customer service, administrative professional, and hospitality. To enhance employability, take business electives in one of these areas of specialization. While most of the coursework will be centered on general business subjects, the diversity of liberal arts courses will help students to better understand and relate to business associates and others.

Graduates will be able to:
- Demonstrate the foundation of business knowledge required to successfully complete the transition to a position in business;
- Specialize in a variety of business-related areas
- Understand a broad based liberal arts education suitable to multiple applications and occupations;
- Provide educational enhancement opportunities for employers looking to increase the expertise of their employees.

Program Requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010 and 1020)(^3)</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics (MATH 1015, 1215, or higher)(^3)</td>
<td>3</td>
</tr>
<tr>
<td>Social Sciences elective</td>
<td>3</td>
</tr>
<tr>
<td>Economics elective</td>
<td>3</td>
</tr>
<tr>
<td>Liberal Arts &amp; Sciences elective</td>
<td>3</td>
</tr>
<tr>
<td>Laboratory Science</td>
<td>3</td>
</tr>
<tr>
<td>Free electives</td>
<td>5</td>
</tr>
<tr>
<td>Wellness</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Core Requirements</td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>3</td>
</tr>
<tr>
<td>Accounting (ACCT 1000 or 1030)</td>
<td>4</td>
</tr>
<tr>
<td>Business Law I (BUSN1231)</td>
<td>3</td>
</tr>
<tr>
<td>Applied Business Math (BUSN 1033)</td>
<td>3</td>
</tr>
<tr>
<td>Business Communications (BUSN 1030)</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Business (BUSN 1040)</td>
<td>3</td>
</tr>
<tr>
<td>Computer Electives: CSIT 1390 or CSST modules</td>
<td>4</td>
</tr>
<tr>
<td>Program electives(^3)</td>
<td>6</td>
</tr>
<tr>
<td>Professionalism (BUSN 1055)</td>
<td>3</td>
</tr>
<tr>
<td>Wellness (Activity Component)</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Total hours: 63

Business Sequences: follow suggested sample sequences below.

Business Administration - Sample Sequence: (intended as a guide. It need not be followed exactly.)

**First Semester**
- English (ENGL 1010) 3
- Principles of Business (BUSN 1040) 3
- Computer elective (CSIT 1390 or CSST modules) 4
- Mathematics elective 3
- Wellness (Awareness/Instructional Component) 1

**Second Semester**
- English 3
- Accounting (ACCT 1000, 1030) 4
- Business Communications (BUSN 1030) 3
- Program electives\(^1\) 6
- Professionalism (BUSN 1055) 3
- Wellness (Activity Component) 0.5

**Third Semester**
- Economics elective 3
- Liberal Arts & Sciences (SPCH 1080 recommended) 3
- Business Law I (BUSN 1231) 3
- Applied Business Mathematics (BUSN 1033) 3
- Free elective 2

**Fourth Semester**
- Laboratory Science 3
- Social Sciences elective 3
- Program electives 6
- Free elective 3
- Wellness (Activity Component) 0.5

Footnotes:
\(^1\) Program electives: Select from PHIL 2500; SPCH 1080; or courses with the following prefixes: ACCT, BUOT, BUSN, CSCS, CSIT, CSNT, CSST, CSWT, ECON, HOSP, MGMT, MKTG.
\(^2\) If mathematics placement is MATH 1215 or higher, students may substitute another business course for BUSN 1033.
\(^3\) Based on placement, students might be required to successfully complete preparatory course(s) before attempting further course or program requirements.
**Administrative Professional -**

**Sample Sequence:** (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010)</td>
<td>English (ENGL 1020)</td>
</tr>
<tr>
<td>Foundations of Word Processing (BUOT 1010)</td>
<td>Office Techniques (BUOT 1520)</td>
</tr>
<tr>
<td>Mathematics (MATH 1015, 1215, or higher)</td>
<td>Principles of Business (BUSN 1040)</td>
</tr>
<tr>
<td>Applied Business Math (BUSN 1033)</td>
<td>Microcomputer Literacy (CSIT 1390 or BUOT 1062, CSST 1031, 1051, 1101)</td>
</tr>
<tr>
<td>Liberal Arts elective (SPCH 1080)</td>
<td>Professionalism (BUSN 1055)</td>
</tr>
<tr>
<td>Wellness (Awareness/Activity)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Third Semester</td>
<td></td>
</tr>
<tr>
<td>Office Procedures (BUOT 2010)</td>
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</tr>
<tr>
<td>Laboratory Science elective</td>
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</tr>
<tr>
<td>Accounting (ACCT 1000 or ACCT1030)</td>
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<tr>
<td>Business Communications (BUSN 1030)</td>
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</tr>
<tr>
<td>Business Law I (BUSN 1231)</td>
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<td></td>
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<tr>
<td>Fourth Semester</td>
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<td>Economics elective</td>
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<td>Social Sciences elective</td>
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<tr>
<td>Office Technology Practicum (BUOT2960)</td>
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<tr>
<td>Business elective</td>
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<tr>
<td>Office Management (MGMT 2045)</td>
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<tr>
<td>Wellness Awareness/Activity</td>
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**Hospitality -**

**Sample Sequence:** (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td>English (ENGL 1010)</td>
<td>English (ENGL 1020)</td>
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<tr>
<td>Hospitality (HOSP 1000)</td>
<td>Customer Service &amp; Relationship (BUSN 1060)</td>
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<tr>
<td>Mathematics (MATH 1015, 1215, or higher)</td>
<td>Foundations of Word Processing (BUOT 1010)</td>
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<tr>
<td>Professionalism (BUSN 1055)</td>
<td>Microcomputer Literacy (CSIT 1390 or BUOT1062, CSST1031, 1051, 1101)</td>
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<tr>
<td>Principles of Business (BUSN 1040)</td>
<td>Liberal Arts elective (SPCH 1080)</td>
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<tr>
<td>Third Semester</td>
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<tr>
<td>Principles of Marketing (MKTG 2050)</td>
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<tr>
<td>Laboratory Science</td>
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<tr>
<td>Accounting (ACCT 1000 or ACCT1030)</td>
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</tr>
<tr>
<td>Business Communications (BUSN 1030)</td>
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</tr>
<tr>
<td>Business Law I (BUSN 1231)</td>
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<tr>
<td>Social Sciences elective</td>
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<tr>
<td>Hospitality Practicum (HOSP2960)</td>
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<tr>
<td>Applied Business Math (BUSN 1033)</td>
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<tr>
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**Legal Administrative Professional -**

**Sample Sequence:** (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.)

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<td>English (ENGL 1010)</td>
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<td>Applied Business Math (BUSN 1033)</td>
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<td>Legal Office Procedures (BUOT 2100)</td>
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<td>Wellness Awareness/Activity</td>
<td>Professionalism (BUSN 1055)</td>
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<td>Business Elective</td>
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</tr>
<tr>
<td>Procedural Law for Legal Professionals (BUOT 2120)</td>
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<td>Accounting Practices (ACCT 1000/ACCT1030)</td>
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<td>Laboratory Science</td>
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<td>Business Communications (BUSN 1030)</td>
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<td>Principles of Business (BUSN 1040)</td>
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<td>Wellness (Awareness/Activity)</td>
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<td>Fourth Semester</td>
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<tr>
<td>Legal Assistant Studies (BUOT 2130)</td>
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<td>Office Technology Practicum (BUOT 2960)</td>
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<tr>
<td>Office Management (MGMT 2045)</td>
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<tr>
<td>Wellness Awareness/Activity</td>
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Management
Sample Sequence: (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters)

<table>
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<tr>
<td>English (ENGL 1010)</td>
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<td>English (ENGL 1020)</td>
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<td>Principles of Business (BUSN 1040)</td>
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<tr>
<td>Computer Courses (CSIT 1390 or BUOT 1062, CSST 1031, 1051, 1101)</td>
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<td>Principles of Management (MGMT 2041)</td>
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<th>Third Semester</th>
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<td>Human Resource Management (MGMT 2047)</td>
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<td>Laboratory Science</td>
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<tr>
<td>Business Law II (BUSN 1232)</td>
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<td>Social Sciences Elective</td>
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<td>Liberal Arts &amp; Sciences Elective (SPCH 1080)</td>
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<td>Small Business Management (MGMT 2042)</td>
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<td>Applied Business Math (BUSN 1033)</td>
<td>3</td>
<td>Business Management Internship (BUSN 2970)</td>
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<td>New Venture Creation (BUSN1021)</td>
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Medical Administrative Assistant
Sample Sequence: (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters)

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<th>First Semester</th>
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</thead>
<tbody>
<tr>
<td>English (ENGL 1010)</td>
<td>3</td>
<td>English (ENGL 1020)</td>
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<tr>
<td>Math Elective (MATH 1015, 1215 or higher)</td>
<td>3</td>
<td>Electronic Health Records (BUOT 2750)</td>
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<tr>
<td>Medical Insurance and Billing (BUOT 2730)</td>
<td>3</td>
<td>Medical Administrative Procedures (BUOT 2760)</td>
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</tr>
<tr>
<td>Computer Courses (CSIT 1390 or BUOT 1062, CSST 1031, 1051, 1101)</td>
<td>4</td>
<td>Liberal Arts Elective (SPCH 1080)</td>
<td>3</td>
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<tr>
<td>Medical Terminology (MEDT 1010, 1020, 1030)</td>
<td>3</td>
<td>Business Math (BUSN 1033)</td>
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<tr>
<td>Wellness (Awareness/Activity)</td>
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<td>Wellness (Awareness/Activity)</td>
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<table>
<thead>
<tr>
<th>Third Semester</th>
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<th>Fourth Semester</th>
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</thead>
<tbody>
<tr>
<td>Law and Ethics for Medical Careers (BUOT 2755)</td>
<td>3</td>
<td>Economics Elective</td>
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<tr>
<td>Accounting Practices (ACCT 1000)</td>
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<td>Social Sciences Elective</td>
<td>3</td>
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<tr>
<td>Laboratory Science</td>
<td>3</td>
<td>Office Technology Practicum (BUOT 2960)</td>
<td>4</td>
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<tr>
<td>Business Communications (BUSN 1030)</td>
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<td>Business Elective</td>
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<tr>
<td>Medical Administrative Procedures II (BUOT 2765)</td>
<td>3</td>
<td>Principles of Business (BUSN 1040)</td>
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Sales and Customer Service
Sample Sequence: (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.)

<table>
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<th>First Semester</th>
<th></th>
<th>Second Semester</th>
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</thead>
<tbody>
<tr>
<td>English (ENGL 1010)</td>
<td>3</td>
<td>English (ENGL 1020)</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Business (BUSN 1040)</td>
<td>3</td>
<td>Accounting (ACCT1000 or ACCT1030</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics (MATH 1015, 1215, or higher)</td>
<td>3</td>
<td>Business Communications (BUSN 1030)</td>
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</tr>
<tr>
<td>Microcomputer Literacy (CSIT 1390 or BUOT1062, CSST1031, CSST1051, CSST1101</td>
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<td>Business elective</td>
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<tr>
<td>Liberal Arts elective (SPCH 1080)</td>
<td>3</td>
<td>Selling (MKTG 2058)</td>
<td>3</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th></th>
<th>Fourth Semester</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics elective</td>
<td>3</td>
<td>Customer Service &amp; Relationship (BUSN1060)</td>
<td>3</td>
</tr>
<tr>
<td>Laboratory Science</td>
<td>3</td>
<td>Social Science elective</td>
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</tr>
<tr>
<td>Business Law I (BUSN 1231)</td>
<td>3</td>
<td>Professionalism (BUSN 1055)</td>
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<tr>
<td>Applied Business Math (BUSN 1033)</td>
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<td>Business electives</td>
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<td>Free elective</td>
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<tr>
<td>Wellness Awareness/Activity</td>
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</table>
Business Administration

Associate in Science Degree, Transfer program
Division of Professional Studies, Associate Dean Deborah Beall
Department Chair: Barbara Squires

For students who want to earn a bachelor’s degree in business, economics, accounting, marketing, finance or management, this program is designed to match the courses they would be taking as a freshman and sophomore at a four-year college. A faculty advisor and Advising & Counseling Services will help in selecting electives and making the transfer to a four-year college at the end of the sophomore year. Many students also take jobs after earning this degree and finish their bachelor’s degree on a part-time basis. Graduates will be able to:

• Demonstrate the foundation of business knowledge required to successfully complete the next level of courses post CCC;
• Have the ability to complete a baccalaureate degree in two years post CCC;
• Have the opportunity to specialize in a variety of business-related areas;
• Achieve a broad-based liberal arts education suitable to multiple applications and transfer programs of study.

Program Requirements:

| English (ENGL 1010-1020)* | 6 | Accounting (ACCT 1030, 1040) | 8 |
| Mathematics (MATH 1215 or higher)* | 3 | Principle of Business (BUSN 1040) | 3 |
| Upper-level Mathematics (MATH 1510 or 1610)* | 3 | Business Law (BUSN 1231) | 3 |
| Social Sciences (ECON 2001-2002) | 6 | Statistics (BUSN 2053) | 4 |
| Laboratory Science electives | 6 | Computer courses (CSIT 1390 or BUOT 1062 and CSST 1031, 1051, 1101) | 4 |
| Public Speaking (SPCH 1080) | 3 | Program electives (MGMT 2041, 2070, 2047; MKTG 2050; BUSN 1030, 1232) | 6 |
| Liberal Arts and Sciences electives | 6 |
| Wellness | 2 |
| Total hours | 63 |

Sample Sequence: intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.

First Semester
Principles of Business (BUSN 1040) | 3 |
English (ENGL 1010) | 3 |
Computer courses (CSIT 1390 or BUOT 1062) | 4 |
Mathematics* | 3 |
Economics (ECON 2001) | 3 |
Wellness (Activity Component) | 0.5 |

Second Semester
Financial Accounting (ACCT 1030) | 4 |
English (ENGL 1020) | 3 |
Laboratory Science elective | 3 |
Mathematics* | 3 |
Economics (ECON 2002) | 3 |
Wellness (Awareness/Instructional Component) | 1 |

Third Semester
Managerial Accounting (ACCT 1040) | 4 |
Liberal Arts and Sciences electives | 3 |
Laboratory Science elective | 3 |
Program elective | 3 |
Business Law I (BUSN 1231) | 3 |
Wellness (Activity Component) | 0.5 |

Fourth Semester
Liberal Arts and Sciences elective | 3 |
Statistics (BUSN 2053) | 4 |
Program elective | 3 |
Public Speaking (SPCH 1080) | 3 |

Footnotes:
* Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and Math courses. If a student needs to take lower-level math courses in preparation for the required math courses, the extra hours of math credit can be used as part of liberal arts and sciences electives.
1. Students should check with an adviser before scheduling a business elective to ensure that the course will transfer to the college of their choice. In special cases another course may be taken to fulfill this requirement if the student intends to transfer to a college which has unusual requirements. In such cases a waiver may be granted by the Associate Dean of Business Administration and Computing.
** Students with significant keyboarding experience can request a waiver for BUOT 1062 and take an additional credit hour of computer (CSST) courses. See your academic adviser.
** Students who intend to pursue an accounting degree after transferring should add ACCT 1060 for a program total of 65 cr. hrs. and should determine whether both BUSN 1231 and BUSN 1232 will be required at the intended transfer college.
** Students in this program who plan to transfer to a SUNY college can meet 7 of the 10 SUNY Knowledge and Skills areas and 30 SUNY General Education credits. For more information on SUNY General Education requirements, refer to the catalog index or see an adviser.
Chemical Dependency Counseling

Associate in Applied Science Degree, Career program
Division of Professional Studies, Associate Dean: Deborah Beall
Department Chair: Frederick “Bud” Lawrence

This program is designed to prepare students to enter the field of alcoholism and substance abuse treatment. Graduates will be able to:

- Use communication skills to understand consumer problems and assist in problem solving;
- Perform essential case management functions including interviewing, record keeping, gathering intake information, making referrals, and identifying consumer problems and issues;
- Maintain professional and ethical standards;
- Understand and respond to potential crisis issues and situations;
- Identify and contact human services resources and agencies in the community;
- Interact in group settings, including counseling and education groups provided for treatment purposes.

Corning Community College is a New York State Office of Alcoholism and Substance Abuse Service (OASAS) approved education provider. Required courses for the Chemical Dependency Counseling AAS meet OASAS requirements for 350 hours of training for NYS OASAS Credential Alcoholism and Substance Abuse Counselor (CASAC).

Program Requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>English (ENGL 1010 and 1020)*</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics (MATH 1015, 1120 or higher)*†</td>
<td>3</td>
</tr>
<tr>
<td>Social Sciences (SOCL 1010, PSYC 1101)</td>
<td>6</td>
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<tr>
<td>Laboratory Science (BIOL 1050 recommended)</td>
<td>3</td>
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<tr>
<td>Free electives (see adviser for suggestions)</td>
<td>6</td>
</tr>
<tr>
<td>Human Services (HUSR 1030, 1040, 1510**, 1110, 1211, 1581, 1620, 2010, 2963, 2964)</td>
<td>33</td>
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<tr>
<td>Health (HLTH 1202, 1203)</td>
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<td>Wellness (Activity Component)</td>
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<tr>
<td>Total hours</td>
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Sample Sequence: (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.)

First Semester

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>English (ENGL 1010)</td>
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<tr>
<td>Mathematics (MATH 1015, 1120)</td>
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<tr>
<td>Psychology or Sociology (PSYC 1101, SOCI 1010)</td>
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<tr>
<td>Alcohol Counseling Credentialing (HUSR 1110)</td>
<td>3</td>
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<tr>
<td>Health (HLTH 1202 or 1203)</td>
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<tr>
<td>Wellness (Activity Component)</td>
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Second Semester

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>English (ENGL 1020)</td>
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<tr>
<td>Laboratory Science (BIOL 1050)</td>
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<td>Psychology or Sociology (PSYC 1101 or SOCI 1010)</td>
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<tr>
<td>Introduction to Helping Skills (HUSR 1030)</td>
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<tr>
<td>Health (HLTH 1202 or 1203)</td>
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Third Semester

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<tr>
<td>Ethics Human Serv/Chem Dep. (HUSR 1620)</td>
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<td>Human Services II (HUSR 1040)</td>
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<td>Group Dynamics (HUSR 1510)</td>
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Fourth Semester

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<th>Course</th>
<th>Credits</th>
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<tbody>
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<td>Human Services Practicum I &amp; II (HUSR 2963, 2964)</td>
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<td>Free elective</td>
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Footnotes:

1. Statistics is recommended for students interested in transfer.
2. It is recommended that HUSR 2963 and 2964 be taken together in the fourth semester. The practicum may be taken in separate semesters only with the Department Chair’s approval. These courses may be taken only with the permission of the Instructor and must be completed within a drug/alcohol treatment facility.
3. One credit will be used toward the instructional/awareness component of the Wellness requirement.
* Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and math courses.
Chemical Technology
Associate in Applied Science Degree, Career program
Division of STEM, Associate Dean Bradley Cole
Department Chair: Brenda Gustin

Chemical technicians work in research, process improvement, product development, measurement documentation, environmental testing, and quality control. They help design, setup, and analyze experiments in research, product/process development and quality control. They select and order materials and equipment, operate sophisticated instruments, and perform physical and chemical analyses on raw materials and products. Chemical technicians do experiments to obtain reliable data and use computers to analyze data and communicate information. They often work with other professionals to solve problems. The Chemical Technology program is flexible. It emphasizes fundamentals and practical applications in order to train students for immediate employment and prepares them to continue to work towards an advanced degree. Students will have the opportunity to participate in a work internship that will assist them to experience on-the-job reality and gain skills that will enhance their ability to procure employment after graduation. Students in the Chemical Technology program may be required to complete a criminal background check, child abuse screening, and/or drug testing due to the requirements of their internship location. Acceptable results will be determined by the internship site.

Graduates will be able to:
• Operate laboratory instruments, perform reliable scientific measurements;
• Use chemical and technical language, design experiments, evaluate experimental design;
• Prepare samples for experiments;
• Write standard operating procedures (SOPs);
• Document results of experiments;
• Analyze scientific data;
• Use quality control measures in scientific experiments;
• Perform common chemical calculations, and draw chemical structures using computer programs;
• They will locate information in databases and evaluate scientific journal articles.

Opportunities for employment are excellent and feedback from those who have transferred to institutions such as Syracuse, RIT, University of Rochester, Penn State, Cornell, and Alfred indicates CCC students are well prepared academically.

Program Requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010 and 1020)*</td>
<td>6</td>
</tr>
<tr>
<td>Social Sciences electives</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics (MATH 1215-1225 or higher)*</td>
<td>6</td>
</tr>
<tr>
<td>Chemistry (CHEM 1510-1520) or (CHEM 1010-1020 and CHEM 1500) &amp; (CHEM 2010, 2020, 2033, 2043)</td>
<td>28</td>
</tr>
<tr>
<td>Scientific Computer and Communication Skills (SCIN 1060)</td>
<td>3</td>
</tr>
<tr>
<td>Program electives (3 courses from list below)</td>
<td>9</td>
</tr>
<tr>
<td>Free electives (if needed)</td>
<td>3</td>
</tr>
<tr>
<td>Wellness</td>
<td>2</td>
</tr>
<tr>
<td>Total hours</td>
<td>63</td>
</tr>
</tbody>
</table>

Sample Sequence: intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.

First Semester
- English: 3
- Mathematics (MATH 1215 or higher): 3
- Chemistry (CHEM 1510 or 1010): 4
- Scientific Computer and Communication Skills (SCIN 1060): 3
- Program elective: 3
- Wellness (Awareness/Instructional Component): 1

Second Semester
- English: 3
- Mathematics (MATH 1225): 3
- Chemistry (CHEM 1520 or 1020): 4
- Program elective: 3
- Social Sciences elective: 3
- Wellness (Activity Component): 0.5

Third Semester
- Organic Chemistry I (CHEM 2010): 5
- Analytical Chemistry (CHEM 2033): 5
- Social Sciences elective: 3
- Wellness (Activity Component): 0.5

Fourth Semester
- Chemical Instrumentation (CHEM 2043): 5
- Program elective (CHTK 2960 recommended): 3
- Organic Chemistry II (CHEM 2020): 5
- Free elective: 3

Footnotes:
1 For those who have recently successfully completed high school chemistry, CHEM 1510-1520 should be selected.
2 If taking CHEM 1010, 1020, CHEM 1500 should be selected as one of the free electives.
• Program electives: Select courses from the following list to total at least 9 credit hours: BIOL 2010, 2040, 2060; CHTK 2960; ENGR 2150 or MECH 2210; ELEC 1010 or higher; GEOL 1510 or 1530; MATH 1310, 1413, 1610; MECH 1050; MFGT 2010, 2020; PHYS 1010 or higher.
• Students may elect to take TECH 1110, 1120, and 1130 in order to receive 3 credit hours of program electives.
• MATH 1230-1240 is recommended.

Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and math courses.
Computer Aided Drafting (CAD)
Certificate, Career program
Division of STEM, Associate Dean: Bradley Cole
Department Chair: John Longwell

Drafting is an intensive program emphasizing the development of manual and computer aided (CAD) drafting skills. Graduates will have hands on knowledge of machining process for the creation of machine components from raw stock to quality control inspection using the ANSI standard for geometric dimensioning and tolerance. Should students decide to continue their education in the pursuit of an A.A.S degree in technology, the majority of these courses apply directly to the A.A.S. degree programs in Mechanical Technology: CAD Design, Manufacturing, and Machine Tool Technology as directed below**.

Graduates will be able to:
• Develop skills to use AutoCAD and SolidWorks to create working drawings to expected industry standards.
• Produce 2-D drawings and 3-D models for import into computer assisted manufacturing (CAM) software for computer numerical control (CNC) machining program generation;

While not a specific program requirement, in order to graduate from this program students must demonstrate the writing skills necessary to enter ENGL 1010, College Composition I.

Program Requirements:
Technical Concentration
(CADD 1700, 2710; MACH 1040; MECH 1050, 1550, 1560, 1570; TECH 1120) 24
Mathematics (MATH 1230 or higher)* 3
Electives (see list below) 3
Total hours 30

Sample Sequence: (intended as a guide for academic planning. It need not be followed exactly or completed in two semester.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics (MATH 1230 or higher)</td>
<td>Engineering Graphics II (MECH 1550)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Engineering Graphics I (MECH 1050)</td>
<td>CNC Programming (MECH 1560)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Spreadsheet Applications in Technology (TECH 1120)</td>
<td>Dimensional Metrology (MECH 1570)</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Precision Machining I (MACH 1040)</td>
<td>Computer Aided Drafting II (CADD 2710)</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Computer Aided Drafting I (CADD 1700)</td>
<td>Electives</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

Footnotes:
*Based on placement, students might be required to successfully complete preparatory course(s) before attempting further course or program requirements. It is essential to discuss this with an adviser.
*Electives: Select from ENGL 1010; MATH 1240; GEOG 1210; and any CADD, CRST, ELEC, MACH, MECH, MFGT, TECH course.
*Mechanical drawing experience is recommended.
**21 of the 30 credit hours of this program apply towards the specific 64 credit requirement of the Machine Tool Technology A.A.S. program allowing a student the opportunity to apply the credits earned in the certificate towards the completion of a two-year degree.
* 24 of the 30 credit hours of this program apply towards the specific 64 credit requirement of the Manufacturing Technology A.A.S. program allowing a student the opportunity to apply the credits earned in the certificate towards the completion of a two-year degree.
* 24 of the 30 credit hours of this program apply towards the specific 64 credit requirement of the Mechanical Technology: CAD Design A.A.S. program allowing a student the opportunity to apply the credits earned in the certificate towards the completion of a two-year degree.
Computer Information Science
Associate in Science Degree, Transfer program
Division of STEM, Associate Dean Bradley Cole
Department Chair: DJ Dates

Students who enjoy working with people and dealing with computers will find this program attractive. The program is designed to provide the first two years of a baccalaureate computer information science or information technology program. Transfer options include: computer information science, information technology, management information system, systems analysis and design, telecommunications, database administration, and other computer related disciplines.

Graduates will be able to:
- Demonstrate an understanding of computing and what it includes;
- Develop solutions to a wide variety of problems by analyzing, designing, developing, implementing, testing, and maintaining computer systems,
- Create an information system for a given organizational setting,
- Select, install, and maintain hardware/software based on user needs,
- Communicate orally and in writing with individuals inside/outside of the computing field.

Program Requirements:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Minimum Credits</th>
<th>Maximum Credits</th>
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</thead>
<tbody>
<tr>
<td>English (ENGL 1010-1020)*</td>
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<td></td>
</tr>
<tr>
<td>Mathematics (MATH 1310 and MATH 1413 or higher)*</td>
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<td></td>
</tr>
<tr>
<td>Social Sciences electives</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Speech (SPCH 1060 or 1080)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Liberal Arts elective1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Laboratory Science electives1</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Free electives</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Computer courses (CSCS 1240, 1320, 2320, 2330; CSIT 2310; CSNT 1200)</td>
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<td></td>
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<td>Program electives2</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Humanities elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Wellness</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Total hours</td>
<td>64</td>
<td></td>
</tr>
</tbody>
</table>

Sample Sequence: (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.)

**First Semester**

- English (ENGL 1010) 3
- Structured/Object-Oriented Problem-Solving (CSCS 1240) 3
- Social Sciences elective 3
- Mathematics (MATH 1413 or higher) 4
- Program Elective (CSCS 1200 recommended)2 3

**Second Semester**

- C/C++ Programming (CSCS 1320) 4
- Speech (SPCH 1060 or 1080) 3
- English (ENGL 1020) 3
- Network Fundamentals (CSNT 1200) 4
- Wellness (Awareness/Instructional Component) 1

**Third Semester**

- Laboratory Science elective1 3
- Statistics (MATH 1310) 4
- Data Structures (CSCS 2320) 3
- Discrete Structures (CSCS 2330) 3
- Liberal Arts elective1 3
- Wellness (Activity Component) 0.5

**Fourth Semester**

- Structured and Object-Oriented Systems
- Analysis & Design (CSIT 2310) 3
- Laboratory Science elective1 3
- Program elective2 3
- Humanities elective 3
- Free elective 4
- Wellness (Activity Component) 0.5

Footnotes:
1 Laboratory sciences and liberal arts electives: select to fulfill requirements of transfer college. If using PHYS for laboratory science elective, select from PHYS 1010 or higher.
2 Select from CSCS, CSIT 1320, CSIT 2044 or higher, CRST, CSNT, CSNS or CSWT with adviser’s approval.
* Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and math courses.
* Since programs at transfer colleges vary greatly, it is essential that students meet early with their faculty adviser in order to select appropriate electives.
* High school or equivalent preparation desired: biology, chemistry or physics and three years of mathematics, including intermediate algebra and trigonometry. Students who don’t have this preparation will be able to get it here, but it may take longer to complete the program.
* Students in this program who plan to transfer to a SUNY college can meet 21 credits of the general education requirement.
Computer Numerical Control Programming  
Certificate, Career program  
Division of STEM, Associate Dean: Bradley Cole  
Department Chair: John Longwell

This certificate is designed to prepare students for a position operating or writing coded instructions (programs) for automated computer numerically controlled (CNC) machines. Programming is done both by hand and with the use of PC based automatic programming (Mastercam) software. CNC programs are written in both standard M & G code and conversational formats. Machining experience is acquired through the operation of both CNC machining centers and conventional machine tools, which include two vertical and one horizontal machining centers (two of which are equipped with automatic tool changers), and an array of standard milling, grinding, and turning machines (some of which are equipped with state-of-the-art digital readout systems). Inspection devices used include optical comparators, coordinate measuring machines, digital height gauges, as well as other traditional measuring tools. Students with experience in the machine trades or other technical occupations may qualify for some credit through challenge examinations. They should discuss this with their faculty adviser.

Graduates will be able to:

• Have the tools necessary to program in both a production and tool-shop environment;
• Generate CNC code by both manual and computer assisted methods;
• Understand the aspects of machine programs, tooling and first piece inspection, and state-of-the-art software and hardware systems.

While not a program requirement, students must demonstrate the writing skills necessary to enter ENGL 1010 in order to graduate from this program. Based on assessment, students might be required to take developmental English to fulfill this requirement. High school or equivalent preparation is required; it is also recommended that students have at least the equivalent of two years mathematics including algebra and either geometry or intermediate algebra. Students in this program who reside in Perry Hall will need to provide transportation to off-campus locations.

Program Requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precision Machining I (MACH 1040)</td>
<td>5</td>
</tr>
<tr>
<td>CNC Programming (MECH 1560)</td>
<td>3</td>
</tr>
<tr>
<td>CNC Machining (MACH 2400)</td>
<td>5</td>
</tr>
<tr>
<td>Tooling Technology (MACH 2410)</td>
<td>4</td>
</tr>
<tr>
<td>Dimensional Metrology (MECH 1570)</td>
<td>3</td>
</tr>
<tr>
<td>Engineering Graphics I (MECH 1050)</td>
<td>3</td>
</tr>
<tr>
<td>Computer Aided Drafting I (CADD 1700)</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics (MATH 1230-1240 or higher)*</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total hours</strong></td>
<td><strong>32</strong></td>
</tr>
</tbody>
</table>

Sample Sequence: (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.)

First Semester
- Precision Machining (MACH 1040) 5
- Mathematics (MATH 1230) 3

Second Semester
- CNC Programming (MECH 1560) 3
- Mathematics (MATH 1240) 3
- Engineering Graphics I (MECH 1050) 3

Third Semester
- CNC Machining (MACH 2400) 5
- Computer Aided Drafting I (CADD 1700) 3
- Dimensional Metrology (MECH 1570) 3

Fourth Semester
- Tooling Technology (MACH 2410) 4

Footnotes:

*Based on placement, students may be required to take MATH 0960, before taking math credit courses.
*29 of the 32 credit hours of this program apply towards the specific 64 credit requirement of the Machine Tool Technology A.A.S. program allowing a student the opportunity to apply the credits earned in the certificate towards the completion of a two-year degree.
*18 of the 32 credit hours of this program apply towards the specific 64 credit requirement of the Manufacturing Technology A.A.S. program allowing a student the opportunity to apply the credits earned in the certificate towards the completion of a two-year degree.
*18 of the 32 credit hours of this program apply towards the specific 64 credit requirement of the Mechanical Technology: CAD Design A.A.S. program allowing a student the opportunity to apply the credits earned in the certificate towards the completion of a two-year degree.
Computer Science
Associate in Science Degree, Transfer program
Division of STEM, Associate Dean Bradley Cole
Department Chair: DJ Dates

Students in the Computer Science program are educated in the design and implementation of system software. The program provides the first two years of a baccalaureate computer science degree with transfer options that include: scientific programming, systems programming, systems design, computer engineering, and other computer-related disciplines. Graduates of computer science programs commonly seek employment with computer manufacturers or software houses that specialize in system software.

Graduates will be able to:
- Demonstrate knowledge and understanding of essential facts, concepts, principles, and theories relating to computer science;
- Understand and demonstrate the structure of mathematics in its relation and application to computer science;
- Apply knowledge and skills to solve problems effectively and efficiently;
- Communicate effectively with a range of audiences;
- Understand the professional, ethical, security and social issues and responsibilities in computer science.

Program Requirements:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010-1020)*</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics (MATH 1610-1620)*</td>
<td>8</td>
</tr>
<tr>
<td>Laboratory Science electives¹</td>
<td>6</td>
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<tr>
<td>Social Sciences electives¹</td>
<td>3</td>
</tr>
<tr>
<td>Liberal Arts &amp; Sciences electives</td>
<td>6</td>
</tr>
<tr>
<td>Computer Science (CSCS 1240, 1320, 1730, 2320, 2330, 2650 and CSCS 1200)</td>
<td>25</td>
</tr>
<tr>
<td>Humanities electives¹</td>
<td>3</td>
</tr>
<tr>
<td>Program electives² (see list below)</td>
<td>6</td>
</tr>
<tr>
<td>Wellness</td>
<td>1</td>
</tr>
<tr>
<td>Total hours</td>
<td>64</td>
</tr>
</tbody>
</table>

Sample Sequence: (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.)

First Semester
- Program Elective (CSNT 1200 recommended)²       3
- Structured and Object-Oriented Problem-Solving (CSCS 1240) 3
- Computer Essentials (CSCS 1200)                  4
- Calculus I (MATH 1610)                           4
- English (ENGL 1010)                             3

Second Semester
- C/C++ Programming (CSCS 1320)                    4
- UNIX/Linux Fundamentals (CSCS 1730)              4
- Calculus II (MATH 1620)                         4
- English (ENGL 1020)                             3

Third Semester
- Humanities elective¹                             3
- Laboratory Science elective¹                     3
- Social Science elective¹                        3
- Data Structures (CSCS 2320)                      3
- Discrete Structures (CSCS 2330)                  3

Fourth Semester
- Computer Organization (CSCS 2650)                4
- Program elective²                               3
- Liberal Arts & Sciences electives¹              6
- Laboratory Science elective¹                    3
- Wellness (Awareness and/or Activity)             1

Footnotes:
1 Select to fulfill requirements of transfer college. If using PHYS for laboratory science elective, select PHYS 1010 or higher
2 Select from CSIT 1320, CSIT 2044 or higher, MATH 1310, MATH 2410 or higher, PHYS 1820 or higher, and any CSCS, CSIT, CSNT, CSNS, CSWT; select to fulfill requirements of transfer college.
* Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and Math courses.
* Students in this program who plan to transfer to a SUNY college can meet 7 of the 10 SUNY Knowledge and Skills areas and 30 SUNY General Education credits. For more information on SUNY General Education requirements, refer to the catalog index or see an adviser.
* Since programs at transfer colleges vary greatly, it is essential that students meet early with their advisor in order to select appropriate electives.
* High school or equivalent preparation required: biology, chemistry or physics and four years of mathematics, including algebra, geometry or intermediate algebra, trigonometry, and pre-calculus. Students who don’t have this preparation will be able to get it here, but it may take longer to complete the program.
Criminal Justice
Associate in Applied Science Degree, Career program
Division of Professional Studies, Associate Dean: Deborah Beall

A rewarding, action-oriented career in Criminal Justice begins with a balanced combination of law enforcement theory and practical experience. Anchored in a solid curriculum that includes liberal arts courses, the Criminal Justice program prepares students for careers in law enforcement, security, investigation, corrections, military intelligence, and other related professions. To qualify for positions in the criminal justice field, graduates usually must pass a written civil service examination, physical agility tests and are subject to background investigations.

Graduates will be able to:
- Demonstrate knowledge of the criminal justice system, the causes of criminal conduct, and the response to criminal behavior;
- Demonstrate beginning application of law;
- Understand the value of ethical behavior in the administration of justice;
- Apply critical thinking in criminal justice;
- Apply beginning technical proficiencies;
- Use appropriate communication skills;
- Demonstrate awareness of our pluralistic society to foster understanding and tolerance.

Hands-on experience combines with studies in government, law, psychology, and literature to develop the competence needed for the variety of demands placed daily on criminal justice personnel. Recognized throughout the northeast as an exceptional educational facility, the CCC Criminal Justice Complex, located on Goff Road (Exit 48, Route 352) in East Corning, features state-of-the-art investigative tools. It is also a New York State regional training center that certifies law enforcement officers.

Newly added to this program is a Law Enforcement Track. Students who choose this option will attend CCC’s Southern Tier Law Enforcement track typically in their fourth and final semester.* Graduates in the Law Enforcement Track will have attained a level of expertise in the areas of New York State laws, crime scene investigations, physical training, defensive tactics, emergency medical services, emergency vehicle operations, and many other ancillary police activities sufficient for New York State Phase I Certification. Graduates will receive both an Associate in Applied Science degree in Criminal Justice and Police Basic Training certification. Students interested in this option must apply; acceptance is not guaranteed and is determined in part based on successful completion of a background check, physical fitness requirements, and an oral board interview.

*Note that the Southern Tier Law Enforcement Academy is offered in the Spring semester only. Students who begin this program in Spring or Summer semesters will require careful advising to ensure preparation for an academy session prior to their final semester.

Criminal Justice Track

<table>
<thead>
<tr>
<th>Program Requirements:</th>
<th>6</th>
<th>3</th>
<th>24</th>
<th>6</th>
<th>6</th>
<th>2</th>
<th>64</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010 and 1020)*</td>
<td>Criminal Justice (CRJ 1010, 1020, 1030, 1040, 1050, 2010, 2020, 2050)</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Mathematics (MATH 1015, 1215, or higher)*</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Social Sciences (PSYC 1101 and SOCI 1010)</td>
<td>6</td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Social Sciences elective</td>
<td>3</td>
<td>Free electives</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government (GOVT 1010, 1020, 2040)</td>
<td>3</td>
<td>Wellness</td>
<td></td>
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<td></td>
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<tr>
<td>Laboratory Science (see list below)**</td>
<td>3</td>
<td>(PFIT 1015 and WELL 1010 recommended)</td>
<td>2</td>
<td>Total hours</td>
<td>64</td>
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</table>
Sample Sequence:  (intended as a guide for academic planning.  It need not be followed exactly or completed in four semesters.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010)</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics (MATH 1015, 1215, or higher)</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Criminal Justice (CRJ 1010)</td>
<td>3</td>
</tr>
<tr>
<td>Penal Law (CRJ 1050)</td>
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<tr>
<td>Social Sciences (PSYC 1101 or SOCI 1010)</td>
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<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Third Semester</td>
<td>Fourth Semester</td>
</tr>
<tr>
<td>Criminal Evidence &amp; Procedures (CRJ 1020)</td>
<td>3</td>
</tr>
<tr>
<td>Criminal Investigation I (CRJ 2010)</td>
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<tr>
<td>Criminal Justice elective</td>
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</tr>
<tr>
<td>Government (GOVT 1010, 1020, 2040)</td>
<td>3</td>
</tr>
<tr>
<td>Wellness (Awareness or Activity)</td>
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<td></td>
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<td>Law Enforcement Track</td>
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Program Requirements:

<table>
<thead>
<tr>
<th>Program Requirements:</th>
<th>Total hours</th>
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</thead>
<tbody>
<tr>
<td>English (ENGL 1010 and 1020 or 1040)*</td>
<td>8</td>
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<tr>
<td>Mathematics (MATH 1015, 1215, or higher)*</td>
<td>3</td>
</tr>
<tr>
<td>Social Sciences (SOCI 1010)</td>
<td>6</td>
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<tr>
<td>Government (GOVT 1010, 1020, 2040)</td>
<td>3</td>
</tr>
<tr>
<td>Laboratory Science (see list below)*</td>
<td>3</td>
</tr>
<tr>
<td>Criminal Justice (CRJ 1010, 1020, 1030, 1040, 1050, 1540, 1550, 1560, 1570, 1580, 1590, 2010, 2050)</td>
<td>38</td>
</tr>
<tr>
<td>Cooperative Norms Fitness Preparation (PFIT 1018)</td>
<td>3</td>
</tr>
<tr>
<td>Police Report Writing (ENGL 1410)</td>
<td>2</td>
</tr>
<tr>
<td>Police Certified First Responder (CRJ 1590)</td>
<td>2</td>
</tr>
<tr>
<td>Police Report Writing (ENGL 1410)</td>
<td>2</td>
</tr>
<tr>
<td>Laws of NY State (CRJ 1550)</td>
<td>3</td>
</tr>
</tbody>
</table>

Sample Sequence:  (intended as a guide for academic planning.  It need not be followed exactly or completed in four semesters.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010)</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics (MATH 1015, 1215, or higher)</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Criminal Justice (CRJ 1010)</td>
<td>3</td>
</tr>
<tr>
<td>Penal Law (CRJ 1050)</td>
<td>3</td>
</tr>
<tr>
<td>Social Sciences (SOCI 1010)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Third Semester</td>
<td>Fourth Semester</td>
</tr>
<tr>
<td>Criminal Justice Ethics (CRJ 2050)</td>
<td>3</td>
</tr>
<tr>
<td>Criminal Investigation I (CRJ 2010)</td>
<td>4</td>
</tr>
<tr>
<td>Criminal Justice Evidence &amp; Procedure</td>
<td>3</td>
</tr>
<tr>
<td>Government (GOVT 1010, 1020, 2040)</td>
<td>3</td>
</tr>
<tr>
<td>Cooper Norms Fitness Preparation (PFIT1018)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Footnotes:

*Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and Math courses.

**Laboratory Science recommended: BIOL, CHEM, or SCIN 1030-1040. Some BIOL and CHEM courses will not be appropriate.

*** For criminal justice elective, select SOCI 2310 or any CRJ course not required for the AAS degree.

*It is highly recommended that students in this program see their academic adviser each semester to plan their schedules.*
Criminal Justice
Associate in Science Degree, Transfer program
Division of Professional Studies, Associate Dean: Deborah Beall

This program provides a core of criminal justice courses meshed with a sound liberal arts foundation designed for students planning to transfer to baccalaureate programs in the criminal justice field. Students will be prepared for future leadership positions in criminal justice. They will learn to think critically, communicate effectively, and develop a sound ethical base for decision making.

Graduates will be able to:
• Demonstrate knowledge of the criminal justice system, causes of criminal conduct, and responses to criminal behavior;
• Demonstrate a knowledge of the evolution of criminal law and an understanding of the values and ethics essential to the administration of justice.
• Students will be practiced in social science research methods and skilled in preparing research proposals and will demonstrate an awareness of our pluralistic society to foster understanding and tolerance.

High school or equivalent preparation required: Strong communication and computation skills are recommended.

<table>
<thead>
<tr>
<th>Program Requirements:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010 and 1020.)*</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics (MATH 1215 or higher and MATH 1310)*</td>
<td>7</td>
</tr>
<tr>
<td>Laboratory Science</td>
<td>6</td>
</tr>
<tr>
<td>Criminal Justice elective (select with adviser’s approval)</td>
<td>3</td>
</tr>
<tr>
<td>Social Sciences (PSYC 1101; SOCI 1010, 2310; and either PSYC 2206 or SOCI 2060)</td>
<td>12</td>
</tr>
<tr>
<td>Government (GOVT 1010, 1020, or 2040)</td>
<td>3</td>
</tr>
<tr>
<td>Criminal Justice (CRJ 1010, 1050, 2030, 2040, 2050, 2203)</td>
<td>18</td>
</tr>
<tr>
<td>Free electives</td>
<td>2</td>
</tr>
<tr>
<td>Wellness (PFIT 1015 and WELL 1010 recommended)</td>
<td>2</td>
</tr>
<tr>
<td>Spanish (SPAN 1010 or higher)</td>
<td>4</td>
</tr>
<tr>
<td>Total hours</td>
<td>63</td>
</tr>
</tbody>
</table>

Sample Sequence: (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.)

First Semester
English (ENGL1010)* | 3 |
Mathematics (MATH 1215 or higher)* | 3 |
Penal Law (CRJ 1050) | 4 |
Psychology or Sociology (PSYC 1101 or SOCI 1010) | 3 |
Introduction to Criminal Justice (CRJ 1010) | 3 |

Second Semester
English (ENGL 1020) | 3 |
Mathematics (MATH 1310) | 4 |
Criminal Justice Elective | 3 |
Psychology or Sociology (PSYC 1101 or SOCI 1010) | 3 |
Government (GOVT 1010, 1020, or 2040) | 3 |

Third Semester
Laboratory Science | 3 |
Evolution of Criminal Law (CRJ 2030) | 3 |
Sociology of Crime and Delinquency (SO CI 2310) | 3 |
Treatment of Criminal Offender (CRJ 22203) | 3 |
Free elective | 2 |
Wellness (Activity Component) | 1 |

Fourth Semester
Laboratory Science | 3 |
Constitution and the Accused (CRJ 2040) | 3 |
Research Methods in Soc Sciences (PSYC 2206 or SOCI 2060) | 3 |
Spanish (SPAN 1010) | 3 |
Criminal Justice Ethics (CRJ 2050) | 3 |
Wellness (Awareness/Instructional Component) | 1 |

Footnotes:
* Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and Math courses.
* Students in this program who plan to transfer to a SUNY college can meet 7 of the 10 SUNY Knowledge and Skills areas and 30 SUNY General Education credits. For more information on SUNY General Education requirements, refer to the catalog index or see an adviser.
Directed Studies

Associate in Applied Science Degree, Career program
Divisions of Humanities and Social Sciences, Professional Studies
Associate Dean: Byron Shaw; Associate Dean: Deborah Beall

This program is designed to allow the opportunity to pursue a degree for career enhancement or to accommodate the immediate needs of business and industry. Students must meet with an adviser and prepare a detailed educational plan to be presented to and approved by the associate deans before enrolling in the program.

Graduates will be able to
- Develop a program to suit a unique career choice not met by any other program.

Although this program is not intended for transfer, students in this program who plan to transfer to a SUNY college can meet 7 of the 10 SUNY Knowledge and Skills areas and 30 SUNY General Education credits. For more information on SUNY General Education requirements, refer to the catalog index or see an adviser.

High school or equivalent preparation required.

<table>
<thead>
<tr>
<th>Program Requirements:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010 and 1020.)*</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics (MATH 1110 or higher)*</td>
<td>3</td>
</tr>
<tr>
<td>Laboratory Science elective</td>
<td>3</td>
</tr>
<tr>
<td>Social Sciences elective</td>
<td>6</td>
</tr>
<tr>
<td>Humanities elective</td>
<td>3</td>
</tr>
<tr>
<td>Liberal Arts and Sciences electives</td>
<td>6</td>
</tr>
<tr>
<td>Free electives</td>
<td>33</td>
</tr>
<tr>
<td>Wellness</td>
<td>2</td>
</tr>
<tr>
<td>Total hours</td>
<td>62</td>
</tr>
</tbody>
</table>

Sample Sequence: (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters. The sequence of courses may vary from this sample depending on the student’s intended eventual major.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics (MATH 1110 or higher)</td>
<td>3</td>
</tr>
<tr>
<td>Social Sciences elective</td>
<td>3</td>
</tr>
<tr>
<td>Free electives</td>
<td>6</td>
</tr>
<tr>
<td>Wellness (Awareness/Instructional Component)</td>
<td>1</td>
</tr>
<tr>
<td>English</td>
<td>3</td>
</tr>
<tr>
<td>Social Sciences elective</td>
<td>3</td>
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<tr>
<td>Humanities elective</td>
<td>3</td>
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<tr>
<td>Liberal Arts and Sciences elective</td>
<td>3</td>
</tr>
<tr>
<td>Free electives</td>
<td>3</td>
</tr>
<tr>
<td>Wellness (Activity Component)</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory Science</td>
<td>3</td>
</tr>
<tr>
<td>Liberal Arts and Sciences electives</td>
<td>3</td>
</tr>
<tr>
<td>Free electives</td>
<td></td>
</tr>
<tr>
<td>Free electives</td>
<td>15</td>
</tr>
</tbody>
</table>

Footnotes:
* Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and Math courses.
Early Childhood Services
Certificate, Career program
Division of Professional Studies, Associate Dean: Deborah Beall

This program is designed to give students preparation for a number of positions in early childhood education. Students will acquire the skills and knowledge to allow them to work directly or indirectly with young children aged birth through eight years. Methods, observing behavior, psychology, communications, and appropriate developmental practice are emphasized. Credits in this program partially fulfill the requirements in the Early Childhood Studies A.A.S. degree program.

Graduates have:
1. Identify, analyze, evaluate, and apply historical information on current issues about program settings, whole child development, and the necessary partnerships between families and teachers
2. Use observation and recording methods, interpret data, and link the findings for further application
3. Recognize and support a holistic program that demonstrates developmentally appropriate practice for the typical child, inclusive of diversity, culture, differing abilities, home language, and anti-biased curriculum
4. Knowledge, skills, and competencies required to obtain entry-level employment in early childhood settings
5. Use reflective practices to base decisions and actions on ethical and professional standards
6. Opportunity to apply for a Child Development Associate (CDA), a nationally accepted credential awarded by the Council for Professional Recognition. Students must meet all eligibility requirements prior to the application process.

While not a specific program requirement, in order to graduate from this program students must demonstrate the math skills necessary to enter MATH 1015, Introductory Algebra. Based on assessment, students may need to successfully complete MATH 0960, Basic Math Skills, to fulfill the graduation requirement. It is essential to discuss this with an adviser.

<table>
<thead>
<tr>
<th>Program Requirements:</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010)*</td>
</tr>
<tr>
<td>Education (ECED 1110, 1120, 1130, 1140, 2960)</td>
</tr>
<tr>
<td>Human Services (HUSR 1030 or ECED 1150)</td>
</tr>
<tr>
<td>Psychology (PSYC 1101, 2207)</td>
</tr>
<tr>
<td>Program elective (see list below)</td>
</tr>
<tr>
<td>Total hours</td>
</tr>
</tbody>
</table>

Sample Sequence: (intended as a guide for academic planning. It need not be followed exactly or completed in two semesters.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010)</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Early Childhood Education (ECED 1110)</td>
<td>3</td>
</tr>
<tr>
<td>Observing &amp; Recording Behavior Child (ECED 1120)</td>
<td>3</td>
</tr>
<tr>
<td>Help Skills/Families, Schools, Communities: A Partnership</td>
<td>3</td>
</tr>
<tr>
<td>(HUSR 1030 or ECED 1150)</td>
<td>3</td>
</tr>
<tr>
<td>Infant &amp; Toddler: Dev &amp; Practice (ECED 1130)</td>
<td>3</td>
</tr>
<tr>
<td>General Psychology I (PSYC 1101)</td>
<td>3</td>
</tr>
</tbody>
</table>

Footnotes:
*Program Electives: Select from ECED 1524; EDUC 2040
*Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and Math courses.
*All 33 credit hours of this program fit into the program requirements for the Early Childhood Studies A.A.S. degree allowing a student the opportunity to apply the credits earned in the certificate towards the completion of a two-year degree.
Early Childhood Studies
Associate in Applied Science Degree, Career program
Division of Professional Studies, Associate Dean: Deborah Beall

This program provides a core of early childhood courses, including a supervised field experience, with a sound liberal arts foundation. It is designed for students planning to work in early childhood fields. Child development theory and practice will be woven together to give the student the skills and knowledge to work effectively with children 0 - 8 years of age. An emphasis throughout the curriculum is on working with children and families from diverse backgrounds and abilities.

Graduates will be able to:
1. Identify, analyze, evaluate, and apply theoretical information on current issues about the program settings, whole child development, and the necessary partnership between families and teachers
2. Use observation and recording methods, interpret data, and link the findings for further applications
3. Recognize and support developmentally appropriate practice for the typical child, inclusive of diversity culture, differencing abilities, home language, and anti-bias curriculum
4. Knowledge, skills, and competencies required for career-track employment in early childhood settings
5. Use of reflective practices to base decisions and actions on ethical and professional standards
6. Obtain a foundational base of knowledge through completion of General Education courses

Program Requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010-1020)*</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics (MATH 1110-1120, or higher)*</td>
<td>6</td>
</tr>
<tr>
<td>Laboratory Science (BIOL 1010-1020 recommedd)</td>
<td>6</td>
</tr>
<tr>
<td>Psychology (PSYC 1101, 2207)</td>
<td>6</td>
</tr>
<tr>
<td>Social Sciences elective (HIST 1010, 1020, 1110, 1120, or SOCI 1010)</td>
<td>3</td>
</tr>
<tr>
<td>Wellness</td>
<td>2</td>
</tr>
<tr>
<td>Early Childhood (ECED 1110, 1120, 1130, 1140, 1150, 1524, 2960)</td>
<td>24</td>
</tr>
<tr>
<td>Children’s Literature (ENGL 2030)</td>
<td>3</td>
</tr>
<tr>
<td>Special Ed. &amp; Inclusive Classroom (EDUC 1560)</td>
<td>3</td>
</tr>
<tr>
<td>Free electives</td>
<td>3</td>
</tr>
<tr>
<td>Total hours</td>
<td>62</td>
</tr>
</tbody>
</table>

Sample Sequence: (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.)

First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010)</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics (MATH 1110 or higher)</td>
<td>3</td>
</tr>
<tr>
<td>General Psychology (PSYC 1101)</td>
<td>3</td>
</tr>
<tr>
<td>Intro Early Childhood Educ (ECED 1110)</td>
<td>3</td>
</tr>
<tr>
<td>Social Sciences elective (SOCI 1010; HIST 1010, 1020, 1110, 1120)</td>
<td>3</td>
</tr>
<tr>
<td>Wellness (Awareness/Instructional Component)</td>
<td>1</td>
</tr>
</tbody>
</table>

Second Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1020)</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics (MATH 1120 or higher)</td>
<td>3</td>
</tr>
<tr>
<td>Child Psychology (PSYC 2207)</td>
<td>3</td>
</tr>
<tr>
<td>Observing &amp; Recording Behavior Child (ECED 1120)</td>
<td>3</td>
</tr>
<tr>
<td>Families, Schools, Comts.: Partnership (EDUC 1150)</td>
<td>3</td>
</tr>
<tr>
<td>Free elective</td>
<td>3</td>
</tr>
<tr>
<td>Wellness (Activity Component)</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Third Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory Science (BIOL 1010 recommended)</td>
<td>3</td>
</tr>
<tr>
<td>Methods &amp; Materials Early Childhood Ed.(ECED1140)</td>
<td>3</td>
</tr>
<tr>
<td>Infant &amp; Toddler: Dev and Practice (ECED 1130)</td>
<td>3</td>
</tr>
<tr>
<td>Language Development &amp; Children (ECED 1524)</td>
<td>3</td>
</tr>
<tr>
<td>Special Ed. &amp; Inclusive Classroom (EDUC 1560)</td>
<td>3</td>
</tr>
</tbody>
</table>

Fourth Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory Science (BIOL 1020 recommended)</td>
<td>3</td>
</tr>
<tr>
<td>Children’s Literature (ENGL 2030)</td>
<td>3</td>
</tr>
<tr>
<td>Field Experience-Early Childhood (ECED 2960)</td>
<td>6</td>
</tr>
<tr>
<td>Wellness (Activity Component)</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Footnotes:
*Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and Math courses.
The Electrical Technology program prepares students to enter the rapidly expanding field of electronics. Their studies qualify them to work in the exciting fields of electronic design, computer repair, communications, systems control, and technical sales and service. This program stresses electronic design using integrated circuits. Laboratory experience is a part of each of the courses in this program.

Graduates will be able to:

- Function as laboratory, production, and field technicians using spreadsheets, word processors, and presentation software;
- Use common circuit analysis equipment and instrumentation;
- Design, construct, and analyze circuits using discrete semiconductor, solid state devices and operational amplifiers;
- Interface software programs and various hardware devices;
- Program/troubleshoot PLC systems and apply different transducers/sensors;
- Demonstrate basic programming skills;
- Use techniques of drafting and the preparation of electronic/electrical drawings;
- Recognize and use project management techniques.

For students who decide to go on for further education after the A.A.S. degree, many four-year colleges now offer bachelor degree programs in technology and technical education specifically designed for graduates in electrical technology. High school or equivalent preparation required: Two years of mathematics including algebra and either geometry or intermediate algebra. Students who don’t have this preparation will be able to get it here, but it may take longer to complete the program.

### Program Requirements:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010 and 1020 or 1030)*</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics (MATH 1230-1240 or higher)*</td>
<td>6</td>
</tr>
<tr>
<td>Social Sciences electives</td>
<td>3</td>
</tr>
<tr>
<td>Physics (PHYS 1010)</td>
<td>4</td>
</tr>
<tr>
<td>Social Sciences or Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Technical Concentration (ELEC 1010, 1500, 1510, 2000, 2010, 2020, 2030, 2050, 2060, 2070; MECH 1050; TECH 1030, 1080)</td>
<td>42</td>
</tr>
<tr>
<td>Total hours</td>
<td>64</td>
</tr>
</tbody>
</table>

Students should take the Orientation to Technology (TECH 1050) course [offered before the semester begins] where their computer skills will be assessed. If students do not pass sections of the computer assessment, they will be required to take TECH 1110, 1120 or CSST 1091 to make up the deficiency.

### Sample Sequence:

( Intended as a guide for academic planning. It need not be followed exactly or completed in four semesters. )

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010)</td>
<td>English (ENGL 1020)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics (MATH 1230 or higher)</td>
<td>Mathematics (MATH 1240 or higher)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Manufacturing Methods (TECH 1030)</td>
<td>Digital Electronics (ELEC 1510)</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Engineering Graphics (MECH 1050)</td>
<td>Elementary Physics (PHYS 1010)</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Electricity (ELEC 1010)</td>
<td>Solid State Electronics (ELEC 1500)</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Manufacturing Methods Lab (TECH 1080)</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Sciences elective</td>
<td>Social Sciences or Humanities elective</td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Linear Electronics (ELEC 2010)</td>
<td>Electronic Communications (ELEC 2060)</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Electronic Construction (ELEC 2000)</td>
<td>Senior Project (ELEC 2050)</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Industrial Electronics (ELEC 2020)</td>
<td>Industrial Data Acquisition (ELEC 2070)</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

Footnotes:

*Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and Math courses.
Engineering Science  
Associate in Science Degree, Transfer program  
Division of STEM, Associate Dean: Bradley Cole  
Department Chair: Debra Dudick

Engineering Science provides a foundation in engineering principles, physical sciences, mathematics, and social fields in preparation for making important contributions to engineering and society. The program provides university parallel coursework for the first two years of a bachelor’s degree in engineering. Graduates continue their education by transferring to a four-year institution where they specialize in traditional fields such as electrical, mechanical, chemical, civil, environmental, materials, aerospace, and biomedical engineering. Past graduates have successfully completed studies at Alfred University, Clarkson University, Cornell University, Rensselaer Polytechnic Institute, Rochester Institute of Technology, SUNY Buffalo, the Watson School of Engineering at SUNY Binghamton, and numerous others nationwide.

Corning Community College maintains membership in the State University of New York Two Year Engineering Science Association, a consortium of two-year and four-year ABET accredited institutions offering study in engineering. Graduates will be able to:

- Demonstrate an understanding of engineering principles and concepts through graphic, oral, and written communication;
- Apply engineering principles and concepts in solution of problems and experiments;
- Perform selected tasks relative to laboratory experiments in the physical sciences;
- Interpret data according to physical fundamentals;
- Demonstrate computer literacy and programming proficiency;
- Use information from appropriate literature sources in completing objectives;
- Apply teamwork concepts in the solution of problems, experiments, or projects.

High school or equivalent preparation required: Four years of science including biology, chemistry and physics, and four years of mathematics, including algebra, geometry or intermediate algebra, trigonometry, and pre-calculus. Students who don’t have this preparation will be able to get it here, but it may take longer to complete the program.

### Program Requirements:

| English (ENGL 1010-1020)* | 6 | Chemistry (CHEM 1510-1520) | 8 |
| Mathematics (MATH 1610-1620, 2610-2620)* | 16 | Engineering (ENGR 1010, 1030) | 5 |
| Social Sciences electives (ECON 2001 or 2002 recommended) | 3 | Physics (PHYS 1820, 2830, 2840) | 12 |
| Social Sciences or Humanities elective | 3 | Technical Concentration (see list below) | 14 |
| Computer programming (ENGR 1050) | 3 | Total hours | 70 |

*Based on placement, students might be required to successfully complete preparatory course(s) before attempting further course or program requirements.

### Sample Sequence: (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.)

**First Semester**

| English (ENGL1010) | 3 | English (1020) | 3 |
| Mathematics (MATH 1610) | 4 | Mathematics (MATH 1620) | 4 |
| Chemistry (CHEM 1510) | 4 | Chemistry (CHEM 1520) | 4 |
| C for Engineers (ENGR 1050) | 3 | Physics (PHYS 1820) | 4 |
| Engineering Orientation (ENGR 1010) | 2 | Graphics for Engineers (ENGR 1030) | 3 |

**Second Semester**

| Mathematics (MATH 2610) | 4 | Mathematics (MATH 2620) | 4 |
| Physics (PHYS 2830) | 4 | Physics (PHYS 2840) | 4 |
| Technical Concentration | 7 | Technical Concentration | 7 |
| Social Sciences (ECON 2001 recommended) | 3 | Social Sciences or Humanities (ECON 2002 recommended) | 3 |

**Third Semester**

**Fourth Semester**

Footnotes:

1. Technical Concentration: Select from CHEM 2100-2200; ENGR 2110-2120, 2150, 2180. Courses should be chosen to conform to the program requirements of the college to which the student plans to transfer. If Chemical Engineering is the intended transfer major, select CHEM 2100-2200 and two of the ENGR courses. Otherwise, select the four ENGR courses.
The Environmental Science A.S. degree is designed to enable students to transfer to most baccalaureate institutions with standing as a junior. The program outcomes prepare students for “green” employment in industries that are targeting global climate change, management of natural resources, and protection of the environment. While completion of this degree alone prepares students for work as environmental technicians, continuation through transfer institutions qualifies the graduate for work as environmental engineers, educators, environmental field biologists, and other environmental scientists in both the public and private sector.

Gradsuates will demonstrate:
• A thorough understanding of the theoretical principles, processes, and relationships underlying the environmental sciences;
• An ability to apply this knowledge to a wide variety of practical situations;
• An understanding of the social, economic, political, and ethical issues related to the environmental sciences, perform relevant laboratory experiments and interpret data gathered from such experiments;
• The ability to critically analyze and formulate possible solutions to environmental issues.

Inherent in Corning Community College’s mission is preparing students for a life of service to their professions and their communities in a globally interdependent society. The environmental analysis community is a key player in directing important public policy objectives related to quality of life issues, economic development, and environmental responsibility.

Program Requirements:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1010</td>
<td>Environmental Ethics (PHIL 2200)</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1310</td>
<td>Environmental Health (WELL 1200)</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1510</td>
<td>Program Electives **</td>
<td></td>
</tr>
<tr>
<td>BIOL 1500</td>
<td>BIOL 2080, BIOL 2060, GEOL 1510, PHYS 1730-1740</td>
<td>16</td>
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<tr>
<td>CHEM 1200</td>
<td>CHEM 2010-2020, CHEM 1030</td>
<td>10</td>
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<tr>
<td>BIOL 2060</td>
<td>Wellness Activity (PFIT, RECC)</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 2040</td>
<td>Environmental Geology (GEOL 1530)</td>
<td>4</td>
</tr>
<tr>
<td>MATH 1510</td>
<td>Total Hours</td>
<td>64</td>
</tr>
</tbody>
</table>

Sample Sequence: (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.)

**Program electives and Calculus option to be determined by desired transfer school program requirements.**

* Students in this program who plan to transfer to a SUNY college can meet 21 credits of the general education requirement.
* Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and Math courses. Successful completion of some or all developmental courses may also be required before students can enroll in the science classes pertinent to this program.

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Learning transforms lives.
Fine Arts and Design
Associate in Science Degree, Transfer program
Division of Humanities and Social Science, Associate Dean: Byron Shaw
Department Chair: Loueda Bleiler

This program is designed to enable students in both fine arts and commercial art to transfer to many baccalaureate institutions with standing as a junior. Due to the variety of requirements from transfer destinations, this program is meant to cover as many bases as possible. Its flexibility encourages students to explore a spectrum of art forms and styles without locking them into a particular discipline. Its general education requirements in mathematics, lab sciences, social sciences, and wellness will provide students the required elements of a liberal arts and sciences education. Its core courses—art history, design, drawing, and painting—are the elemental building blocks for further study in fields as varied as ceramics, digital art, or art education. A required portfolio preparation course will specifically acquaint students with the expectations of quality transfer institutions.

Graduates of this program will be able to:

- Demonstrate fundamental drawing concepts, including line, proportion, value, gesture, texture, and style.
- Be able to draw an architectural interior in correct linear perspective.
- Draw and paint realistic portraits and figure subjects in correct proportion, including self-portraits.
- Demonstrate proficient use of pen and ink, charcoal, conte crayon, ink wash, oil paint, and all graphite media.
- Demonstrate proficiency in manipulating the major elements of 2-D and 3-D design, including shape, scale, color theory, balance, symmetry, kinetics, texture, materials, and composition.
- Demonstrate a foundational knowledge of major historical styles of western art, from ancient Egypt through the present.
- Assemble a portfolio and resume for possible transfer or employment.
- Demonstrate a foundational knowledge in the liberal arts and sciences, to include Basic Communication, Humanities, Social Sciences, Natural Sciences, Mathematics, and Western Civilization.

<table>
<thead>
<tr>
<th>Program Requirements:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010 and 1020)*</td>
<td>6</td>
<td>Laboratory Science electives</td>
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<tr>
<td>Mathematics (MATH 1110 or higher)*</td>
<td>6</td>
<td>Social Sciences electives</td>
</tr>
<tr>
<td>Core Requirements:</td>
<td></td>
<td></td>
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<tr>
<td>ARTS 1310, 1320 (Art History I &amp; II)</td>
<td>6</td>
<td>Art electives*</td>
</tr>
<tr>
<td>ARTS 1030, 2030 (Drawing I &amp; II)</td>
<td>6</td>
<td>Free electives</td>
</tr>
<tr>
<td>ARTS 1410 (2-D Design)</td>
<td>3</td>
<td>Wellness</td>
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<tr>
<td>ARTS 1420 (3-D Design)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ARTS 2110 (Painting I)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ARTS 2999 (Portfolio Preparation)</td>
<td>1</td>
<td>Total hours</td>
</tr>
</tbody>
</table>

Sample Sequence: (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.)

First Semester
- College Composition (ENGL 1010) 3
- 2-D Design (ARTS 1410) 3
- Drawing I (ARTS 1030) 3
- Mathematics elective 3
- Social Sciences elective 3
- Wellness 1

Second Semester
- English (ENGL 1020) 3
- Drawing II (ARTS 2030) 3
- 3-D Design (ARTS 1420) 3
- Mathematics elective 3
- Social Sciences elective 3
- Wellness 1

Third Semester
- Art History I (ARTS 1310) 3
- Painting I (ARTS 2110) 3
- Portfolio Preparation (ARTS 2999) 1
- Art or Media elective 3
- Laboratory Science elective 3
- Humanities elective 3

Fourth Semester
- Art History II (ARTS 1320) 3
- Laboratory Science Elective 3
- Art or Media elective 3
- Humanities elective 3
- Free elective 3

Footnotes:
*Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and Math courses.
* Suggested HUMA electives: PHIL 2360 (Philosophy of the Arts), foreign language, or theatre.
* Suggested ARTS electives: ARTS 1210, 2210 (Ceramics I & II), ARTS 1220 (Basic Black & White Photography), ARTS 1400 (Intro to Digital Art), ARTS 1440 (Intro to Graphic Design), ARTS 1450 (Digital Photography), ARTS 2120 (Painting II), ARTS 2220 (Advanced Photographic Communications), ARTS 2540 (Graphic Design II), ARTS 2550 (Web Design), ARTS 2620 (Ceramic Sculpture), ARTS 2990 (Independent Studio Project)
* Students in this program who plan to transfer to a SUNY college can meet 7 of the 10 SUNY Knowledge and Skills areas and 30 SUNY General Education credits. For more information on SUNY General Education requirements, refer to the catalog index or see an adviser.
Health and Physical Education Studies
Associate in Science Degree, Transfer program
Division of Professional Studies, Associate Dean Deborah Beall

This program includes theoretical and practical coursework to enable students to transfer into baccalaureate programs for health education, health and wellness promotion, nutrition, integrative health, wellness, physical education, athletic training, sports management, or fitness specialist.

Graduates will be able to:
- Articulate and demonstrate core principles in the field of study;
- Demonstrate cognitive, interpersonal and technical skills;
- Use and evaluate a variety of assessment tools;
- Apply discipline-specific philosophies, theories and models to create programs for healthy behavior change;
- Use the scientific process to evaluate current data and research in the areas of health education, wellness and physical education.

High school or equivalent preparation required: one year of biology.

HPES: Health Education and Wellness Concentration**

<table>
<thead>
<tr>
<th>Program Requirements:</th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010-1020)*</td>
<td>6</td>
<td>Foundations of Personal Health (HLTH 1207)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Mathematics (MATH 1215-1225 or higher)*</td>
<td>6</td>
<td>Humanities (SPCH 1080 or SPCH 1060)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Social Sciences (PSYC 1101)</td>
<td>3</td>
<td>Intro to Health Education and Wellness (HEPD 1200)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Laboratory Science (CHEM 1020; BIOL 1050; BIOL 2020-2030)</td>
<td>15</td>
<td>Liberal Arts and Sciences electives (upper level)</td>
<td>6</td>
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<tr>
<td>Health, Wellness and Professional Development electives (HLTH, HEPD, WELL)</td>
<td>16</td>
<td>Physical Ed &amp; Recreation electives (PFIT, RECC)</td>
<td>2</td>
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<tr>
<td></td>
<td></td>
<td>Service Learning (INDI 1000)</td>
<td>2</td>
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<tr>
<td></td>
<td></td>
<td>Total hours</td>
<td>65</td>
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Sample Sequence: (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010)</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics (MATH 1215 or higher)</td>
<td>3</td>
</tr>
<tr>
<td>Intro to Organic &amp; Biochemistry (CHEM 1020)</td>
<td>4</td>
</tr>
<tr>
<td>Foundations of Personal Health (HLTH 1207)</td>
<td>3</td>
</tr>
<tr>
<td>HEPD/HLTH/WELL elective (HEPD/HLTH/WELL)</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Speaking/Inter. Communication (SPCH1080/1060)</td>
<td>3</td>
</tr>
<tr>
<td>Anatomy and Physiology I (BIOL 2020)</td>
<td>4</td>
</tr>
<tr>
<td>Liberal Arts and Sciences elective (upper-level)</td>
<td>3</td>
</tr>
<tr>
<td>Service Learning (INDI 1000)</td>
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</tr>
<tr>
<td>HEPD/HLTH/WELL elective (HEPD/HLTH/WELL)</td>
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<td>PFIT/RECC elective (PFIT/RECC)</td>
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67
**HPES: Physical Education Concentration**

**Program Requirements:**

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
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<tbody>
<tr>
<td>English (ENGL 1010-1020)*</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics (MATH 1215-1225 or higher)*</td>
<td>6</td>
</tr>
<tr>
<td>Social Sciences (PSYC 1101)</td>
<td>3</td>
</tr>
<tr>
<td>Laboratory Science (CHEM 1020; BIOL 1050, BIOL 2020-2030)</td>
<td>15</td>
</tr>
<tr>
<td>Humanities (SPCH 1080)</td>
<td>3</td>
</tr>
<tr>
<td>Liberal Arts and Sciences electives (upper level)</td>
<td>6</td>
</tr>
<tr>
<td>Foundations of Personal Health (HLTH 1207)</td>
<td>3</td>
</tr>
<tr>
<td>BLS-CPR (HLTH 1010)**</td>
<td>1</td>
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<tr>
<td>Intro Health, PE, &amp; Recreation Profession (PEPD 1200)</td>
<td>3</td>
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<tr>
<td>Health, Wellness, and Professional Development electives</td>
<td>9</td>
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<tr>
<td>(HLTH, PEPD, REPD, WELL)</td>
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<tr>
<td>Physical Educ &amp;Recreation Electives (PFIT, RECC)</td>
<td>9</td>
</tr>
<tr>
<td>Advanced First Aid (HLTH 2007)**</td>
<td>1</td>
</tr>
<tr>
<td>Total hours</td>
<td>65</td>
</tr>
</tbody>
</table>

**Sample Sequence:** (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>English</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics (MATH 1215 or higher)</td>
<td>Mathematics (MATH 1225 or higher)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Intro to Organic &amp; Biochemistry (CHEM 1020)</td>
<td>Human Biology (BIOL 1050)</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to HPER: the Profession (PEPD 1200)</td>
<td>Foundations of Personal Health (HLTH 1207)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>BLS for Professional Rescuer (HLTH 1010)</td>
<td>General Psychology I (PSYC 1101)</td>
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<td>1</td>
<td>3</td>
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<tr>
<td>Physical Education/Recreation electives (PFIT/RECC)</td>
<td>Physical Education/Recreation elective (PFIT/RECC)</td>
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<td>1</td>
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<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Speaking (SPCH 1080)</td>
<td>Liberal Arts elective (upper level)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Anatomy and Physiology I (BIOL 2020)</td>
<td>Anatomy and Physiology II (BIOL 2030)</td>
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<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Liberal Arts elective (upper-level)</td>
<td>Physical Education/Recreation electives (PFIT/RECC)</td>
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<tr>
<td>3</td>
<td>4</td>
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<tr>
<td>Health/Wellness/Professional Development electives</td>
<td>Health/Wellness/Professional Development electives</td>
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<tr>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Physical Education/Recreation electives (PFIT/RECC)</td>
<td>First Aid (HLTH 2007)</td>
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<tr>
<td>2</td>
<td>1</td>
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</tbody>
</table>

**Footnotes:**

* Baccalaureate transfer institutions require a GPA of 2.5 - 3.0 for articulation into an upper-level Health and Physical Education Studies program. Liberal arts elective recommendations: Educational Psychology, Child Psychology, Adolescent Psychology, Social Psychology, Elementary Statistics, foreign language, and Ethics course.

** Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and Math courses.

** Students may elect to take Responding to Emergencies (HLTH 1100) in order to receive credit for both BLS-CPR and Advanced First Aid.

** Proof of Current Basic Life Support CPR and Advanced First Aid Certification verification or students must be submitted prior to the completion of the program. If students do not have these certifications upon entering the program, they can complete them as part of the Health, Wellness and Professional Development electives - HLTH 1010 BLS-CPR and HLTH 2007 Advanced First Aid, or students may elect to take HLTH 1100 Responding to Emergencies to receive credit for both BLS-CPR and Advanced First Aid.

Students in this program who plan to transfer to a SUNY college can meet 7 of the 10 SUNY Knowledge and Skills areas and 30 SUNY General Education credits. For more information on SUNY General Education requirements, refer to the catalog index or see an adviser.
This is a career track program intended for students who wish to enter the helping professions. The courses provide students with an overview of the human services field along with the communication and documentation skills required. Appropriate selection of electives allows students to tailor the program to specific areas of interest. Students may choose to focus on services to the developmentally or physically challenged, children, youth, the elderly, or to offer help in the areas of domestic violence, child abuse or crisis intervention.

Graduates will be able to:
- Understand the roles and duties of human services professionals;
- Identify areas of employment;
- Use communication skills to facilitate problem solving;
- Fulfill essential case management functions including interviewing, record keeping, gathering intake information, making referrals, and identifying consumer problems and issues;
- Maintain professional and ethical standards of confidentiality;
- Understand and respond to potential crisis issues and situations;
- Identify and contact resources and agencies in community settings;
- Work effectively in different organizational structures.

**Program Requirements:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010 and 1020)*</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics (MATH 1015, 1120, or higher)*</td>
<td>3</td>
</tr>
<tr>
<td>Psychology and Sociology (PSYC 1101 and SOCI 1010)</td>
<td>6</td>
</tr>
<tr>
<td>Psychology or Sociology (2000-level)</td>
<td>3</td>
</tr>
<tr>
<td>Organizational Behavior (PSYC 2030)</td>
<td>3</td>
</tr>
<tr>
<td>Laboratory Science (BIOL 1050 recommended)</td>
<td>3</td>
</tr>
<tr>
<td>English (ENGL 1020)</td>
<td>3</td>
</tr>
<tr>
<td>Laboratory Science (BIOL 1050 recommended)</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Helping Skills (HUSR 1030)</td>
<td>3</td>
</tr>
<tr>
<td>Program elective</td>
<td>3</td>
</tr>
<tr>
<td>Psychology or Sociology (PSYC 1101 or SOCI 1010)</td>
<td>3.5</td>
</tr>
<tr>
<td>Wellness (Awareness/Instructional Component)</td>
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<tr>
<td>Wellness (Activity Component)</td>
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<tr>
<td>Free elective</td>
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<tr>
<td>Total hours</td>
<td>63.5</td>
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</table>

**Sample Sequence:** (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.)

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>English (ENGL 1010)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Mathematics (MATH 1015, 1120, or higher)</td>
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<tr>
<td></td>
<td>Human Services I (HUSR 1010)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Program elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Psychology or Sociology (PSYC 1101 or SOCI 1010)</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>Wellness (Awareness/Instructional Component)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Wellness (Activity Component)</td>
<td>0.5</td>
</tr>
<tr>
<td>Second</td>
<td>English (ENGL 1020)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Laboratory Science (BIOL 1050 recommended)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Introduction to Helping Skills (HUSR 1030)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Program elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Psychology or Sociology (PSYC 1101 or SOCI 1010)</td>
<td>3.5</td>
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<tr>
<td></td>
<td>Free elective</td>
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<tr>
<td>Third</td>
<td>Human Services II (HUSR 1040)</td>
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<tr>
<td></td>
<td>Sociology or Psychology (2000-level)</td>
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</tr>
<tr>
<td></td>
<td>Organizational Behavior (PSYC 2030)</td>
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<tr>
<td></td>
<td>Free elective</td>
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<tr>
<td></td>
<td>Wellness (Activity Component)</td>
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<tr>
<td>Fourth</td>
<td>Human Services Practicum I (HUSR 2960)</td>
<td>6</td>
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<tr>
<td></td>
<td>Human Services Practicum II (HUSR 2961 or two General Education/Liberal Arts Electives)</td>
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<td>Free elective</td>
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Footnotes:
1. A statistics course is recommended for students interested in transfer.
2. It is recommended that HUSR 2960-2961 be taken together in the third or fourth semester. The practicum may be taken in separate semesters only with Department Chair’s approval. These courses may be taken only with permission of the Department Chair of Human Services. In addition, students must have taken and completed HUSR 1010, 1030, and 1040 with a grade of C or higher.
3. It is strongly recommended that students take HUSR 1010, 1030, and 1040 in sequence.
4. Organizational Behavior (PSYC 2030) may be taken in the fourth semester.
5. Students may substitute 2 3-credit General Education courses for HUSR 2961. The courses must be from 2 different SUNY General Education categories. See SUNY General Education for details.
*Program elective: Includes most HUSR courses and any three credit HLTH course.
*Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and Math courses.
The career program in Information Technology is designed to offer students several paths of study leading to an A.A.S. degree in their chosen field. The program is designed to be flexible and diverse so as to offer students the opportunity to choose a career path that best suits their interests and provides them with marketable skills for entering the global job market, or for continuing their education. This program offers specialization in web technology, network technology, and system administration. Avenues for various career paths could include positions at national supercomputing and science laboratories, continuing on in the undergraduate and eventually graduate programs at other institutions, or positions in the corporate world (banks, financial institutions, etc.) The program also provides educational enhancement opportunities to local employers who want to advance the education of their employees.

Graduates will be able to:

- Communicate effectively written and oral communication skills;
- Work effectively in a team environment both as a member and as a leader;
- Utilize analytical problem solving techniques and critical thinking skills;
- Apply knowledge needed to successfully work with the various computer, networking, system, and application technologies as covered in the various program options.

**Program Requirements:** Concentration Requirements (see sample sequence)

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010 and 1020)*</td>
<td>6</td>
<td>Concentration requirements</td>
</tr>
<tr>
<td>Mathematics (MATH 1230 or higher)*</td>
<td>3-6</td>
<td>Program electives</td>
</tr>
<tr>
<td>Social Sciences electives</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Liberal Arts &amp; Sciences elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Laboratory Science elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Wellness</td>
<td>2</td>
<td>Total hours</td>
</tr>
</tbody>
</table>

**INFORMATION TECHNOLOGY: COMPUTER AND NETWORK TECHNOLOGY**

**Sample Sequence:** (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.)

**First Semester**
- English Composition I (ENGL 1010) 3
- Mathematics (MATH 1230) 3
- Network Fundamentals (CSNT 1200) 4
- Computer Hardware (CRST 1010) 4
- Social Sciences elective 3

**Second Semester**
- English Composition II (ENGL 1020) 3
- Program elective 3
- Operating Systems (CRST 1030) 4
- Structured & Object-Oriented Problem Solving (CSCS 1240) 3
- Routing and Switching (CSNT 1500) 4
- Wellness (Awareness Component) 1

**Third Semester**
- Systems Configuration & Maintenance (CRST 2040) 4
- Laboratory Science elective 3
- Network Software (CSNT 2200) 4
- Social Sciences elective 3

**Fourth Semester**
- Accessing the WAN (CSNT 2800) 3
- Information Technology Practicum (CRST 2050) 4
- Fundamentals of Information Security (CSNS 1610) 4
- Liberal Arts elective 3
- Wellness (Activity Component) 1

**Footnotes:**
1 Select PHYS 1010 or higher;
2 General Psychology recommended;
3 Select from CRST, CSCS, CSNS, CSNT, and CSWT course with adviser’s approval.
**Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and Math courses.**
**Adviser assistance in selection of courses is highly recommended.**
### INFORMATION TECHNOLOGY: WEB TECHNOLOGY

**Sample Sequence:** (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition I (ENGL 1010)</td>
<td>English Composition II (ENGL 1020)</td>
</tr>
<tr>
<td>Mathematics (MATH 1230)</td>
<td>Program elective$^2$</td>
</tr>
<tr>
<td>Website Fundamentals (CSWT 1200)</td>
<td>Introduction to Graphic Design (ARTS 1440)</td>
</tr>
<tr>
<td>Liberal Arts elective$^1$</td>
<td>Structured &amp; Obj Oriented Problem Solving (CSCS 1240)</td>
</tr>
<tr>
<td>Social Sciences elective$^1$</td>
<td>Network Fundamentals (CSNT 1200)</td>
</tr>
<tr>
<td>Wellness (Awareness Component)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client-Web Programming (CSWT 2610)</td>
<td>Server-Web Programming (CSWT 2620)</td>
</tr>
<tr>
<td>Web Design (ARTS 2550)</td>
<td>Structured &amp; Object-Oriented</td>
</tr>
<tr>
<td>Laboratory Science elective</td>
<td>Sys Analysis &amp; Design (CSIT 2310)</td>
</tr>
<tr>
<td>Java Programming (CSCS 2420)</td>
<td>Social Science elective</td>
</tr>
<tr>
<td>Database System (CSIT 2400)</td>
<td>Program elective$^2$</td>
</tr>
<tr>
<td>Wellness (Activity Component)</td>
<td>Information Technology Practicum (CRST 2050)</td>
</tr>
</tbody>
</table>

$^1$Principles of Economics-Macro and Micro recommended;  
$^2$Select from ARTS 1400; ARTS 1450; MKTG 2050, or any CSCS, CSIT, CSNS, CSNT, or CSWT course.  
$^3$Select any Astronomy, Biology, Chemistry, Earth Science, Geology, Physics 1010 or higher, or General Science course which has a laboratory experience along with the lecture.

### INFORMATION TECHNOLOGY: SYSTEM ADMINISTRATION

**Sample Sequence:** (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition I (ENGL 1010)</td>
<td>English Composition II (ENGL 1020)</td>
</tr>
<tr>
<td>Mathematics (MATH 1230)</td>
<td>HPC Fundamentals (CSIT 1320)</td>
</tr>
<tr>
<td>Network Fundamentals (CSNT 1200)</td>
<td>Social Sciences elective</td>
</tr>
<tr>
<td>UNIX/Linux Fundamentals (CSCS 1730)</td>
<td>C/C++ Programming (CSCS 1320)</td>
</tr>
<tr>
<td>Structured &amp; Object-Oriented Problem Solving (CSCS 1240)</td>
<td>Wellness (Awareness component)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Structures (CSCS 2320)</td>
<td>HPC Experience II (CSIT 2048)</td>
</tr>
<tr>
<td>Laboratory Science elective$^2$</td>
<td>Liberal Arts elective</td>
</tr>
<tr>
<td>Data Communication (CSCS 2700)</td>
<td>Systems Programming (CSCS 2730)</td>
</tr>
<tr>
<td>Social Sciences elective</td>
<td>Program elective$^1$</td>
</tr>
<tr>
<td>Program elective$^1$</td>
<td>Computer Organization (CSCS 2650)</td>
</tr>
<tr>
<td>HPC Experience I (CSIT 2044)</td>
<td>Wellness (Activity component)</td>
</tr>
</tbody>
</table>

$^1$Select from CSIT 2240 or higher, ELEC 1010 or ELEC 1510, CRST, CSCS, CSIT, CSNS, CSNT, and CSWT with adviser’s approval.  
$^2$Select any Astronomy, Biology, Chemistry, Earth Science, Geology, Physics 1010 or higher, or General Science course which has a laboratory experience along with the lecture.
Liberal Arts and Sciences: Childhood Education (Teacher Education Transfer)
Associate in Science Degree, Transfer Program
Division of Professional Studies, Associate Dean: Deborah Beall; Department Chair: Julie Dick

This program is designed for students planning to transfer to a four-year institution, other than Elmira College, to pursue a degree in Education.

Graduates will:
1. Have the skills and knowledge necessary to understand the aims of public education in our society, current trends in education, and the general roles and responsibilities of teachers
2. This knowledge will prepare them to pursue an education program at a transfer institution
3. Demonstrate competency in understanding the concepts, principles, and practices of several areas of the Liberal Arts and Sciences, with special focus on preparing them to take the first of three certification exams

High school or equivalent preparation is required to enroll in this program. Students must maintain a 2.7 or higher GPA for successful recommendation and admission to a certification program at a four-year institution following graduation from CCC. Given the diversity of requirements at individual transfer colleges, it is essential that students in this program meet with a faculty adviser to determine appropriate courses.

<table>
<thead>
<tr>
<th>Program Requirements:</th>
<th>6</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010 - 1020)*</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Foreign Language (SIGN, SPAN or other)</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Laboratory Science</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Mathematics (MATH 1130 or higher)</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Social Sciences (HIST1010 or 1020 &amp; HIST1110 or 1120 &amp; PSYC1101)</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Concentration electives from one area below</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

At least 6 hours must be upper level courses
A. English: select from courses in philosophy, speech, foreign language, humanities, media communications, and 2000-level English.
B. Social Studies: select from courses in history, anthropology, economics, geography, government, and sociology.
C. Science: any lab science.
D. Mathematics: select from math courses numbered 1130 and higher.

Sample Sequence: (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.)
First Semester                                                Second Semester
Composition I (ENGL 1010)                                     Composition II (ENGL 1020)
Mathematics (recommend MATH 1130 or higher)                    Mathematics (recommend MATH 1140 or higher)
Foundations of Education (EDUC 1010)                          Child Psychology (PSYC 2207 or 2208)
General Psychology (PSYC 1101)                                Teaching in the Diverse Classroom (EDUC 2040)
Foreign Language I (SIGN, SPAN, or other)                      Foreign Language II (SIGN, SPAN or other)
Wellness (Activity Component)                                 Wellness (Awareness/Instructional Component)

Third Semester                                                Fourth Semester
Laboratory Science (recommend SCIN 1110)                      Laboratory Science (recommend SCIN 1120)
American History (HIST 1110 or 1120)                         History of Western Civilization (HIST 1010 or 1020)
Arts elective (Gen Ed)                                       Schools & Society (EDUC 2050)
Concentration elective                                       Concentration electives
Elective (recommend EDUC 1560 or EDUC 1960)                  Elective

Footnotes:
* EDUC 1010, 1960, EDUC 2040, SCIN 1110, and SCIN 1120 may not transfer to a SUNY transfer institution; contact Advising and Counseling Services or your academic adviser for information regarding transferability to the institutions in which you are interested.
Foreign language must be 2 semesters of the same language.
*Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and Math courses.

Learning transforms lives.
Liberal Arts and Sciences: Education/Childhood Education

A jointly registered program of Corning Community College and Elmira College

Corning Community College: Associate in Science Degree,

Transfer program Elmira College: Bachelor of Science or Bachelor of Arts Degree

Division of Professional Studies, Associate Dean: Deborah Beall
Department Chair: Julie Dick

This program is designed for students planning to transfer to Elmira College as Childhood Education majors. Qualified students who enter this program at CCC are simultaneously accepted into Elmira College. At Elmira College, students may choose to pursue either a Bachelor of Science or Bachelor of Arts degree. During their final semester at CCC, students will meet with Elmira College advisers who will register them for their next semester. Students must maintain a 2.7 or higher Grade Point Average for successful transfer.

Graduates will:
1. Have the skills and knowledge necessary to transfer to the Education Certification program at Elmira College only
2. Have the skills and knowledge necessary to understand the aims of public education in our society, current trends in education, and the general roles and responsibilities of teachers
3. Demonstrate their competency in understanding the concepts, principles, and practices of several areas of the Liberal Arts and Sciences, with special focus on preparing them to take the first of three certification exams.

All teachers in New York State must successfully complete one year of language at the college level. They must also complete their education program and pass all state certification exams before receiving their initial certificate.

It is highly recommended that students consult with their adviser each semester.

### Program Requirements at Corning Community College:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010-1020)*</td>
<td>6</td>
</tr>
<tr>
<td>Foreign Language (Spanish or Sign strongly recommended)</td>
<td>8</td>
</tr>
<tr>
<td>Laboratory Science electives</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics (MATH 1215-1225 or higher)*</td>
<td>6</td>
</tr>
<tr>
<td>Concentration electives from one area below:</td>
<td>15</td>
</tr>
<tr>
<td>At least 9 hours must be upper-level courses.¹</td>
<td></td>
</tr>
<tr>
<td>A. Communications/Humanities: Select from courses in art, foreign languages, humanities, media communications, music, philosophy, speech, theatre, &amp; 2000-level English.</td>
<td></td>
</tr>
<tr>
<td>B. Social Sciences: Select from courses in anthropology, economics, geography, government, history, psychology, and sociology.</td>
<td></td>
</tr>
<tr>
<td>C. Science</td>
<td></td>
</tr>
<tr>
<td>D. Mathematics: Select from math courses numbered higher than 1215 and up to 4 hours from chemistry or physics courses numbered 1500 or higher Program requirements (EDUC 1010, 1560, 1960, 2040; PSYC 1101; PSYC 2207 or 2208; HIST 1010, 1020, 1110 or 1120)</td>
<td>21</td>
</tr>
<tr>
<td>Free elective</td>
<td>3</td>
</tr>
<tr>
<td>Wellness</td>
<td>2</td>
</tr>
<tr>
<td>Total hours</td>
<td>64</td>
</tr>
</tbody>
</table>

### Sample Sequence: (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.)

#### First Semester

- **English (ENGL 1010)**: 3
- **Mathematics (MATH 1215 or higher)**: 3
- **Foundations of Education (EDUC 1010)**: 3
- **General Psychology I (PSYC 1101)**: 3
- **Foreign Language elective**: 4
- **Wellness (Awareness/Instructional Component)**: 1

#### Second Semester

- **English (ENGL 1020)**: 3
- **Mathematics (MATH 1225 or higher)**: 3
- **Child or Adolescent Psychology (PSYC 2207 or 2208)**: 3
- **Teaching in the Diverse Classroom (EDUC 2040)**: 3
- **Foreign Language elective**: 4

#### Third Semester

- **Laboratory Science elective**: 3
- **Concentration electives¹**: 6
- **Special Ed & Inclusive Classroom (EDUC 1560)**: 3
- **History (HIST 1010, 1020, 1110, or 1120)**: 3
- **Wellness (Activity Component)**: 0.5

#### Fourth Semester

- **Laboratory Science elective**: 3
- **Concentration electives**: 9
- **Fieldwork & Seminar in Education (EDUC 1960)**: 3
- **Fine Arts Course**: 3
- **Wellness (Activity Component)**: 0.5

---

Footnotes:

¹ Concentration electives include courses numbered higher than 1215 and up to 4 hours from chemistry or physics courses numbered 1500 or higher.
**Liberal Arts and Sciences: Humanities and Social Sciences**

**Associate in Arts Degree, Transfer program**

Divisions of Humanities and Social Sciences

Associate Dean: Byron Shaw

This program provides the first two years of a traditional college education leading toward such professions as law, teaching at all levels through college, journalism, psychology, international affairs, translation, political science, and many more that require a working knowledge of a modern language as well as a strong academic background. By following a rigorous liberal arts and sciences curriculum, graduates will have developed capabilities in academic research and writing; an ability to apply scientific method and critical thinking skills to validate their own ideas and inquiries; sufficient math skills to deal with complex problems; and an awareness and appreciation of living in a culturally, racially, and ethnically diverse society. The humanities, social sciences, and liberal arts and sciences electives allow students to focus their curriculum toward a specific goal or to explore a variety of disciplines. The courses accommodate a wide range of career choices. In a world where technology is constantly changing, students must be ready for a tomorrow where jobs change rapidly or disappear. This program provides a solid educational foundation by encouraging students to be knowledgeable about the past, but prepared for the future.

Graduates will have:

- **Self-Direction (To Work on One’s)** – The ability to independently define, plan, and complete a project in conformance with assigned criteria, locating, evaluating, integrating, and correctly documenting any necessary primary or secondary source material;
- **Analytical skills (To Think)** – The ability to evaluate the quality of a claim, concept or process by careful consideration of the appropriateness, relevance, and/or truth of the supporting evidence;
- **Understanding of the World (To Know)** – The ability to demonstrate a foundation knowledge of the Natural World, The Physical World, The Social/Cultural World, The Historical World and The Contemporary World;
- **Problem Solving (To Discover)** – The ability to determine the best of many possible solutions to problems, whether numerical, symbolic, ethical, linguistic, or social;
- **Expressivity (To Communicate)** – The ability to clearly present information through writing, speech, visual presentation, or performance;
- **Understanding of Human Condition and Human Behavior (To Understand)** – The ability to demonstrate a basic understanding of motive and resultant human behaviors and activities;
- **Creativity (To Innovate)** – The ability to devise and express original insights and/or distinctive relationships among concepts;
- **World Citizenship (To Appreciate)** – The ability to demonstrate fundamental appreciation of cultures other than one’s own.

**Program Requirements:**

<table>
<thead>
<tr>
<th>Course Type</th>
<th>Credits</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010-1020)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>2000 level communication courses(^{1})</td>
<td>12</td>
<td>Humanities electives</td>
</tr>
<tr>
<td>Upper-level Modern Language (ASL, Arabic, Chinese, French, German, Italian, Russian, or Spanish 2010/higher)</td>
<td>4</td>
<td>Liberal Arts and Sciences electives</td>
</tr>
<tr>
<td>Social Sciences electives</td>
<td>12</td>
<td>Wellness</td>
</tr>
<tr>
<td>Laboratory Science electives</td>
<td>6</td>
<td>Total hours</td>
</tr>
<tr>
<td>Mathematics (MATH 1110 or higher)*</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Humanities electives</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Liberal Arts and Sciences electives</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Free electives</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Wellness</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Total hours</td>
<td>62</td>
<td></td>
</tr>
</tbody>
</table>

**Sample Sequence:** (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters. The sequence of courses may vary from this sample depending on the student’s intended eventual major.)

**First Semester**

- English (ENGL 1010)*: 3
- Modern Language (2010 or higher): 4
- Social Sciences elective: 3
- Laboratory Science elective: 3
- Wellness (Awareness/Instructional Component): 1
- Wellness (Activity Component): 0.5

**Second Semester**

- English (ENGL 1020): 3
- Free elective: 4
- Social Sciences elective: 3
- Laboratory Science elective: 3
- Mathematics: 3

**Third Semester**

- 2000-level Communications course\(^{1}\): 3
- Free elective: 4
- Social Sciences elective: 3
- Humanities elective: 3
- Liberal Arts and Sciences elective: 3
- Wellness (Activity Component): 0.5

**Fourth Semester**

- 2000-level Communications course\(^{1}\): 3
- Social Sciences elective: 3
- Humanities elective: 3
- Liberal Arts and Sciences electives: 6
- Wellness (Activity Component): 0.5

Footnotes:

12000-level communications course requirements may be satisfied with English, modern language literature, media communications, speech, or theatre courses.

*Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and Math courses.

**Students in this program who plan to transfer to a SUNY college can meet 7 of the 10 SUNY Knowledge and Skills areas and 30 SUNY General Education credits.

For more information on SUNY General Education requirements, refer to the catalog index or see an adviser.
The training in disciplines under the general category of liberal arts and sciences is also excellent preparation for many traditional careers, including medicine, dentistry, law, teaching, business, international studies, mass media, mass communications, health, physical education, and recreation. Students can choose to concentrate in an area that matches their interests, or they can develop a curriculum to suit a unique academic goal not met by any other program. By following a rigorous liberal arts and sciences curriculum, graduates will have developed capabilities in academic research and writing; an ability to apply scientific method and critical thinking skills to validate their own ideas and inquiries; sufficient math skills to deal with complex problems; an awareness and appreciation of living in a culturally, racially, and ethnically diverse society.

Graduates will have:

- **Self-Direction (To Work on One’s)** – The ability to independently define, plan, and complete a project in conformance with assigned criteria, locating, evaluating, integrating, and correctly documenting any necessary primary or secondary source material;
- **Analytical skills (To Think)** – The ability to evaluate the quality of a claim, concept or process by careful consideration of the appropriateness, relevance, and/or truth of the supporting evidence;
- **Understanding of the World (To Know)** – The ability to demonstrate a foundation knowledge of the Natural World, The Physical World, The Social/Cultural World, The Historical World and The Contemporary World;
- **Problem Solving (To Discover)** – The ability to determine the best of many possible solutions to problems, whether numerical, symbolic, ethical, linguistic, or social;
- **Expressivity (To Communicate)** – The ability to clearly present information through writing, speech, visual presentation, or performance;
- **Understanding of Human Condition and Human Behavior (To Understand)** – The ability to demonstrate a basic understanding of motive and resultant human behaviors and activities;
- **Creativity (To Innovate)** – The ability to devise and express original insights and/or distinctive relationships among concepts;
- **World Citizenship (To Appreciate)** – The ability to demonstrate fundamental appreciation of cultures other than one’s own.

### Program Requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010-1020)*</td>
<td>6</td>
</tr>
<tr>
<td>Humanities electives</td>
<td>6</td>
</tr>
<tr>
<td>Social Sciences electives</td>
<td>6</td>
</tr>
<tr>
<td>Laboratory Science electives</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics (MATH 1110 or higher)*</td>
<td>6</td>
</tr>
<tr>
<td>Concentration electives from at least one area below</td>
<td>15</td>
</tr>
<tr>
<td>At least 9 hours must be upper-level courses.</td>
<td></td>
</tr>
</tbody>
</table>

A. Communications/Humanities: Select from courses in art, foreign languages, humanities, media communications, music, philosophy, speech, theatre and 2000-level English.

B. Social Sciences: Select from courses in anthropology, economics, geography, government, history, psychology, and sociology.

C. Individualized Studies: Select from liberal arts and sciences courses. (Selection of this concentration requires approval by associate deans of instruction for the program in collaboration with the academic adviser.)

Free Electives: 15

Wellness: 2

**Total Hours:** 62

### Sample Sequence:

(intended as a guide for academic planning. It need not be followed exactly or completed in four semesters. The sequence of courses may vary from this sample depending on the student’s intended eventual major.)

#### First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010)</td>
<td>3</td>
</tr>
<tr>
<td>Social Sciences elective</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>Humanities elective</td>
<td>3</td>
</tr>
<tr>
<td>Free elective</td>
<td>3</td>
</tr>
<tr>
<td>Wellness (Awareness/Instructional Component)</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Second Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1020)</td>
<td>3</td>
</tr>
<tr>
<td>Social Sciences elective</td>
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<tr>
<td>Mathematics</td>
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</tr>
<tr>
<td>Humanities elective</td>
<td>3</td>
</tr>
<tr>
<td>Free elective</td>
<td>3</td>
</tr>
<tr>
<td>Wellness (Activity Component)</td>
<td>0.5</td>
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</table>

#### Third Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory Science elective</td>
<td>3</td>
</tr>
<tr>
<td>Concentration electives¹</td>
<td>6</td>
</tr>
<tr>
<td>Free electives</td>
<td>6</td>
</tr>
<tr>
<td>Wellness (Activity Component)</td>
<td>0.5</td>
</tr>
</tbody>
</table>

#### Fourth Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory Science elective</td>
<td>3</td>
</tr>
<tr>
<td>Concentration electives¹</td>
<td>9</td>
</tr>
<tr>
<td>Free electives</td>
<td>3</td>
</tr>
</tbody>
</table>

Footnotes:

1. In the Communications/Humanities and Social Sciences areas, most upper-level courses carry a 2000 designation; they are noted as upper-level courses in the course description. Sciences & Mathematics upper-level courses are those math courses numbered 1310 or higher and science courses numbered 1500 or higher.

*Students in this program who plan to transfer to a SUNY college can meet 21 credits of the general education requirement.

*Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and Math courses.

Learning transforms lives.
Liberal Arts and Sciences: Mathematics and Science  
Associate in Science Degree, Transfer program  
Division of STEM, Associate Dean: Bradley Cole  
Department Chair Mathematics: Julie Croteau; and Department Chair Sciences: Brenda Gustin

This program is recommended for students interested in the mathematics/sciences area of liberal arts and sciences. Students who choose this program are typically interested in transferring to major in mathematics or the natural or physical sciences, or are those who have interest in careers such as pharmacy, medicine, physical therapy, veterinary medicine, or mathematics or science education. It involves a more rigorous and concentrated level of mathematics and science than the other liberal arts programs, but still allows approximately 21 hours of electives. In all cases, students should look closely at the mathematics and science course descriptions to ensure that this program matches their abilities and career choice. Depending upon their long-range plans, they might also take a foreign language as an elective.

Graduates will demonstrate:
- **Self-Direction (To Work on One’s Own)** – The ability to independently define, plan, and complete a project in conformance with assigned criteria, locating, evaluating, integrating, and correctly documenting any necessary primary or secondary source material;
- **Analytical skills (To Think)** – The ability to evaluate the quality of a claim, concept or process by careful consideration of the appropriateness, relevance, and/or truth of the supporting evidence;
- **Understanding of the World (To Know)** – The ability to demonstrate a foundation knowledge of the Natural World, The Physical World, The Social/Cultural World, The Historical World and The Contemporary World;
- **Problem Solving (To Discover)** – The ability to determine the best of many possible solutions to problems, whether numerical, symbolic, ethical, linguistic, or social;
- **Expressivity (To Communicate)** – The ability to clearly present information through writing, speech, visual presentation, or performance;
- **Understanding of Human Condition and Human Behavior (To Understand)** – The ability to demonstrate a basic understanding of motive and resultant human behaviors and activities;
- **Creativity (To Innovate)** – The ability to devise and express original insights and/or distinctive relationships among concepts;
- **World Citizenship (To Appreciate)** – The ability to demonstrate fundamental appreciation of cultures other than one’s own.

High school or equivalent preparation required: Two years of science and three years of mathematics, including algebra, geometry, intermediate algebra, and trigonometry. Students who don’t have this preparation will be able to get it here, but it may take longer to complete the program.

<table>
<thead>
<tr>
<th>Program Requirements:</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010-1020)*</td>
<td>6</td>
<td>Mathematics and/or Science Concentration¹,²</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Mathematics²*</td>
<td>6</td>
<td>Computer elective³</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Social Sciences electives</td>
<td>6</td>
<td>Free electives⁴</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Laboratory Science sequence¹</td>
<td>8</td>
<td>Wellness</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total hours</td>
<td>62</td>
<td></td>
</tr>
</tbody>
</table>

**Sample Sequence:** (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters. The sequence of courses may vary from this sample depending on the student’s intended eventual major.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010)</td>
<td>3</td>
</tr>
<tr>
<td>Laboratory Science¹</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics²</td>
<td>3</td>
</tr>
<tr>
<td>Free electives⁴</td>
<td>6</td>
</tr>
<tr>
<td>Wellness (Awareness/Instructional Component)</td>
<td>1</td>
</tr>
<tr>
<td>Wellness (Activity Component)</td>
<td>0.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Sciences elective</td>
<td>3</td>
</tr>
<tr>
<td>Science-Mathematics¹,²</td>
<td>6</td>
</tr>
<tr>
<td>Free electives⁴</td>
<td>6</td>
</tr>
<tr>
<td>Wellness (Activity Component)</td>
<td>0.5</td>
</tr>
</tbody>
</table>
**Math Focus Sample Sequence:** (This sequence is provided as a more specific guide for those who intend to transfer as a mathematics major.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010) 3</td>
<td>English (ENGL 1020) 3</td>
</tr>
<tr>
<td>Mathematics (MATH1610) 4</td>
<td>Mathematics (MATH 1620) 2</td>
</tr>
<tr>
<td>Social Science (or Laboratory Science) 3(4)</td>
<td>Laboratory Science 4</td>
</tr>
<tr>
<td>Computer Elective 3,6</td>
<td>Social Science elective 3</td>
</tr>
<tr>
<td>Free Elective</td>
<td>Wellness Awareness (HLTH or WELL) 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentration (MATH 2610) 4,2</td>
<td>Concentration (MATH 2560) 4,2</td>
</tr>
<tr>
<td>Concentration (MATH 2350 or 2410) 3,8</td>
<td>Free elective (MATH 2350 or 2620) 3(4)</td>
</tr>
<tr>
<td>Laborator Science (or Social Science) 4</td>
<td>Free elective 4</td>
</tr>
<tr>
<td>Free elective</td>
<td>Free elective</td>
</tr>
<tr>
<td>Wellness Activity (PFIT or RECC) 1</td>
<td>Free elective 3</td>
</tr>
</tbody>
</table>

Footnotes:
1. Science courses must be selected from those numbered 1500 or higher.
2. Mathematics courses must be selected from courses numbered 1310 or higher. Students planning to transfer to a mathematics program at a four-year institution should select 1610-1620 to meet the mathematics requirement. To meet the concentration requirement, they should choose MATH 2610, and two courses from MATH 2330, 2410, 2560, or 2620.
3. Select from CSCS 1320, CSCS 2420, CSST 1600, ENGR 1050, ELEC 2070, SCIN 1060, or TECH 1060. Those intending to major in Biology or Chemistry should choose SCIN 1060 or TECH 1060. Those intending to major in Math or Physics should choose ENGR 1050, CSST 1600, CSCS 1520, or CSCS 2420.
4. Foreign language recommended.
5. CHEM, BIOL, GEOL sequences start in Fall; PHYS starts in Spring.
6. ENGR 1050 recommended.
7. Finish second half of sequence if started or start PHYS sequence with PHYS 1820.
8. Many transfer schools require Intro to Proofs before students can take junior-level major courses.

*Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and Math courses.

Students in this program who plan to transfer to a SUNY college can meet 7 of the 10 SUNY Knowledge and Skills areas and 30 SUNY General Education credits. For more information on SUNY General Education requirements, refer to the catalog index or see an adviser.
Students in the Machine Tool Technology program study that portion of the manufacturing arena that actually produces the parts that go into the products sold throughout the world. Machinists set up and operate a vast variety of machine tools from basic lathes to advanced computer numerically controlled (CNC) machining centers. In today’s highly automated, high precision environment, the machinist needs a comprehensive knowledge of mathematics, precision measurement, CNC programming, and communication skills. Machinists must understand the working properties of metals such as steel, cast iron, aluminum and the effect heat treating has on their properties. They must be able to read complicated blueprints, translating these images into machined objects.

Graduates will be able to:
- Write and edit programs;
- Run parts on a CNC machining center;
- Use basic machining equipment and tools;
- Calculate and identify proper tool geometry, feeds, speeds, screw threads, and tapers to machine parts of various materials;
- Design simple jigs and fixtures;
- Read and inspect parts made to drawing specifications;
- Draw parts of various types and process them with MasterCam software.

In today’s environment, the machinist is an integral part of a manufacturing team which analyzes processes, estimates costs, schedules production, and programs automated machines which are factors necessary to ensure a continuous refinement and improvement of the manufacturing process. With this involvement comes the knowledge and pride of having an immediate impact on, and control over, quality. Quality and productivity are critical factors in today’s global economy. Students in this program who reside in Perry Hall will need to provide transportation to off-campus locations.

<table>
<thead>
<tr>
<th>Program Requirements:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>English</strong> (ENGL 1010 &amp; 1020)*</td>
</tr>
<tr>
<td><strong>Mathematics</strong> (MATH 1230, 1240 or 1310 or higher)*</td>
</tr>
<tr>
<td><strong>Social Sciences electives</strong></td>
</tr>
<tr>
<td><strong>Physics</strong> (PHYS 1010)</td>
</tr>
<tr>
<td><strong>Social Sciences or Humanities</strong></td>
</tr>
</tbody>
</table>

Students are strongly advised to take the Orientation to Technology (TECH 1050) course [offered before the semester begins] where their computer skills will be assessed. It may be possible to get credit for TECH 1110 and TECH 1120 via this assessment.

**Sample Sequence:** (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>English</strong> (ENGL 1010)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Mathematics</strong> (MATH 1230 or higher)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Precision Machining I</strong> (MACH 1040)</td>
<td>5</td>
</tr>
<tr>
<td><strong>Engineering Graphics I</strong> (MECH 1050)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Technical Word Processing and Research</strong> (TECH 1110)*</td>
<td>1</td>
</tr>
<tr>
<td><strong>Spreadsheet Applications in Technology</strong> (TECH 1120)*</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Manufacturing Methods</strong> (TECH 1030)</td>
<td>3</td>
</tr>
<tr>
<td><strong>CNC Machining</strong> (MACH 2400)</td>
<td>5</td>
</tr>
<tr>
<td><strong>MasterCam I</strong> (MACH 2380)</td>
<td>3</td>
</tr>
<tr>
<td><strong>CNC Lathe Programming</strong> (MACH 2510)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Footnotes:**
*Evening students should substitute BUOT 1062 and CSST 1051.
Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and Math courses.
*High school or equivalent preparation required: Two years of high school mathematics including algebra and either geometry or intermediate algebra. Students who don’t have this preparation will be able to get it here, but it may take longer to complete the program.
Machine Tool Technology
Certificate, Career program
Division of STEM, Associate Dean: Bradley Cole
Department Chair: John Longwell

The purpose of this certificate program is to prepare students for immediate employment as entry level machine operators. They will become proficient in the operation of basic machine tools such as lathes, milling machines, grinders, drill presses and precision measurement equipment. To prepare for future career opportunities in the operation of machining centers, the College’s first course in CNC programming is also required. Students will develop supportive skills in basic mathematics and writing appropriate to a machinist position and necessary to continue their machinist training in an associate’s degree program in Machine Tool Technology.

Graduates will be able to
- Immediately enter the workforce with the skills required to run both production and job-shop parts;
- Apply their skills to set-up and operate common manufacturing machine tools;
- Edit CNC programs “on-the-fly” to assist in production scheduling;
- Demonstrate proficiency in the use of standard and state-of-the-art metrology to verify parts to a documented drawing.

To provide students with the option of electing this program or the associate’s degree in Machine Tool Technology, the first semester of both programs is identical. High school or equivalent preparation required: Two years of high school mathematics including algebra and either geometry or intermediate algebra. Students who don’t have this preparation will be able to get it here, but it may take longer to complete the program. Students in this program who reside in Perry Hall will need to provide transportation to off-campus locations.

**Program Requirements:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010)*</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics (MATH 1230 or higher)*</td>
<td>3</td>
</tr>
<tr>
<td>Technical Concentration (MACH 1040, 1250, 1540; MECH 1050, 1560, 1570; TECH 1110, 1120, 1030)</td>
<td>27</td>
</tr>
<tr>
<td>Total hours</td>
<td>33</td>
</tr>
</tbody>
</table>

Students should take the Orientation to Technology (TECH 1050) course [offered before the semester begins] where their computer skills will be assessed. It may be possible to get credit for TECH 1110, 1120, or CSST 1091 via this assessment. If students do not pass sections of the computer assessment, they may be required to take TECH 1110, 1120 or CSST 1091 to make up the deficiency.

**Sample Sequence:** (intended as a guide for academic planning. It need not be followed exactly or completed in two semesters.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>Metallurgy for the Machinist (MACH 1250)</td>
</tr>
<tr>
<td>Mathematics (MATH 1230 or higher)</td>
<td>Manufacturing Methods (TECH 1030)</td>
</tr>
<tr>
<td>Precision Machining I (MACH 1040)</td>
<td>Precision Machining II (MACH 1540)</td>
</tr>
<tr>
<td>Engineering Graphics I (MECH 1050)</td>
<td>CNC Programming (MECH 1560)</td>
</tr>
<tr>
<td>Technical Word Processing and Research (TECH 1110)</td>
<td>Metrology (MECH 1570)</td>
</tr>
<tr>
<td>Spreadsheet Applications in Technology (TECH 1120)</td>
<td></td>
</tr>
</tbody>
</table>

Footnotes:
* Based on placement, students might be required to successfully complete preparatory course(s) before attempting further course or program requirements.
* All 33 credit hours of this program apply towards the specific 64 credit requirement of the Machine Tool Technology A.A.S. program allowing a student the opportunity to apply the credits earned in the certificate towards the completion of a two-year degree.
* 18 of the 33 credit hours of this program apply towards the specific 64 credit requirement of the Manufacturing Technology A.A.S. program allowing a student the opportunity to apply the credits earned in the certificate towards the completion of a two-year degree.
* 18 of the 33 credit hours of this program apply towards the specific 64 credit requirement of the Mechanical Technology: CAD Design A.A.S. program allowing a student the opportunity to apply the credits earned in the certificate towards the completion of a two-year degree.
Manufacturing Technology
Associate in Applied Science Degree, Career program
Division of STEM, Associate Dean: Bradley Cole
Department Chair: John Longwell

Manufacturing Technology is a field of study that prepares students for careers in production settings, technical and/or management oriented professions. Manufacturing technicians are primarily involved with the management, operation, and maintenance of complex, team-oriented technological systems. Typical on-the-job functions may include work in production and inventory control, quality assurance, methods analysis, manufacturing supervision, and facilities management.

Within the traditional manufacturing courses, the program will integrate the latest concepts of Quality Management or Six Sigma Lean Principles that are increasingly important to the leadership and management of all organizations. With an awareness of growing global competition, the students will learn to apply these principles to produce benefits for customers, owners, employees, suppliers, and society at large. The initial semester will focus on topics common to all technical fields. Subsequent courses become more specialized and use the scientific method to identify and solve problems related to a manufacturing environment.

Graduates will be able to:
- Perform manufacturing process analysis and product testing;
- Apply a problem solving approach to manufacturing cost reduction;
- Develop quality control programs;
- Use of a Computer Aided Design (CAD) system;
- Recognize and use project management techniques;
- Use word processing, spreadsheets and presentation software.

Program Requirements:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010 and 1020)*</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics (MATH 1230-1240 or higher)*</td>
<td>6</td>
</tr>
<tr>
<td>Social Sciences electives.</td>
<td>6</td>
</tr>
<tr>
<td>Physics (PHYS 1010)</td>
<td>4</td>
</tr>
<tr>
<td>Technical Concentration (CADD1700, CADD2710; ELEC 1010, MECH 1050, 1550, 1560, 1570, 2050, 2210; MACH 2380; MFGT 2020, 2060; TECH 1030, 1080)</td>
<td>42</td>
</tr>
</tbody>
</table>

Total hours: 64

Students should take the Orientation to Technology (TECH 1050) course [offered before the semester begins] where their computer skills will be assessed. If students do not pass sections of the computer assessment, they may be required to take TECH 1110, 1120 or CSST 1091 to make up the deficiency.

Sample Sequence: (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010)</td>
<td>English (ENGL 1020)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics (MATH 1230 or higher)</td>
<td>Mathematics (MATH 1240 or higher)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Engineering Graphics I (MECH 1050)</td>
<td>CNC Programming (MECH 1560)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Manufacturing Methods (TECH 1030)</td>
<td>Engineering Graphics II (MECH 1550)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Manufacturing Methods Lab (TECH 1080)</td>
<td>Physics (PHYS 1010)</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Electricity (ELEC 1010)</td>
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</tr>
<tr>
<td>4</td>
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</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials (MECH 2210)</td>
<td>Computer Aided Drafting II (CADD 2710)</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Social Sciences elective</td>
<td>Manufacturing Supervision (MFGT 2060)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Quality Management (MFGT 2020)</td>
<td>Dimensional Metrology (MECH 1570)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Hydraulics &amp; Pneumatics (MECH 2050)</td>
<td>MasterCam I (MACH 2380)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Computer Aided Drafting I (CADD 1700)</td>
<td>Social Sciences or Humanities elective</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

Footnotes:
*Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and Math courses.
*High school or equivalent preparation required: Two years of mathematics including algebra and either geometry or intermediate algebra.
Every new product, machine, vehicle, or device we enjoy today represents the work of creative mechanical designers. Those who derive satisfaction from the challenge of solving mechanical problems, making things work, and using computer technology to create new things may have a future in this exciting field. This program represents a blend of applied design theory with the most recent innovations in Computer-Aided Design (CAD), Rapid Prototyping, Computer Numerical Control and traditional industrial practices. Initial courses focus on topics common to all technical fields, including mathematics, engineering graphics, machine tools, and basic electricity. Subsequent courses become more specialized as students apply computer technology to problems related to machine design and automation.

Graduates are prepared to:
• Use of a CAD system for design, manufacture, and analysis; select materials, and design mechanical components and systems;
• Perform technician assignments involving measurements, test equipment, data recording and analysis;
• Communicate with and understand technical terminology;
• Use word processing, spreadsheet, and presentation software;
• Recognize and use project management techniques.

Should students decide to continue their education at the four-year college level, courses taken at Corning transfer to upper-division colleges granting Bachelor of Technology degrees in Mechanical Technology, Manufacturing Technology, and Manufacturing Engineering Technology.

<table>
<thead>
<tr>
<th>Program Requirements:</th>
<th></th>
<th>Technical Concentration (ELEC 1010; TECH 1030, 1080; MECH 1050, 1060, 1550, 1570, 2010, 2050, 2170, 2210; CADD 1700, 2710)</th>
<th>39</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010 and 1020.)*</td>
<td>6</td>
<td>Mathematics (MATH 1230-1240 or higher)*</td>
<td></td>
</tr>
<tr>
<td>Mathematics (MATH 1230-1240 or higher)*</td>
<td>6</td>
<td>Social Sciences electives</td>
<td>6</td>
</tr>
<tr>
<td>Social Sciences electives</td>
<td>6</td>
<td>Technical Elective***</td>
<td>3</td>
</tr>
<tr>
<td>Physics (PHYS 1010)</td>
<td>4</td>
<td>Total hours</td>
<td>64</td>
</tr>
<tr>
<td>Social Sciences electives</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physics (PHYS 1010)</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical Elective***</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total hours</td>
<td>64</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Students are strongly advised to take the Orientation to Technology (TECH 1050) course [offered before the semester begins] where their computer skills will be assessed. If students do not pass sections of the computer assessment, they may be required to take TECH 1110, 1120 or CSST 1091 to make up the deficiency.

Sample Sequence: (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010)</td>
<td>English (ENGL 1020)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics (MATH 1230 or higher)</td>
<td>Mathematics (MATH 1240 or higher)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Engineering Graphics I (MECH 1050)</td>
<td>Engineering Graphics II (MECH 1550)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Manufacturing Methods (TECH 1030)</td>
<td>Physics (PHYS 1010)</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Manufacturing Methods Lab (TECH 1080)</td>
<td>Dimensional Metrology (MECH 1570)</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Electricity (ELEC 1010)</td>
<td></td>
</tr>
<tr>
<td>4</td>
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</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Sciences elective</td>
<td>Social Sciences elective</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Hydraulics and Pneumatics (MECH 2050)</td>
<td>Machine Design (MECH 2010)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Technical Mechanics (MECH 1060)</td>
<td>Strength of Materials (MECH 2170)</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Computer Aided Drafting I (CADD 1700)</td>
<td>Computer Aided Drafting II (CADD 2710)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Materials (MECH 2210)</td>
<td>Technical elective</td>
</tr>
<tr>
<td>4</td>
<td>0-3</td>
</tr>
<tr>
<td>Technical Elective</td>
<td></td>
</tr>
<tr>
<td>0-3</td>
<td></td>
</tr>
</tbody>
</table>

Footnotes:
*Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and Math courses. Math 1310 does not count toward the 6 credits of math for this program.
*High school or equivalent preparation required: Two years of mathematics including algebra and either geometry or intermediate algebra.
*** Technical elective: Choose from MFGT 2020 or MECH 1560. Note: both can be taken if desired and are recommended by the Technology Department.
Nursing
Associate in Applied Science Degree, Career program
Division of Professional Studies, Associate Dean: Deborah Beall
Department Director: Cathleen Kunkler

The integrated curriculum includes learning experiences in medical, surgical, pediatric, obstetric, geriatric, psychiatric and community settings. Clinical experience is provided in hospitals in Corning, Elmira, Sayre, Montour Falls, Troy and at other health care agencies throughout the area during day, evening, and weekend hours. Students are responsible for their own transportation to clinical agencies and are expected to rotate agencies each semester.

Graduates will be able to:
- Function independently,
- Identify potential health problems,
- Provide health teaching and counseling,
- Give restorative and supportive care,
- Execute prescribed nursing and medical regimes.

Successful completion of this program enables graduates to take the National Council Licensing Examination for Registered Nurse (NCLEX).

This program is accredited by the Accreditation Commission for Education in Nursing, Inc. (ACEN) and registered by the New York State Education Department and the State Board of Regents. Admission to the Nursing program does not guarantee eligibility to register into the first nursing course. Registration into nursing courses is on a space-available basis.

Eligibility and steps:
- Students must successfully complete courses in biology and chemistry either in high school (with a grade of 75% or its letter grade equivalent or higher) or in college (with a grade of C or higher).
- Students must have completed all developmental courses (see prerequisites below), place in ENGL 1010 based on CCC assessments tests and must be eligible to take MATH 1215 or higher by assessment tests or by completion of MATH 1015 with a grade of C or higher.
- Students will be required to submit a completed “Eligibility Packet for Nursing I.” The packet includes instructions on what documentation is required to be submitted for review and how to complete the requirements. Required areas include:
  - Results of a criminal background check
  - Results of Pennsylvania child abuse screening
  - Proof of current American Heart Association or American Red Cross BLS certification
  - Completion of the “Essential Functions” of the Nursing program form
  - Submission of required health form information to the identified company and results of Health Form compliance from identified company
  - Minimum GPA of 2.5

Students are required to meet the criteria set by the clinical agencies. This includes health form components, background check and/or child abuse check included in the eligibility packet. In addition, students will be required to have flu vaccines as part of their clinical lab requirement. An applicant who has been convicted of a felony may not be allowed to take the NCLEX. For more information, contact the Nurse Education Department Director. Students entering the Nursing program will need to know basic keyboarding and computer use. CCC offers both of these courses.

Prospective students who have graduated from an accredited PN program may be eligible for advanced placement. All LPNs requesting advanced placement MUST complete an “Advanced Placement Packet”, submit an official PN transcript and evidence of licensure as a practical nurse; meet the entry requirements for the College; meet prerequisite requirements for entrance into their initial nursing course. To be considered for advanced placement LPNs must also complete at least 12 credits of program requirements including Principles of Anatomy and Physiology I and score 75% or higher on an advanced placement exam. For further information regarding the exam please contact the Nurse Education Department. The advanced placement exam is valid for three years and can only be taken once.

Nursing courses, specifically NURS 1100, 1500, 2000, 2100, 2500, have a shelf life of three years. If a student is unsuccessful in any of the clinical nursing courses, NURS 1100, 1500, 2100, or 2500, they would have the opportunity to submit a petition to the Nurse Education Department requesting the chance to repeat the course. Petitions are only available through the Nurse Education Department. Students would only be allowed to repeat one clinical nursing course.

Students would only be allowed to repeat one clinical nursing course. Students must complete the sequence of nursing courses within five years of beginning their first nursing course.

Learning transforms lives.
Prerequisite Courses:

Developmental Courses: Any developmental courses will need to be completed successfully prior to submission of eligibility packet. Math: Must be eligible to take MATH 1215 or higher by assessment tests or by completion of MATH 1015. Science: See chart below.

<table>
<thead>
<tr>
<th>Science</th>
<th>If never taken in high school then:</th>
<th>If taken in high school and received less than 75% OR took in college and received less than a “C” then:</th>
<th>If taken in high school and received more than 75% OR took in college and received more than a “C” then:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>Must take BIOL 1050 or 1060 or 1020 or 1510 with a grade of “C” or higher.</td>
<td>Must take BIOL 1050 or 1060 or 1020 or 1510 with a grade of “C” or higher.</td>
<td>Prerequisite is met.</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Must take CHEM 1010 or 1020 or 1510 and pass with a grade of “C” or higher.</td>
<td>Must take CHEM 1020 or 1010 or 1510 and pass with a grade of “C” or higher.</td>
<td>Prerequisite is met.</td>
</tr>
</tbody>
</table>

Program Requirements:

<table>
<thead>
<tr>
<th></th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010 and 1020)</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics elective (MATH 1215 or higher)</td>
<td>3</td>
</tr>
<tr>
<td>Social Sciences (PSYC 1101, SOCI 1010)</td>
<td>6</td>
</tr>
<tr>
<td>Nursing (NURS 1100, 1500, 2000, 2100, 2500)</td>
<td>36</td>
</tr>
<tr>
<td>Nursing elective</td>
<td>1</td>
</tr>
<tr>
<td>Laboratory Science (BIOL 1210, 1220 and 2010)</td>
<td>12</td>
</tr>
<tr>
<td>Total hours</td>
<td>64</td>
</tr>
</tbody>
</table>

Footnotes:

Based on placement, students might be required to successfully complete preparatory course(s) and prerequisite courses before attempting further course or program requirements.

1 BIOL 1210 Principles of Anatomy & Physiology I must be taken prior to or concurrently with NURS 1100 Nursing I and BIOL 1220 Principles of Anatomy & Physiology II must be taken prior to or concurrently with NURS 1500 Nursing II. BIOL 2010 Microbiology must be taken prior to or concurrently with NURS 2100 Nursing III.

All lab science program requirements must be completed with a grade of “C” or higher and be completed prior to entering NURS 2500 Nursing IV.

2. A grade of C or better in a nursing course is necessary to continue to the next nursing course. Students who fail to provide safe and satisfactory patient care may be dropped from nursing courses and assigned a final grade of “D” or “F” at any time during the semester. Students who are unsuccessful in NURS 1100, 1500, 2100, and/or 2500 must petition the Department of Nurse Education for a second opportunity to complete the program. An unsuccessful attempt is: completion of a course with a grade of “F”; withdrawal from a course, or a failure in a nursing advanced placement exam. Students must petition by February 15th for returning in the fall semester and September 15th for returning in the spring semester. Failure to meet the deadline will result in the non-approval of the student’s petition, and the student will need to wait until the following year. Readmission to nursing courses is on a space-available basis determined following the last nursing exam of the semester – students will be notified by the Nurse Education Department. NURS 1511 is required prior to re-entry into Nursing II, NURS 2110 is required prior to re-entry into Nursing III, and NURS 2510 is required prior to re-entry into Nursing IV. For re-entering students, credits previously earned for Nursing I, II, and III are valid for three years. After three years previously passed nursing courses will need to be repeated. Only one nursing course can be repeated. Eligibility packets/Advanced Placement packets are available in the Nurse Education Department or on the college website under Academic Programs > Health and Nursing > Nursing. Petitions for the Nursing program are available in the Nurse Education Department. Nursing courses must be completed within five years of beginning initial nursing course.

Advanced placement students – all LPNs will need to register and pass the advanced placement exam and submit a completed Advanced Placement Packet. The Advanced Placement exam can only be taken once. Students should contact the Nurse Education Department for more information. Advanced Placement students entering NURS 1500 Nursing II, based on receiving approval for advanced placement and space availability, are required to take NURS 1511 prior to beginning NURS 1500. Assessment for Prior Learning forms will be completed in NURS 1511 in order to receive credit for NURS 1100 Nursing I. Advanced Placement students will be registered in nursing courses on a space available basis. Only evidence of certification in BLS CPR must be maintained throughout the program and evidence submitted to the Nurse Education Department. The ONLY acceptable CPR courses are American Heart Association course “BLS Provider” or American Red Cross course “Basic Life Support for the Professional Rescuer.” No other CPR certification will be accepted. Verification of an updated CPR certification will be monitored throughout each nursing course. Lapses in certification can lead to unsuccessful completion of a nursing course.

Prerequisite and program requirements for Math courses will need to be completed with a “C” or higher

Nursing electives: Select from NURS 1502, 1506, 1515, 1551, 2102, 2502, 2965, 2992, 2993; HLTH 1100, 1510, 2007, 2503.
Police Basic Training
Certificate, Career program
Division of Professional Studies, Associate Dean: Deborah Beall

The program has been approved by the New York State Division of Criminal Justice Services to meet Phase I of the Police Academy Training. (Phase II occurs after employment.) Entry into the program requires approval from the program coordinator, and completion of all remediation requirements. This certificate is not a guarantee of employment. No persons with a felony conviction in any state will be accepted. All applicants will be required to supply the following information prior to being accepted in this program: a) FBI/DCJS criminal history; b) NYS driver’s abstract from the NYS Department of Motor Vehicles proving the applicant’s privilege to operate a motor vehicle in the state of New York; and c) CCC Health Form documenting immunizations and an up-to-date physical exam which documents the ability of the applicant to perform the physical tasks in the PFIT curriculum. Due to physical fitness requirements from the NYS Department of Criminal Justice Services, all students will be required to successfully achieve a 40% rating on a physical fitness test based on the Cooper Norms, administered by staff designated by the session director and conducted in accordance with NYS DCJS guidelines. Due to the competitive nature of employment positions in law enforcement, each applicant will be required to successfully pass an oral board interview conducted by staff designated by the session director.

Graduates will:
• Have attained a level of expertise in the areas of: New York State Laws, crime scene investigations, physical training, defensive tactics, emergency medical services, emergency vehicle operations, and many other ancillary police activities sufficient for New York State Phase I Certification.

Recognized throughout the northeast as an exceptional educational facility, the CCC Criminal Justice Center is a New York State regional training center that certifies law enforcement officers. It is located on Goff Road (off Route 352) in East Corning. In accordance with NYS Civil Service Law for the appointment of police officers, preference for acceptance will be given to applicants who are between 20 and 34 years of age.

26 credit hours of this program can be applied towards the completion of the Criminal Justice A.A.S. degree and 19 credit hours of this program can be applied towards the completion of the Criminal Justice A.S. degree.

<table>
<thead>
<tr>
<th>Program Requirements:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010, 1410)*</td>
<td>5</td>
</tr>
<tr>
<td>Sociology (SOCI 1010)</td>
<td>3</td>
</tr>
<tr>
<td>Criminal Justice</td>
<td>18</td>
</tr>
<tr>
<td>(CRJ 1010, 1540, 1550, 1560, 1570, 1580, 1590)</td>
<td></td>
</tr>
<tr>
<td>College Mathematics I (MATH 1015 or higher)*</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education (PFIT 1018)</td>
<td>3</td>
</tr>
<tr>
<td>Total hours</td>
<td>33</td>
</tr>
</tbody>
</table>

**Sample Sequence:** (intended as a guide for academic planning)

**First Semester**
- English (ENGL 1010) 3
- Sociology (SOCI 1010) 3
- Introduction to Criminal Justice (CRJ 1010) 3
- College Mathematics (MATH 1015 or higher) 3
- Physical Education (PFIT 1018) 3

**Second Semester**
- Police Physical Conditioning and Wellness (CRJ 1540) 2
- Laws of NY State (CRJ 1550) 3
- Police Basic Procedures (CRJ 1560) 3
- Police Community Interaction (CRJ 1570) 3
- Police Investigation (CRJ 1580) 3
- Police Certified First Responder (CRJ 1590) 2
- Police Report Writing (ENGL 1410) 2
Recreation Studies
Associate in Science Degree, Transfer program
Division of Professional Studies, Associate Dean Deborah Beall

The Recreation Studies A.S. degree is designed to enable students with interests in recreation, leisure, and outdoor education to transfer to most baccalaureate institutions with standing as a junior. The program outcomes emphasize both theory and practice. Its general education requirements in English, mathematics, lab sciences, social sciences, and humanities will provide students the required elements of a liberal arts education. Its core courses in recreation development and leadership are the elemental building blocks for further study in fields as varied as outdoor recreation, therapeutic recreation, or recreation management.

Graduates of this program will be able to:

- Identify the concepts of work, leisure, recreation, and play and the nature and diversity of each along with the importance of leisure as an essential element in the human experience;
- Have an understanding of risk management practices for recreational groups and be able to apply them in a camp program or setting and identify personal strengths and limitations in group leadership roles;
- Plan, organize, lead, and facilitate activities and program elements suited to camp, school, and other outdoor education units;
- Develop and refine an understanding of human values through experiential learning processes along with intervention plans for categories of risk such as education, substance abuse, crime and delinquency, teen pregnancy and others.

Careers in recreation involve planning, organizing activities in recreation areas, parks, community centers, religious organizations, camps, theme parks, and tourist attractions. Increasingly, recreation workers are found in businesses where they organize and direct leisure activities for employees. Inherent in Corning Community College’s mission is preparing students for a life of service to their professions and their communities in a global interdependent society. The recreation community is now being viewed as a key player in achieving important public policy objectives related to quality of life issues, economic development, and environmental responsibility.

Program Requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010 and 1020)*</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics (MATH 1215 or higher, MATH 1310)*</td>
<td>7</td>
</tr>
<tr>
<td>Social Sciences (PSYC 1101, PSYC 2215)</td>
<td>6</td>
</tr>
<tr>
<td>Laboratory Science (BIOL 1010, BIOL 1020)</td>
<td>6</td>
</tr>
<tr>
<td>Communications (SPCH 1080 or 1060)</td>
<td>3</td>
</tr>
<tr>
<td>Humanities (SIGN 1010 or SPAN 1010)</td>
<td>4</td>
</tr>
<tr>
<td>History (HIST 1110)</td>
<td>3</td>
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<tr>
<td>Free elective</td>
<td>3</td>
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</tbody>
</table>

Sample Sequence: (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.)

First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>English (ENGL 1010)</td>
<td>3</td>
</tr>
<tr>
<td>Laboratory Science (BIOL 1010)</td>
<td>3</td>
</tr>
<tr>
<td>Intro Recreation &amp; Leisure (REPD 1202)</td>
<td>3</td>
</tr>
<tr>
<td>Intro Psychology (PSYC 1101)</td>
<td>3</td>
</tr>
<tr>
<td>College Mathematics I (MATH 1215)</td>
<td>3</td>
</tr>
<tr>
<td>Recreation Activity Course (RECC)</td>
<td>1</td>
</tr>
</tbody>
</table>

Second Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1020)</td>
<td>3</td>
</tr>
<tr>
<td>Laboratory Science (BIOL 1020)</td>
<td>3</td>
</tr>
<tr>
<td>Elementary Statistics (MATH 1310)</td>
<td>4</td>
</tr>
<tr>
<td>Abnormal Psychology (PSYC 2215)</td>
<td>3</td>
</tr>
<tr>
<td>Youth at Risk (HUSR 1590)</td>
<td>3</td>
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Third Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wilderness First Responder (RECC1400)</td>
<td>5</td>
</tr>
<tr>
<td>Programming Planning (REPD 1503)</td>
<td>3</td>
</tr>
<tr>
<td>Computer Lit. &amp; Microcomputer Appl. (CSIT 1390)</td>
<td>4</td>
</tr>
<tr>
<td>Public Speaking (SPCH 1080 or 1060)</td>
<td>3</td>
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</tbody>
</table>

Fourth Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Ethics (PHIL 2200)</td>
<td>3</td>
</tr>
<tr>
<td>American History (HIST 1110)</td>
<td>3</td>
</tr>
<tr>
<td>Humanities (SIGN 1010 or SPAN 1010)</td>
<td>4</td>
</tr>
<tr>
<td>Recreation Leadership (REPD 1502)</td>
<td>3</td>
</tr>
<tr>
<td>Recreation Activity elective</td>
<td>1</td>
</tr>
<tr>
<td>Free elective</td>
<td>3</td>
</tr>
</tbody>
</table>

Footnotes:

**Health, Wellness, Physical Education and Recreation courses that are needed for the Wellness requirement are built into this program.

**Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and Math courses.
Teaching Assistant  
Certificate, Career program  
Division of Professional Studies, Associate Dean: Deborah Beall  
Department Chair: Julie Dick

This program is intended for students interested in becoming a Teaching Assistant Level III. The third-level certificate permits the holder to provide direct instructional services to students under the general supervision of a licensed or certified teacher.

Graduates will be expected to
- Demonstrate competence in the following areas: literacy instruction of all students, instruction of students with special needs, awareness and appreciation of a variety of learning styles and instructional methodology, support of math instruction and development of study skills with students.

All candidates for Certification are required to pass the New York State Assessment of Teaching Assistant Skills, offered through the NYS Department of Education. New York State law also requires that candidates for certification submit to a fingerprint supported criminal history background. Additionally, candidates for certification are required to complete two clock hours of coursework or training regarding the identification and reporting of suspected child abuse and maltreatment and two clock hours of coursework or training in school violence prevention and intervention. Training in the identification of child abuse and maltreatment can be obtained via a non-credit course offered by CCC, Professional Development (PDEV) 0011. The Level III certification is continuously valid with completion of the required professional development hours every five years.

**Program Requirements:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010)*</td>
<td>3</td>
</tr>
<tr>
<td>College Mathematics I (MATH 1215)*</td>
<td>3</td>
</tr>
<tr>
<td>Foundations of Education (EDUC 1010)</td>
<td>3</td>
</tr>
<tr>
<td>General Psychology (PSYC 1101)</td>
<td>3</td>
</tr>
<tr>
<td>Program Elective**</td>
<td>3</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child or Adolescent Psychology (PSYC 2207 or 2208)</td>
<td>3</td>
</tr>
<tr>
<td>Fieldwork and Seminar in Education (EDUC 1960)</td>
<td>3</td>
</tr>
<tr>
<td>Teaching in a Diverse Classroom (EDUC 2040)</td>
<td>3</td>
</tr>
<tr>
<td>Total hours</td>
<td>24</td>
</tr>
</tbody>
</table>

**Sample Sequence:** (intended as a guide for academic planning.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010)</td>
<td>Child or Adolescent Psychology (PSYC 2207 or 2208)</td>
</tr>
<tr>
<td>College Mathematics I (MATH 1215)</td>
<td>Fieldwork and Seminar in Education (EDUC 1960)</td>
</tr>
<tr>
<td>Foundations of Education (EDUC 1010)</td>
<td>Teaching in a Diverse Classroom (EDUC 2040)</td>
</tr>
<tr>
<td>General Psychology (PSYC 1101)</td>
<td>Program elective</td>
</tr>
</tbody>
</table>

Footnotes:
*Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and Math courses.

*All 24 credit hours of this program it into the program requirements for the Liberal Arts and Sciences: Childhood Education (Teacher Education Transfer) degree, Liberal Arts and Sciences: Education/Childhood Education degree, or the Liberal Arts and Sciences: Humanities and Social Sciences, AS degree allowing a student the opportunity to apply the credits earned in the certificate towards the completion of a two-year degree.

**Program electives: ECED 1524 (Language Development and Children), EDUC 1560 (Special Ed & Inclusive Classroom), FYEX 1000 (First Year Experience), SCIN 1110 (Physical Sciences), SCIN 1120 (Natural Sciences), MATH 1130 (Math for Elementary Teachers I), CSST 1031 (Introduction to Graphical User Interface [GUI]), BUOT 1062 (Word Processing for Non-Major), CSST 1051 (Introduction to Spreadsheets), or HUSR 1520 (Introduction to Differing Abilities).
Course Descriptions
Courses are listed alphabetically by subject prefixes and 4-digit numbers that indicate the course level. Generally numbers that begin with a 0 are non-credit or developmental courses and do not apply to a degree. Those that begin with a 1 are freshmen or first-year level courses; a 2 indicates a sophomore or second-year level course and usually has a prerequisite. See the program pages for program specific requirements. When a prerequisite is indicated, students who believe they have knowledge similar to the prerequisite may consult with the course instructor about registration.

New courses are continuously being added and some courses are being deleted from the curricula, so if a course is not listed in this catalog, students should consult the appropriate division to find a description. For more detailed information about a course, the course outline (syllabus) is available from the division secretary. Help in locating information about courses is also available from counselors, advisers, or Advising & Counseling Services.

Please note also that not every course is offered every semester. Fall and Spring are used to indicate when courses are normally offered. “ASN” identifies those courses not offered on a regular basis.

For more information on CCC’s non-credit course offerings contact our department of Workforce Education and Academic Pathways or visit https://www.corning-cc.edu/workforce

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Prefix</th>
<th>Discipline</th>
<th>Prefix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>ACCT</td>
<td>Humanities</td>
<td>HUMA</td>
</tr>
<tr>
<td>Anthropology</td>
<td>ANTH</td>
<td>Human Services</td>
<td>HUSR</td>
</tr>
<tr>
<td>Arabic</td>
<td>ARAB</td>
<td>Interdisciplinary</td>
<td>INTD</td>
</tr>
<tr>
<td>Architectural Drawing</td>
<td>TECH</td>
<td>Internship</td>
<td>ITRN</td>
</tr>
<tr>
<td>Art</td>
<td>ARTS</td>
<td>Italian</td>
<td>ITAL</td>
</tr>
<tr>
<td>Astronomy</td>
<td>ASTR</td>
<td>Latin</td>
<td>LATN</td>
</tr>
<tr>
<td>Auto Body</td>
<td>ABOD</td>
<td>Learning Skills</td>
<td>LEAR</td>
</tr>
<tr>
<td>Automotive</td>
<td>AUTO</td>
<td>Machine Technology</td>
<td>MACH</td>
</tr>
<tr>
<td>Biology</td>
<td>BIOL</td>
<td>Management</td>
<td>MGMT</td>
</tr>
<tr>
<td>Business</td>
<td>BUSN</td>
<td>Manufacturing Technology</td>
<td>MFGT</td>
</tr>
<tr>
<td>Career Planning</td>
<td>CRPL</td>
<td>Marketing</td>
<td>MKTG</td>
</tr>
<tr>
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# Course Categories Chart

How courses meet discipline electives

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<tr>
<th>Business</th>
<th>Accounting, Business, Computer, Computer Network, Computer Science, Management, Marketing, Office Administration, Hospitality.</th>
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<td></td>
<td><strong>Communications</strong> English, Media Communications, Speech, Theatre. <strong>Honors</strong> All courses with the HONS prefix. <strong>Humanities</strong> Art, Foreign Languages, Humanities, Media Communications, Music, Philosophy, Sign Language, Speech, Theatre, 2000-level English.</td>
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<td><strong>Laboratory Science</strong> Any Astronomy, Biology, Chemistry, Geology, Physics, and General Science courses which have laboratory experiences along with lectures.</td>
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<td><strong>Mathematics</strong> All courses with the MATH prefix. <strong>Science</strong> Includes all Laboratory Science and most General Science courses.</td>
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<td><strong>Social Sciences</strong> Anthropology, Economics, Geography, Government, History, Psychology, Sociology.</td>
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<td><strong>Wellness Requirement</strong> <strong>Awareness/Instructional</strong>: Health Education, Wellness. <strong>Activity</strong>: Physical Education, Recreation.</td>
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Equivalent Credit Courses: Equivalent credit courses are not used to satisfy degree requirements.
ABOD Auto Body
Division of STEM
Faculty: Chris Blackwell, Brad Knowlden

ABOD 1000 Auto Body Fundamentals
Basics of auto body repair business. Responsibilities of the shop and
employees. Basic paperwork, tools, and personnel responsibilities introduced.
Additional topics include customer relations, shop setup, and equipment.
Written project and verbal presentation required. (3 cr. hrs.) (Fall).

ABOD 1010 Auto Body I
Collision Blue-printing, panel replacement, straightening and alignment,
MIG, gas and spot welding, collision repair, and auto body tool
identification and operation. (4 cr. hrs.) (Fall, Spring). Lecture/laboratory.
Lab Fee. Auto body tools required.

ABOD 1020 Welding and Cutting
Different types of welding used to repair and assemble automobiles.
Cutting apart and welding a vehicle safely without causing undue damage
to the vehicle. Industrial welding procedures are also introduced. (4 cr.
hrs.) (Fall, Spring). Lecture/laboratory. Personal welding tools needed.

ABOD 1510 Auto Refinishing
Current refinishing techniques. Includes primers and finishes, surface
preparation, selection of tools, spraying and stripping techniques, safety
and environmental regulations. Application of solvent based paint. (4 cr.
hrs.) (Fall, Spring). Lecture/laboratory. Lab fee. Approved HVLP spray
gun required.

ABOD 2010 Hazardous Communications
The safe handling, storage, and disposal of hazardous chemicals. Shop
safety practices, personal safety, and environmental controls. “Right to
Know”, “Cradle to Grave” laws and Area Source Rule will be researched.
Written assignments required. (3 cr. hrs.) (Spring). Prerequisite: Eligible
to take ENGL 1010.

ABOD 2020 Automotive Components
Focuses on removal and replacement of doors, hoods, and other moveable
body components most usually affected in a collision. Course is a bridge
between auto body and auto mechanics. Many mechanical operations
are covered. (4 cr. hrs.) (Fall). Prerequisites: ABOD 1010, ABOD 1020.
Lecture/laboratory. Auto body tools required.

ABOD 2030 Minor Collision Repair
Focuses on metal bonding along with panel alignment and placement
and the repair of plastics and fiberglass. Use of body jacks introduced. (4 cr.
hrs.) (Fall). Prerequisites: ABOD 1020; AUTO 1090, 1540; MATH 1015.
Lecture/laboratory. Auto body tools required.

ABOD 2040 Damage Analysis and Estimation
Analyzing damage caused by a collision and estimating the cost to repair.
Includes observing and detecting all forms of vehicle damage. Primary,
secondary, direct, and indirect damage will be analyzed. Written and
verbal assignments. (3 cr. hrs.) (Fall). Prerequisite: MATH 1015.

ABOD 2050 Major Collision Repair
Straightening and repairing the frame system of a damaged automobile.
Topics also include suspension, alignment, and major metal components.
(4 cr. hrs.) (Spring). Prerequisites: ABOD 1010, 1020, 2030; MATH 1015.
Lecture/laboratory. Auto body tools required.

ABOD 2060 Production
Supervised field experience at an auto body business. Design and
implementation of student’s own auto body shop business plan.
Customers and businesses will supply projects and materials. This is a
Capstone course where students will log all educational and customer
relations activities, work schedules, and completed objectives. Air
conditioning and other mechanical operations are covered. (4 cr. hrs.)
(Spring). Prerequisites: MATH 1015, ABOD 2040; Co-requisite: ABOD
2050,ABOD 2070. Lecture/Laboratory.

ABOD 2070 Automotive Refinishing II
Paint blending for today’s automobiles. Analyzing color and its
relationship to the prime is the major focus. Water based refinishing
utilized. (4 cr. hrs.) (Spring). Prerequisites: ABOD 1510, AUTO 1000,
MATH 1015. Lecture/laboratory. Spray HLVP equipment required.

ABOD 2080 Advanced Auto Refinishing
Covers the custom refinishing with an airbrush. Includes analysis of
paint problems, demonstrations of custom processes such as pinstriping,
lettering, detailing scenes, flames, and graphics; selection of air brushes;
use of HVLP and touch-up spray guns; introduction of multi-state,
pearl and heavy metallic paints. (3 cr. hrs.) (Fall/Spring). Lecture/
demonstration. Air brushes and specialty tools mandatory.

ABOD 2110 Specialty Automotive Construction
How an automobile is constructed from the ground up. Covers all
necessary technology from suspension to paint. Projects will be
team efforts. Teamwork and leadership intensive. (3 cr. hrs.) (Fall).
Prerequisite: MATH 1015. Lecture/laboratory.

ABOD 2130 Automotive Glass Installation
Installation and safe removal of auto glass which is a growing sector
of the automotive industry. Attention to installation of structural glass
as a concern for passenger safety. (3 cr. hrs.) (Fall). Lecture/laboratory.
Special installation tools needed.

ACCT Accounting
Division of Professional Studies
Faculty: Thomas Owen, Barbara Squires

ACCT 1000 Accounting Practices
Vocabulary and concepts of accounting and bookkeeping for the small
business. Provides some knowledge of accounting for working in a
business environment and some skills to do the accounting in a small
business organization. (4 cr. hrs.) (Fall, Spring). Cannot be taken for
credit if credit has already been earned for ACCT 1030.

ACCT 1010 Microcomputer Bookkeeping
(New Course) The application of computerized general ledger accounting
software with emphasis on processing transactions and payroll, printing
reports, as well as managing both accounts receivable and accounts
payable. (1 cr. hr.) (ASN). Prerequisites: ACCT 1000 or ACCT 1030,
CSST 1031 or CSIT 1390. Students may not receive credit
for both ACCT 2100 and ACCT 1010.

ACCT 1030 Financial Accounting
Theories, principles and procedures related to financial or general
accounting. Generally accepted accounting principles as they relate to the valuation of assets and equities and
the measurement of accrual-based income. (4 cr. hrs.) (Fall, Spring). Prerequisite: Eligible to take ENGL 1010 and MATH 1015.

ACCT 1040 Managerial Accounting
Introduction to internal and manufacturing accounting: job order, process and standard costing. Includes cost behavior, cost-volume-profit analysis, operating budgets and capital budgeting techniques, cost allocations and statement of cash flows. (4 cr. hrs.) (Fall, Spring). Prerequisite: ACCT 1030

ACCT 1060 Fundamental Accounting Procedures
In-depth study of manual accounting procedures, preparation and analysis of the Statement of Cash Flows, as well as alternatives for making accrual and deferral adjustments, including merchandise inventory and closing entries. (2 cr. hrs.) (Spring). Prerequisites: ACCT 1030 and CSST 1051 or CSIT 1390.

ACCT 1100 Federal Income Tax
Current federal income tax law and its application to the individual taxpayer. Inclusions and exclusions to gross income, deductions, capital gains and losses and preparation of individual returns. (3 cr. hrs.) (ASN)

ACCT 2030 Intermediate Accounting I
Intensive study of generally accepted accounting principles. The accounting cycle; cash; receivables; inventories; property, plant and equipment; depreciation and compound interest. (4 cr. hrs.) (Fall). Prerequisite: ACCT 1030.

ACCT 2050 Cost Accounting
Cost accumulation and allocation procedures; cost terminology; tools for planning and control; cost-volume-profit analysis; job order and process systems, standard costing and variance analysis; JIT costing; budgeting; performance evaluation in various environments; ABC and capital budgeting. (4 cr. hrs.) (Spring). Prerequisite: ACCT 1040.

ACCT 2060 Fundamental Accounting Procedures
Primarily an applications course. A computerized general ledger system for general accounting and preparation of financial statements. Payroll accounting, including federal tax reporting requirements. (3 cr. hrs.) (Spring). Prerequisites: ACCT 1030 and CSST 1051. Lecture/laboratory.

ANTH Anthropology
Division of Humanities and Social Sciences

ANTH 2120 Cultural Anthropology
A holistic study of human variation and adaptation over time in a wide range of societies from nonliterate, nonindustrial communities, and modern non-Western cultures and indigenous peoples of the Americas. Focus includes kinship systems, economic arrangements, social control, religion and art. (3 cr. hrs.) (Fall, Spring). Prerequisite: Eligible to enroll in ENGL 1010. Upper-level course. Writing in content area. Meets SUNY General Education requirements in Other World Civilization and Social Sciences. Recommended for second-year students.

ARAB Arabic
Division of Humanities and Social Sciences
Faculty: Michael Beykirch

ARAB 1010 Elementary Modern Standard Arabic Conversation & Structure I
Modern standard Arabic vocabulary and expressions. Listening comprehension, speaking ability, and extensive practice in reading and writing the Arabic alphabet. (4 cr. hrs.) (ASN). Lecture/Recitation/Laboratory. Meets SUNY General Education requirement in Foreign Languages.

ARAB 1020 Elementary Modern Standard Arabic Conversation & Structure II
Additional practice in conversation, development of reading and writing skills, and a systematic study of modern standard Arabic grammar. (4 cr. hrs.) (ASN). Prerequisite: ARAB 1010 or equivalent. Lecture/Recitation/Laboratory. Meets SUNY General Education requirement in Foreign Languages.

ARTS Arts/History & Studio
Division of Humanities and Social Sciences
Faculty: Molly Cagwin, Fred Herbst, David Higgins

ARTS 1000 Essentials of Art
An introduction to the visual arts emphasizing the understanding and appreciation of art through a review of the elements and principles of art and design, as well as an examination of two- and three-dimensional art forms, methods and media. (3 cr. hrs.) Available through Accelerated College Education program. Meets General Education requirement in Humanities.

ARTS 1004 Introduction Art Appreciation
An introduction to art as a form of visual communication. Emphasis on historical, social, ethnic, and intellectual basis for creating art, as well as the relevance of art in contemporary culture. (1 cr. hr.) (ASN). Available for New York State teacher certification as required through GST-B.O.C.E.S. This course will NOT meet the Arts requirement for students intending to transfer to teacher education programs.

ARTS 1030 Drawing I
A beginning course employing a variety of media. Emphasis on development of visual perception and drawing ability through the study of shape, proportion, line, linear perspective, value and texture. Still-life, architectural and natural forms will be explored. (3 cr. hrs.) (Fall, Spring). Individual and group instruction; lecture/studio. Fee $25. Meets SUNY General Education requirement in the Arts.

ARTS 1210 Ceramics I
The nature of clay and its aesthetic potential for the creation of functional and decorative forms. Emphasis on hand building, wheel-throwing, clay making, glazing, kiln firing techniques, and maintaining a ceramic studio. (3 cr. hrs.) (Fall, Spring). Individual and group instruction; lecture/studio. Fee $40. Meets SUNY General Education requirement in The Arts.

ARTS 1220 Basic Black & White Photo
Basic theories and principles of black and white photography. Includes basic camera handling, photographic chemical preparation, 35 mm roll film processing, projection printing and controls, photographic lighting, and methods of using black and white film. (3 cr. hrs.) (ASN) Students
must supply their own camera and photographic supplies; rental cameras are available through the College. Darkroom facilities will be made available. Course enrollment is limited to a maximum of 15 students. Lecture/activity. Fee $50. Meets General Education requirement in the Arts.

ARTS 1310  Art History: Prehistoric to Medieval
Survey of representative works of art for increased aesthetic perception. Analysis of architecture, sculpture, and painting of western art history from Ancient Egyptian through the Middle Ages. (3 cr. hrs.) (Fall, Spring). Prerequisite: Eligible to take ENGL 1010. Writing in content area. Meets SUNY General Education requirements in Western Civilization or Humanities.

ARTS 1320  Art History: Renaissance to Modern
Representative works of architecture, painting and sculpture in Western art from the Renaissance to the present for increased aesthetic perception. (3 cr. hrs.) (Spring). Prerequisite: Eligible to take ENGL 1010. Writing in content area. Meets SUNY General Education requirements in Western Civilization or Humanities.

ARTS 1400  Introduction to Digital Art
An introduction to the concepts and tools of digital art. Commercial applications, such as Adobe Photoshop(R), will be used and demonstrated. The course provides experience in applying the principles of design, composition, color systems, and image manipulation. (3 cr. hrs.) (ASN) Lecture/Activity. Fee $25. Meets SUNY General Education requirement in The Arts.

ARTS 1410  Two-Dimensional Design
Studio investigation of design principles and elements of line, space, shape, value, texture, and color in two-dimensional form. Visual perception, creative insight, visual organization, and craftsmanship in a variety of media. (3 cr. hrs.) (Fall). Individual and group instruction; lecture/studio. Fee $25. Meets SUNY General Education requirement in the Arts.

ARTS 1420  Three-Dimensional Design
Studio investigation of design principles and elements of line, space, shape, value, texture, and color in three-dimensional form. Visual perception, creative insight, visual organization, and craftsmanship. (3 cr. hrs.) (Spring). Individual and group instruction; lecture/studio. Fee $25. Meets SUNY General Education requirements in The Arts.

ARTS 1440  Introduction to Graphic Design

ARTS 1450  Digital Photography

ARTS 1460  3D Rendering and Animation
(New Course) Introduction to the core concepts, principles, and practices of 3D rendering and animation in Autodesk 3D Studio Max. Explore the practical and aesthetic aspects of 3D modeling, rendering, texture mapping, lighting and camera controls, and animation techniques. (3 cr. hrs.) (Spring)

ARTS 1500  East Asian Art
A survey of the arts of China, Korea, and Japan. Topics include how different types of art are tied to and transformed by cultural factors. The distinctive aesthetic styles of East Asia will be explored in painting, sculpture, architecture and decorative arts. (3 cr. hrs.) (ASN). Prerequisite: Eligible to take ENGL 1010. Writing in content area. Meets SUNY General Education requirements in The Arts and Other World Civilizations.

ARTS 1505  Contemporary Craft History
A survey of the important themes, artists, and objects (including glass, ceramics, metalworking, fibers, woodworking, and textiles) of 20th century American craft. Social issues and historical factors affecting the evolution of contemporary craft production will also be examined. (3 cr. hrs.) (Fall, Spring). Prerequisite: ENGL1010.

ARTS 1670  American Art I
A survey of the visual arts of the Thirteen Colonies and the United States of America, 1674-1913 (from Colonial times to the Armory Show). Explores the influence of social and political issues on the painting, sculpture, crafts, and architecture of a growing nation. Emphasizes the thematic and chronological development of a distinctive cultural expression separate from, and occasionally in opposition to, European trends. Prerequisite: eligible to take English 1010. Writing in content area. Meets SUNY General Education requirement in the Arts.

ARTS 2030  Drawing II
Form and space relationships of effective visual composition. An expanded range of media and techniques. Still-life, architectural, portrait and landscape subjects will be explored. (3 cr. hrs.) (Spring). Prerequisite: ARTS 1030. Individual and group instruction; lecture/studio. Upper-level course. Fee $25. Meets General Education requirements in the Arts.

ARTS 2110  Painting I

ARTS 2120  Painting II
Further developing and expanding the fundamental objectives of painting. Emphasis on mastering composition and an expanded range of media and styles. Critical evaluation of paintings, past and present. (3 cr. hrs.) (ASN). Prerequisite: ARTS 2110. Individual and group instruction; lecture/studio. Upper-level course. Fee $40. Meets CCC General Education in the Arts.

ARTS 2210  Ceramics II
Advanced hand building and wheel-throwing techniques. Further investigation of creative design, compounding glazes and firing techniques (3 cr. hrs.) (Fall, Spring). Prerequisite: ARTS 1210. Individual and group instruction; lecture/studio. Upper-level course. Fee $40. Meets SUNY General Education requirements in the Arts.
ARTS 2220  Advanced Photographic Communications
An introduction to recent photographic history and theory. Advanced photographic printing and exhibition techniques will be emphasized, culminating in a public exhibition of student work. (3 cr. hrs.) (ASN). Prerequisites: ARTS 1220 and ENGL 1010 or equivalent experience with consent of the Instructor. Lecture/activity. Upper-level course. Students must have their own cameras and photographic supplies; rental cameras are available through the College. Darkroom facilities will be made available. Fee $50.

ARTS 2540  Intro to Graphic Design II
Advanced projects in graphic design with an emphasis on building a portfolio for employment or transfer. Projects will be based on real world professional design problems. Stylistic and aesthetic issues will be stressed. (3 cr. hrs.) (ASN). Prerequisite: ARTS 1440. Upper-level course. Fee $25.

ARTS 2550  Web Design
Practical and aesthetic aspects of design for the Internet. Includes navigation, usability, complex layout techniques, typography, GIF animation, rollovers, and other effects. (3 cr. hrs.) (ASN). Prerequisite: ARTS 1440 or CSWT 1041. Upper-level course. Fee $25.

ARTS 2620  Ceramic Sculpture
Sculptural concept and communication. The development of understanding and creation of aesthetic formal organizations of three-dimensional space and matter. Studio problems in clay modeling techniques of sculpture construction, carving, and casting. (3 cr. hrs.) (ASN). Prerequisite: ARTS 1210 or 1420. Upper-level course. Fee $30. Meets CCC General Education requirement in the Arts.

ARTS 2990  Independent Studio Projects
Advanced studio projects based on the student’s experience in a studio discipline. Time and nature of the project will be determined by the student and the instructor of each discipline involved. (3 cr. hrs.) (Fall, Spring). Prerequisite: Highest course in the specific area of interest and only with instructor consent. Upper-level course. Specially-supervised independent study. May be taken in each discipline for credit and repeated as an audit. Fee $20.

ARTS Astronomy
Division of STEM
Faculty: Deborah Dann

ASTR 1010  Elements of Astronomy
The nature of stars as individuals and as groups. Astronomical instruments, the sun, stellar evolution, recent developments in astronomy (black holes, quasars, etc.), a survey of the solar system. Use of the College Observatory. (3 cr. hrs.) (Spring). Prerequisite: Math 1015, eligible to take ENGL 1010, satisfactory completion of all reading skills placements. Lecture/laboratory. Writing in content area. Designed for non-science majors to fulfill laboratory science requirements and for science majors as a free elective. Lab fee. Meets SUNY General Education requirement in Natural Sciences.

ASTR 1020  The Solar System
Introduction to the evolution and properties of the planets, asteroids, comets, and other members of the solar system; includes a historical review of models of the solar system. (3 cr. hrs.) (Fall). Prerequisite: Math 1015, eligible to take ENGL 1010, satisfactory completion of all reading skills placements. Lecture/laboratory/observatory.

ASTR 1030  Observational Astronomy
Constellation identification, photography, observation of planets and deep sky objects, planning and conducting observatory sessions for visiting groups. Optional activities include planetarium and observatory field trips. (1 cr. hr.) (ASN). Lectures/observations. One night each week in the laboratory or at the Observatory, weather permitting.

AUTO Automotive
Division of STEM
Note: All AUTO Labs require a valid driver’s license and tools. Please see “Min Required Tool List” found at the College Store, Appendix in the catalog, or an Automotive Technology Adviser.
Faculty:Chris Blackwell, Brain Halm, Barry Pappas, Jason Stanbro

AUTO 1000  Auto Lab I
First of a four-semester sequence of lab and lecture courses. Includes safety practices, symptom analysis, inspection, testing and servicing, and systems inter-relationships. Written project and oral presentation required. (3 cr. hrs.) (Fall). Laboratory. Fee $50.

AUTO 1010  Introduction to Automotive Technology
First of a four-semester sequence of lab and lecture courses. Introduces safety practices, symptom analysis, inspection, testing and servicing, and systems inter-relationships. Written project and oral presentation required. (3 cr. hrs.) (Spring). Co-requisite: AUTO 1540. Lecture. Course Fee $38.

AUTO 1090  Automotive Chassis
Suspension systems; chassis designs including cars and light trucks; operation and repair procedures for all brakes including ABS systems, steering and air conditioning; four-wheel alignment theory and practice. Written project and oral presentation required. (3 cr. hrs.) (Spring). Co-requisite: AUTO 1540. Lecture. Course Fee $38.

AUTO 1100  Basic Automotive Tune-Up
Working safety, use of shop manuals, the four-cycle engine, the ignition system, automotive safety check, automotive tune-up principles and procedures, and auto emission testing. (1 cr. hr.) (ASN). Lecture/laboratory. Offered evenings only. Not open to auto majors for credit. Lab fee.

AUTO 1410  Automotive Electronics I
Basic electrical and circuit concepts in automotive systems. Included are diagrams, charging system, starting and ignition systems, lighting and accessories. (4 cr. hrs.) (Fall). Lecture/laboratory. Lab fee.

AUTO 1420  Fuel Systems I
The study of automotive fuel, fuel storage, and fuel delivery systems used by major manufacturers. Diagnosis and testing of associated components. (4 cr. hrs.) (Fall). Lecture/laboratory. Lab fee.

AUTO 1510  Automotive Electronics II
AUTO 1520  Fuel Systems II
Automotive engine emissions and the control of those emissions as used by manufacturers. Diagnosis and testing of related components. (4 cr. hrs.) (Spring) Prerequisite: AUTO 1420. Lecture/laboratory. Lab fee.

AUTO 1540  Chassis and Alignment Lab
Service and analysis of the automotive chassis, brake service including anti-lock systems, front and rear steering and suspension component replacement, four-wheel alignments, basic air conditioning operations. (4 cr. hrs.) (Spring). Prerequisite: AUTO 1000. Co-requisite: AUTO 1090 unless in the Auto Body Collision Repair program. Laboratory. Lab fee.

AUTO 1580  Electronic Braking Systems
Analyzes major anti-lock brake systems, system design and diagnostic techniques, hydraulics and brake fundamentals. Theoretical discussions supplemented with system demonstrations. (3 cr. hrs.) (ASN).

AUTO 2130  Internal Combustion Engine
Theory of gas engine operation, cooling and lubrication systems, material selection, measurement and component function and design. Lab consists of problem diagnosis, major engine repair, and performance testing. (4 cr. hrs.) (Fall). Prerequisite: AUTO 1510. Lecture/laboratory. Lab fee.

AUTO 2140  Automotive Practicum
Field experience in Automotive Service. A supervised 12-hour-per-week work session at an established automotive repair business. Students keep a log of all educational activities, work schedule, and completed objectives. Provides an understanding of the organizational structure of an automotive service business. (4 cr. hrs.) (Spring). Prerequisite: AUTO 2190. Lecture/laboratory. On-the-job-training.

AUTO 2190  Electronic Engine Controls
An intensive study of the most popular foreign and domestic electronic engine timing and fuel control systems. Classroom instruction is augmented by laboratory diagnosis and testing of specific systems. (4 cr. hrs.) (Fall). Prerequisite: AUTO 1510. Lecture/laboratory. Fee $50.

AUTO 2210  Power Transmissions
Operation and repair of differentials, standard and automatic transmissions and transaxles. Power flow, hydraulic circuitry, diagnostic troubleshooting and overhaul. (4 cr. hrs.) (Fall). Prerequisite: AUTO 1090 and 1540. Lecture/laboratory. Lab fee.

AUTO 2960  Drivability
Practical instructions and general procedures for testing and servicing automobile systems used by major manufacturers. Diagnosis of drivability complaints associated with these systems emphasized. Customer relations issues will be addressed using written and oral presentations. (4 cr. hrs.) (Spring) Prerequisites: AUTO 1520, 1540, 2190. Lecture/laboratory. Lab fee.

BIOL 1020  Introduction to Biology-Animal
Surveys the animal kingdom with emphasis on diversity, complexity, ecology and sustainability. Emphasizes human biology, including organ systems and genetics. Designed for the non-major. (3 cr. hrs.) (Spring, Summer). Prerequisite: Eligible to take ENGL 1010. Lecture/laboratory. Lab fee. Meets SUNY General Education requirement in Natural Science.

BIOL 1030  Introduction to Environmental Science and Sustainability
Students learn the interrelationships between humans and their environment by exploring the effects of the environment on organisms as well as sustainable solutions in the context of people, the planet, and profits. Topics include human population, biodiversity, ecosystem services, energy use, global climate trends, and food and water security. (3 cr. hrs.) (Summer). Prerequisite: Eligible to take ENGL 1010. For non-science majors only. Lecture/laboratory. Meets SUNY General Education requirement in Natural Sciences.

BIOL 1050  Introduction to Human Biology
Covers body chemistry, the organ systems, human genetics, and human ecology. Laboratory offers but does not require vertebrate dissection. Alternates to dissection are available. (3 cr. hrs.) (Fall, Summer). Prerequisite: Eligible to take ENGL 1010 and satisfactory completion of all math skills placements. Not recommended for Chemical Technology, Mathematics/Science, or Elementary Education students. Lecture laboratory. Lab fee. Meets SUNY General Education requirements in Natural Sciences.

BIOL 1060  Introduction to Biology - Food Science
Surveys basic biological principles with an emphasis on food science. Includes the characteristics and diversity of life, food requirements of the human body, environmental impact of food production, food resources, and sustainability issues. Laboratory activities reinforce relationships between biological principles and food. Designed for non-majors. (3 cr. hrs.) (Fall). Prerequisite: Eligible to take ENGL 1010. Lecture/laboratory. Lab fee. Meets CCC General Education requirement in Natural Sciences.

BIOL 1070  Botany for Gardeners
(New Course) The principles of plant biology, including growth, development, life cycles, nutrient requirements, and genetics, and its application to agriculture and food production. Conventional and organic methods used to cultivate soil fertility and prevent plant predation and disease as way to promote human and environmental sustainability. Includes maintaining garden plots at Spencer Crest Nature Center. (3 cr. hrs.) Prerequisite: eligible to take ENGL 1010. Lecture/laboratory. Lab fee. (Summer).

BIOL 1120  Principles of Anatomy & Physiology I
(New Course) Presents an introduction to Anatomy and Physiology including body organization, biochemistry, cells, genetics, integumentary, skeletal, muscular, and nervous systems. Laboratory includes the dissection of preserved mammal organs. This course is designed for nurses, physical education students and assistant level health care fields. This course is not recommended for science majors. (4 cr. hrs.) (Fall, Summer). Prerequisites: high school biology and chemistry with a grade of 75% or higher or college biology and chemistry. Eligible to take ENGL 1010 and MATH 1015 or higher. Lecture/laboratory. Lab fee.
BIOL 1220  Principles of Anatomy & Physiology II  
(New Course)  Presents an introduction to Anatomy and Physiology including the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive systems. Laboratory includes the dissection of preserved mammal organs and fetal pig. This course is designed for nurses, physical education students and assistant level health care fields. This course is not recommended for science majors. (3 cr. hrs.) (Spring, Summer). Prerequisites: BIOL 1210. Lecture/laboratory. Lab fee.

BIOL 1500  Environmental Science  
Interrelationships between organisms and the environment. The impact of human activities such as pollution, resource use and population growth is studied. Basic ecological concepts provide a foundation for understanding environmental problems and global change. Labs will illustrate the complexity associated with environmental change and emphasize sustainability. Laboratory includes the observation of plants, algae, bacteria and animals. (4 cr. hrs.) (Fall) Prerequisite: Eligible to take ENGL 1010, satisfactory completion of all math skills placements, high school biology or one semester of college biology. Lab Fee. Meets SUNY General Education requirement in Natural Sciences.

BIOL 1510  General Biology I  
Emphasizes the modern aspects of biology and its techniques. Includes biochemistry, cell structure and physiology, genetic mechanisms, a survey of the three domains of organisms, and plant structure and physiology. For math/science students. (4 cr. hrs.) (Fall) Prerequisite: Eligible to take ENGL 1010, 75% or higher in high school biology and high school chemistry or 75% or higher in high school biology and concurrent enrollment in CHEM 1010 or 1020. Successful completion of any 3 or 4 credit college biology course may substitute for high school biology. Lecture/laboratory. Lab fee. Meets SUNY General Education in Natural Sciences.

BIOL 1520  General Biology II  
Emphasizes the modern aspects of biology and its techniques. Includes evolution, animal diversity, human and animal anatomy/physiology, animal behavior, reproduction and development, and ecology. For math/science students. Laboratory requires dissection of a preserved fetal pig and various vertebrate organs, as well as the use of living invertebrates and fish. (4 cr. hrs.) (Spring). Prerequisite: BIOL 1510, eligible to take ENGL 1010, 75% or higher in high school biology and high school chemistry or 75% or higher in high school biology and concurrent enrollment in CHEM 1010 or 1020. Successful completion of any 3 or 4 credit college biology course may substitute for high school biology. Lecture/laboratory. Lab fee. Meets SUNY General Education requirement in Natural Sciences.

BIOL 1550  History of Biological Ideas (Honors)  
An introduction to the history of some major themes in biology. Includes research, discussion, and analysis of the development of major underlying themes and concepts in biology. Areas covered may include anatomy/physiology, medicine, genetics, evolution, and microbiology. (3 cr. hrs.) (Spring) Prerequisite: ENGL 1010 and either one year of college biology or one semester of college Biology and instructor consent. Lecture, readings, discussions, and presentations. Does not satisfy lab science requirements.

BIOL 1560  Current Issues in the Life Sciences (Honors)  
This course will explore and analyze many of the current issues and controversies that involve the various life sciences, with the goal of getting students to critically think about these issues, develop and defend personal positions, and understand the science behind them. The course is divided into four broad modules: the nature of science, health, society, & medicine, genetics & molecular biology, and environmental science & sustainability. It includes research, discussion, analysis, and presentations. (3 cr. hrs.) (Fall). Prerequisite: ENGL 1010 and either one year of college biology or one semester of college biology and instructor consent. Lecture, readings, discussions, and presentations. Does not satisfy lab science requirements.

BIOL 2010  Microbiology  
A study of bacteria, fungi, viruses, and protozoans. Emphasizes the anatomical, cultural, physiological, and reproductive characteristics of true bacteria and practical applications of microbiology including aspects of disease. Various techniques and procedures used in microbiology labs including, culture, enumeration, and identification. (4 cr.hrs.) (Fall). Prerequisite: One year of college biology courses numbered 1200 or higher OR one semester of college biology courses numbered 1200 or higher and one semester of college chemistry OR BIOL 1210 with a C or better. Lecture/laboratory. Lab fee. Meets SUNY General Education requirement in Natural Science.

BIOL 2012  Microbiology Lecture  
Lecture only portion of Microbiology. A study of bacteria, fungi, viruses, and protozoan. Emphasizes the anatomical, cultural, physiological, and reproductive characteristics of true bacteria and practical applications of microbiology including aspects of disease. Various techniques and procedures used in microbiology labs including, culture, enumeration, and identification. (3 cr. hrs.) (Fall). Prerequisite: One year of college biology courses numbered 1200 or higher OR one semester of college biology courses numbered 1200 or higher and one semester of college chemistry. Lecture. Meets SUNY General Education requirement in Natural Science.

BIOL 2020  Human Anatomy & Physiology I  
This course is designed for science majors, the allied health professions (radiology, physical therapy, occupational/exercise/respiratory therapy, athletic trainer, tomography, etc.) and students planning on earning advanced degrees (MD, DO, DC, DDS, PhD, pharmacy). A detailed study of the human body: it’s chemical, molecular, cellular, genetic and tissue components: skeletal and muscular structure and function; nervous system, neural control mechanisms; and sensory pathways and structures. Laboratory requires microscopy, dissection of a preserved cat cadaver and various vertebrate organs. (4 cr. hrs.) (Fall). Prerequisites: two college biology classes. Lecture/Laboratory. Lab Fee. Student is recommended to take CHEM 1020 or equivalent.

BIOL 2030  Human Anatomy & Physiology II  
This course is designed for science majors, the allied health professions (radiology, physical therapy, occupational/exercise/respiratory therapy, athletic trainer, tomography, etc.) and students planning on earning advanced degrees (MD, DO, DC, DDS, PhD, pharmacy). Continuing from BIOL 2020, BIOL 2030 is a detailed study of the structure and function of the human endocrine, digestive, respiratory, cardiovascular, excretory, and reproductive systems. Laboratory requires microscopy, dissection of a preserved cat cadaver, various vertebrate organs and physiology lab exercises. (4 cr. hrs.) (Spring). Prerequisite: BIOL 2020. Lecture/laboratory. Lab fee.

BIOL 2040  Ecology  
Examines the relationship between organisms and their environment with special attention paid to the concepts of species interaction, biodiversity, competition, predation, animal behavior, adaptation and sustainability. Populations, communities, ecosystems and the biosphere will also be studied. Students will have the opportunity to explore topics and areas of ecology that are of interest to them. Laboratory includes the study of ponds, streams, forests and cemeteries, as well as the use of live
invertebrates. (4 cr. hrs.) (Fall). Prerequisite: One year of college biology.
Lab fee.

**BIOL 2050 Cell Biology**
(New Course) Introduction to the molecular mechanisms of eukaryotic cell function. Topics include biochemistry of the cell, bioenergetics and catalysis, the sub-cellular organelles, intracellular transport, intercellular communication, and cell growth and division. Laboratory exercises will complement these topics by utilizing current techniques in molecular cell biology. (4 cr. hrs.) (Fall) Prerequisite: One year of College Biology. Lecture/laboratory. Lab fee.

**BIOL 2060 Genetics**
Presents an introduction to modern genetics, including the transmission of hereditary information; DNA structure and replication, gene expression and regulation, mutation, DNA repair, and population genetics. Laboratory exercises complement these topics utilizing current techniques in molecular biology. (4 cr. hrs.) (Spring). Lecture/laboratory. May not be substituted for BIOL 1520. Lab fee. Prerequisite: Any two college biology courses. One college chemistry course recommended.

**BIOL 2080 Evolution**
Examines the basic concepts of evolution, including natural selection, significance of behavior, and sexual reproduction, adaptation, speciation, and the history of life on earth. The historical framework of evolutionary thought, as well as modern aspects and applications of the theory, will be studied and discussed. Students will be able to explore topics and areas of evolution that are of special interest to them. (3 cr. hrs.) (Spring). Prerequisite: One year of college biology or instructor consent. Lecture only. Fulfills upper-level science requirements. Does not satisfy lab science requirements.

**BUOT Business/Office Technology**
Division of Professional Studies  Note: The following courses may be taught in a simulated office environment.
Faculty: Deborah Dunbar, Angela Hennessy.

**BUOT 1010 Foundations for Word Processing**
Introduces touch-typing skills, speed development, beginning word processing, and proofreading using software packages on the computer within the framework of an office environment. (3 cr. hrs.) (Fall, Spring). Lecture/Laboratory. Recommended for students who are preparing for employment in office technology and others who want a good foundation in keyboarding and word processing.

**BUOT 1061 Computer Keyboarding**
Touch typing on computer keyboards to obtain a general proficiency level. (1 cr. hr.) (ASN). Lecture/laboratory. Not recommended for students who need a good foundation in keyboarding and word processing.

**BUOT 1062 Word Processing for Non-Major**
Using microcomputer word processing software for basic word processing functions including editing, formatting, indenting, columns, tables and document enhancements. (1 cr. hr.) (Fall, Spring). Laboratory.

**BUOT 1101 Introduction to Desktop Publishing**
Use of microcomputer and current application software to introduce the elements of graphic design. Concepts include graphic and text organizers, text blocks, headlines, margins, columns, white space, fonts, and graphic images. (1 cr. hr.) (ASN). Prerequisite: BUOT 1091.

**BUOT 1520 Intermediate Word Processing**
Continued development of speed building within the intermediate and advanced word processing skills such as merging documents, desktop publishing, graphic design, and newsletter layout. Students are required to master proofreading techniques and continue to develop professionalism in researching, writing, presenting and supervising. (3 cr. hrs.) (ASN). Prerequisite: BUOT 1010. Lecture/laboratory.

**BUOT 2010 Office Procedures**
Enhancing personal/professional skills while learning concepts of information management; meetings, conference, and travel arrangements; financial and legal functions; telephone techniques; and records management. Capstone course for students preparing for a career in office technology. (3 cr. hrs.) (ASN). Prerequisites: BUOT 1520. Lecture/laboratory.

**BUOT 2100 Legal Office Procedures**
(New Course) Introduces students to the legal office environment and the tasks and duties performed by a legal secretary. Emphasis is placed on law office organization, file management, client interaction, document formatting, recordkeeping, and legal research. (3 cr. hrs.) (Fall, Spring). Prerequisite: BUOT 1010. Lecture/Laboratory.

**BUOT 2120 Procedural Law for Legal Professional**
(New Course) Provides an overview of the various areas of procedural law for the more generalized knowledge a legal assistant needs. Emphasis is placed on the rights and duties of individuals and entities in the different legal areas (contract law, criminal law, accident law, law of wills, etc.) as well as the responsibilities of the legal assistant in each of these areas. Statutes and cases, the two main sources of procedural law, and the difference between state and federal law and when each is used in a case in a law office are discussed. (3 cr. hrs.) (Fall). Prerequisite: BUOT 1010. Lecture/Laboratory.

**BUOT 2130 Legal Assistant Studies**
(New Course) Presents an overview of the structure and functions of the law office and provides an opportunity to learn about the responsibilities of various law office employees. Different specialty areas of law are explored in depth and practical problems encountered in a law office are reviewed. Trial procedures are discussed. Emphasis is placed on the administrative responsibilities of the law office, including preparing legal correspondence and documents, compiling evidence for trial, and using the computer and Internet. (3 cr. hrs.) (Spring). Prerequisite: BUOT 1010, BUOT 2100, BUOT 2120. Lecture/Laboratory.

**BUOT 2700 Medical Machine Transcription I**
This is a beginning medical transcription course designed to provide students with a working knowledge of the transcription of medical records along with developing the skills to help understand and use medical language. (3 cr. hrs.) Prerequisite: BUOT 1061, BUOT 1010, or Medical Keyboarding.

**BUOT 2710 Medical Machine Transcription II**
This is an advanced medical transcription course designed to build on the foundation laid in Machine Transcription I and to bridge the gap between the typically easy-to-understand dictation in the beginning transcription course and the difficult dictation heard in the work environment of a medical transcriptionist. (3 cr. hrs.) (ASN). Prerequisite: BUOT 2700 and either BUOT 1061 or BUOT 1010.
BUOT 2730  Medical Insurance and Billing
Introduces the basics of medical insurance, including insurance terminology, medical coding systems, government and private payer health care claims and general insurance procedures. (3 cr. hrs.) (ASN) BUOT 2740  Medical Coding I Teaches the structure and conventions of ICD-9-CM and CPT, the correct process for selected codes, and the types of coding errors to be avoided. (3 cr. hrs.) (ASN) Prerequisite: BUOT 2730.

BUOT 2745  Medical Coding II
(New Course) Teaches the structure and conventions of hospital and dental billing methods. (3 cr. hrs.) (ASN). Prerequisite: BUOT 2730 and BUOT 2740.

BUOT 2750  Computer Reports in the Medical Office
This course is designed to introduce the student to appropriate terminology and skills in order to use any patient billing software programs. (3 cr. hrs.) (ASN).

BUOT 2755  Law & Ethics for Medical Career
(New Course) Introduces the student to the legal principles and ethical issues affecting all healthcare professionals in the United States. The role of the allied healthcare professional will be emphasized throughout the course. (3 cr. hrs.) (ASN).

BUOT 2760  Medical Administrative Procedures I
(New Course) Introduces the medical office environment and the tasks and duties performed by a medical secretary. Emphasis is placed on patient interaction, scheduling appointments, filling out insurance paperwork, creating and updating patients’ medical records using an electronic health records system, handling correspondence and maintaining billing records. (3 cr. hrs.) (ASN) Lecture/Laboratory.

BUOT 2765  Medical Administrative Procedures II
(New Course) Simulation exercises will be used in this course to resume the students’ experience to the medical office environment and the tasks and duties performed by a medical secretary. Emphasis will continue to be placed on patient interaction, scheduling appointments, filling out insurance paperwork, creating and updating patients; medical records using an electronic health records system, handling correspondence and maintaining billing records. (3 cr. hrs.) (ASN) Lecture/Laboratory.

BUOT 2770  Medical Transcription
Practical experience transcribing various medical reports. (2 cr. hrs.) (ASN). Prerequisite: BUOT 2760.

BUOT 2780  Medical Office Procedures
Trains for administrative duties in a medical office. Some of these duties include scheduling patients, using good telephone skills, understanding medical compliance programs, confidentiality issues, as well as record management and retention. (3 cr. hrs.) (ASN) Prerequisites: BUOT 1062 and CSST 1051.

BUOT 2800  ICD-9-CM/PCS Coding
(New Course) Teaches the structure and conventions of ICD-9-CM/PCS, the correct process for selected codes, and types of coding errors to be avoided. Students will possess entry-level competency using CPT coding systems. Main Related Program(s): AAS Business Administration, Medical Coding and Billing Specialist. (3 cr. hrs.) (ASN).

BUOT 2960  Office Technology Practicum
On-the-job training in business or industry. The practicum experience is a minimum of 180 hours and includes a weekly on-campus seminar used for discussion of the practicum experiences, assessment of learning, and leadership training. (4 cr. hrs.) (ASN). Prerequisite: 2.0 program GPA and prerequisite or co-requisite BUOT 2010.

BUSN 1003  Personal Budgeting
Introduction to personal budgeting, including budget preparation and analysis, understanding credit reporting agency procedures and credit reports, overview of what types of credit, effective credit card use, and establishing financial goals. (.5 cr. hr.) (ASN).

BUSN 1021  New Venture Creation
Starting a new business, understanding who entrepreneurs are, seeking and evaluating opportunities for new ventures, and gathering resources to convert those opportunities into business. (3 cr. hrs.) (ASN).

BUSN 1030  Business Communications
Effective techniques for oral and written communications. Analyzing and writing letters, memos, and business reports. Proficiency in language mechanics will be assessed. (3 cr. hrs.) (Fall, Spring).

BUSN 1033  Applied Business Mathematics
The four arithmetic processes and the algebra of business. Application of mathematics to typical business problems. Taxes, insurance, payroll, depreciation, trade and cash discounts, markup, simple interest and bank discounts, and financial statement analysis. (3 cr. hrs.) (Fall, Spring) Prerequisite: Placement in MATH 1015 or higher.

BUSN 1040  Principles of Business
Survey of and introduction to economics, marketing, management, labor relations, finance, accounting, business law and related topics. Nature of organization and operation of American business. (3 cr. hrs.) (Fall, Spring).

BUSN 1055  Professionalism
Understanding of individual and workplace needs as they relate to professionalism, team building, and career growth. Topic areas include human relations, business ethics, business etiquette, team building concepts, and career enrichment. (3 cr. hrs.) (Fall, Spring). Discussion/ participation and role-playing exercises. May be taught in a simulated work environment.

BUSN 1060  Customer Service & Relationship Management
Helps students define customer service standards for the organization and the individual, develop skills for listening and calming oneself and others, explore options for resolving issues with realistic expectations and gain techniques to maintain perspective and equilibrium. (3 cr. hrs.) (ASN).
BUSB 1100 Business Applications and Solutions  
(New course) Communication, decision making, and critical thinking facilitated by the use of software using online tools and word processing, spreadsheets, presentations and databases in a simulated business environment to support other required business courses. (3 cr. hrs.) (ASN)

BUSB 1230 Personal Law  
Survey of the laws affecting common legal problems of consumers and households. Topics include: hiring a lawyer; the court systems and procedures; small claims court procedures; family law; landlord/tenant; buying a home; estate planning; and other topics as time permits. (3 cr. hrs.) (ASN).

BUSB 1231 Business Law I  
Introduction to the American legal system and specific topics that affect business conduct. Includes legal terminology, the court systems and civil procedures, business ethic, tort law, criminal law, intellectual property and computer law, common law contract, and other topics as time permits. (3 cr. hrs.) (Fall, Spring) Prerequisite: Eligible to take ENGL 1010.

BUSB 1232 Business Law II  
Upper-level course covering the modern statutory and common law regulation of business relationships and transactions. Includes the Uniform Commercial Code topics of sales, secured transactions, commercial paper/banking, business organizations, bankruptcy, agency and accountant liability. (3 cr. hrs.) (Fall, Spring) Prerequisite: Eligible to take ENGL 1010.

BUSB 2002 Insurance Property & Casualty  
New York State insurance regulations, duties of agents and brokers, types of coverage, and compensation. For prospective brokers, agents and others who wish to take the New York State Insurance Brokers and/or Agents Exam. (8 cr. hrs.) (ASN). Offered evenings only; preparation for Broker’s examination.

BUSB 2020 Personal Finance  
Basic areas of personal finance, such as banking, home financing, insurance, investments, credit financing, and retirement planning. (3 cr. hrs.) (ASN).

BUSB 2035 Principles of Finance  
The basic principles of business finance. Types of business organizations; instruments of credit and finance; short, intermediate and long-term financing; analysis of financial statements; forecasting; budgeting. (2 cr. hrs.) (ASN). Prerequisite: ACCT 1030, 1040.

BUSB 2040 Principles of Investment  
Securities as they impact the financial marketplace. General securities, fixed income investments, municipals, mutual funds, options, margins, the Federal Reserve, and taxation of investments. (3 cr. hrs.) (ASN).

BUSB 2048 Real Estate Brokers  
Operation of real estate broker’s office, agency law, appraisal, construction, leases, and other content required by New York State. (3 cr. hrs.) (ASN). Prerequisite: BUSN 2047. A continuation of the educational requirements for a New York State broker’s license. Offered evenings only.

BUSB 2053 Business Statistics & Data Analysis  
The application of basic statistical methods to business problems. Studies include the assembling of statistical data, sampling techniques, measures of central tendency, dispersion, regression and correlation analysis, hypothesis testing, and probability theory. A statistical software package for data analysis will be utilized throughout the course for presentation and student project work. (4 cr. hrs.) (Fall, Spring). Prerequisite: MATH 1015. CSST 1051 strongly recommended.

BUSB 2960 Field Experience  
Supervised work program in business or industry. The work assignment selected according to the student’s vocational goals. The student attends one class per week and submits a final report indicating the application of classroom learning to on-the-job experiences. Student will be evaluated by his or her employer. (1 cr. hr.) (ASN). Prerequisite: Associate Dean’s or instructor’s consent.

BUSB 2970 Business Management Internship  
(New Course) Capstone course to provide management students the opportunity for experiential learning combined with utilization of Microsoft Project software. Students will be required to complete a minimum of 40 hours of field experience in a local business. The field experience may consist of software instruction and application exercises, case study analysis, simulations and development of work teams. The classroom portion of the course is analyzed and evaluated through the completion of a portfolio that students develop as the semester progresses. At the end of the course, students complete a final presentation. (3 cr. hrs.) (ASN). Prerequisite: ENGL 1010, MGMT 2041, MGMT 2047, BUSN 1040, BUSN 1055, CSIT 1390 or BUOT 1062/CSST 1091, and Associate Dean of Business or instructor consent. This course is a combination of seminar and field experience and may be team taught.

CADD Computing Graphics  
Division of STEM  
Faculty: Dale Crandall, John Longwell

CADD 1700 Computer Aided Drafting I  
Introduction to computer aided design (CAD) techniques. Teaches commands necessary to generate basic three dimensional part models, assemblies and two-dimensional engineering drawings through use of a computer using the solid modeling program, Solid Works. (3 cr. hrs.) (Fall, Spring).Lecture/graphics terminal lab. Lab fee.

CADD 2710 Computer Aided Drafting II  
Advanced computer aided design (CAD) techniques. Students utilize the solid modeling program, Solid Works, to generate three-dimensional parametric models assemblies and drawings. Topics include weldments, sheet metal parts, surfacing, motion simulation and mold tools. Students also utilize a laser interferometer (3D Laser Scanner) for reverse engineering and a fused deposition 3D Platter for Rapid Prototyping their designs. (3 cr. hrs.) (Spring). Prerequisite: CADD 1700. Lecture/graphics terminal lab. Lab fee.

CHEM Chemistry  
Division of STEM  
Faculty: William Jarvis, Kamesh Narasimhan, Ruth Wenner

CHEM 1010 Chemical Principles  
Introductory general chemistry emphasizing applied theory, problem solving, unit-conversion, lab skills. (4 cr. hrs.) (Fall, Spring) Prerequisite: MATH 1015 or equivalent, eligible to take ENGL 1010. Not recommended for math/science students. Lab fee. Meets SUNY General Education requirement in Natural Sciences.
CHEM 1020  Introduction to Organic & Biochemistry
This course provides a survey of basic facts and principles of organic chemistry and biochemistry. Topics include the structure, properties, and reactivity of some of the major types of organic functional groups. Other topics include carbohydrates, lipids, proteins, enzymes, nucleic acids, and metabolism. Prerequisite: Eligible to take ENGL 1010. Lecture/laboratory. Designed for nursing and other allied health majors; not recommended for math/science students. Lab fee. Meets SUNY General Education requirement in Natural Sciences.

CHEM 1030  Environmental Chemistry
Explores the environment from a chemical perspective, including the chemistry of the air, water, and soil. Special attention to the chemical aspects of problems in the environment principally caused by humans. Basic concepts for informed participation as individuals, parents, employees, and citizens. Lab provides hands-on experience with experimentation, data collection, and analysis needed to understand the role scientific method and chemistry play in addressing environmental problems and issues. (3 cr. hrs.) (Spring). Prerequisite: Eligible to enroll in ENGL 1010. Online lecture/on campus laboratory. Designed for non-science majors to fulfill laboratory sciences requirements and for science majors as an elective. Lab fee. Meets SUNY General Education requirement in Natural Sciences.

CHEM 1050  Intermediate Chemical Principles
Expands the student’s knowledge of elements of chemical equation mathematics, the periodic table, solution chemistry, acids & bases, equilibriums, and oxidation-reduction reactions. (1 cr. hr.) (As Needed). Recommended for students who have taken CHEM 1010 and 1020 and plan to enter CHEM 2031, 2032, 2041, 2042, 2010, and 2020 or for those who want a refresher course before taking upper level chemistry. Prerequisites: CHEM 1010 and CHEM 1020 or CHEM 1510 and CHEM 1520. Does not satisfy lab science requirements.

CHEM 1070  General Chemistry I
Principles of chemistry and its quantitative aspects. Stoichiometry, characteristics of matter, structure and bonding, elementary thermochemistry, solutions, equilibrium, thermodynamics, and electrochemistry. Descriptive chemistry is integrated throughout the course. (4 cr. hrs.) (Fall, Summer) Prerequisite: CHEM 1010 or 75% or higher in high school chemistry, eligible to take ENGL 1010, satisfactory completion of all reading skills placements. Intended for, but not limited to, math/science students. It is recommended that students be familiar with algebraic and logarithmic calculations; high school physics is strongly suggested. Lecture/laboratory. Lab fee. Meets SUNY General Education requirement in Natural Sciences.

CHEM 1080  General Chemistry II
Principles of chemistry and its quantitative aspects. Stoichiometry, characteristics of matter, structure and bonding, elementary thermochemistry, solutions, equilibrium, thermodynamics, and electrochemistry. Descriptive chemistry is integrated throughout the course. (4 cr. hrs.) (Spring). Prerequisite: CHEM 1510. Intended for, but not limited to, math/science students. It is recommended that students be familiar with algebraic and logarithmic calculations; high school physics is strongly suggested. Lecture/laboratory. Lab fee. Meets SUNY General Education requirements in Natural Sciences.

CHEM 1090  Organic Chemistry I
Studies the principles and techniques to describe, explain, and predict the behavior of organic compounds including theories of bonding, nomenclature and isomerism, spectroscopy, resonance and hyperconjugation and reaction mechanisms. (5 cr. hrs.) (Fall). Prerequisite: One year of college chemistry. Lecture/laboratory. Lab fee. Meets General Education requirements in Natural Sciences.

CHEM 2020  Organic Chemistry II
Applies the principles to selected functional groups. Application of organic chemistry to other fields. Laboratory techniques in the analysis, isolation and synthesis of organic compounds. (5 cr. hrs.) (Spring). Prerequisite: CHEM 2010. Lecture/laboratory. Lab fee. Meets General Education requirement in Natural Sciences.

CHEM 2033  Analytical Chemistry
Fundamental principles of chemical measurement discussed from sampling through analysis and interpretation of results. Strong emphasis on use of standards, methods of calibration, experimental design, data collection, and statistical treatment of results, documentation, quality control and assurance, and good laboratory practices. Experiments include analysis used in medical diagnosis, pharmaceuticals, air, food and water quality, and research studies. Techniques include volumetric, titrimetric, and gravimetric analysis; potentiometry, spectrophotometry, atomic absorption spectrometry, and various forms of chromatography. (5 cr. hrs.) (Fall). Prerequisite: One year of college chemistry. Designed for math/science and chemical technology students.

CHEM 2043  Chemical Instrumentation
Broad survey of spectroscopic, electrochemical, chromatographic and other instrumental analytical techniques. Strong emphasis on use of standards, methods of calibration, experimental design, data collection, statistical treatment of results, documentation, quality control and assurance, and good laboratory practices. Techniques will include nuclear magnetic resonance, mass spectrometry, liquid chromatography, Infra-red and UV-Visible spectrophotometry, (5 cr. hrs.) (Spring). Prerequisite: CHEM 2033. Designed for math/science and chemical technology students.

CHIN  Chinese
Division of Humanities and Social Sciences

CHIN 1010  Beginning Chinese I
Practice in conversation, development of reading and writing characters, and a systematic study of grammar. Attention to the culture of Chinese-speaking countries. (4 cr. hrs.) (ASN). Lecture/Recitation/Laboratory. Meets SUNY General Education requirement in Foreign Languages.

CHIN 1020  Beginning Chinese II
Additional practice in conversation, development of reading and writing characters, and a systematic study of grammar. Attention to the culture of Chinese-speaking countries. (4 cr. hrs.) (ASN). Prerequisite: CHIN 1010 or equivalent Lecture/Recitation/Laboratory. Upper-level course. Meets SUNY General Education requirement in Foreign Languages.

CHIN 2010  Intermediate Chinese I
Development of greater facility in reading, writing, speaking, and understanding the language through systematic continued study of its structures. Attention to the culture of Chinese-speaking countries. (4 cr. hrs.) (ASN). Prerequisite: CHIN 1020 or equivalent. Lecture/Recitation/ Laboratory. Upper-level course. Meets SUNY General Education requirement in Foreign Languages.
CHIN 2020  Intermediate Chinese II
Continued development at the intermediate level of a facility in reading, writing, speaking and understanding the language through systematic study of its structures. Attention to the culture of Chinese-speaking countries. (4 cr. hrs.) (ASN). Prerequisite: CHIN 2010 or equivalent. Lecture/Recitation/Laboratory. Upper-level course. Meets SUNY General Education requirement in Foreign Languages.

CRJ 1070  Police - Community Relations
Explores the interrelationship between criminal justice agencies and various segments of the community they serve. Forces that affect interaction between the police and citizens including the psychology of bias, racism and cross cultural communication will be examined along with concepts of community oriented policing services. (3 cr. hrs.) (Fall, Spring).

CRJ 1206  Collection, Identification, and Preservation of Evidence
Collecting, packaging, and transporting evidence. Lab examination, custody, and its exhibition in court. (1 cr. hr.) (Fall, Spring). Fee $10.

CRJ 1209  Narcotics & Dangerous Drugs
Problems created by illegal use of narcotics and dangerous drugs. Classification, description, history of drugs. Etiology of addiction, extent of drug use, relationships to criminal behavior, and methods of police investigation and control. (1 cr. hr.) (Fall, Spring). Fee $10.

CRJ 1210  Robbery
Legal aspects, classification, planning, use of disguises, the extent of the problem, and surveillance photography in robbery investigations. (1 cr. hr.) (Fall, Spring).

CRJ 1214  NYS Security Guard Certificate
Intended to meet the requirements set forth by the New York State Security Guard Act of 1992 for the certification of security guards. It includes the curriculum for the Eight Hour Pre-Assignment security guard training course, as set forth by NYS Department of Criminal Justice Services (DCJS), covering the duties, responsibilities, and functions of security guards. The topics covered will include the role of a security officer, the legal powers and limitations of a security officer, emergency situations, communication and public relations, access control, ethics and code of conduct. Upon successful completion of this course, the student will receive the NYS Security Guard 8 Hour Pre-Assignment Certificate. (0.5 cr. hrs.).

CRJ 1540  Police Physical Conditioning and Wellness
Assists the student in developing an optimal level of physical fitness in the areas of cardio-respiratory endurance, muscular strength, flexibility, speed, and endurance through personal training, nutrition, and stress awareness. This level of physical fitness meets the NYS Department of Criminal Justice Services requirements for the included portions of the Basic Course for Police Officers. (2 cr. hrs.) (Spring). Prerequisite: Students must be accepted into the Police Basic Training Certificate program and have successfully completed all courses required in the fall semester of the program.

CRJ 1560  Basic Police Procedures
Provides a comprehensive overview of the basic skills and practices necessary for daily professional law enforcement duties which meet the NYS Department of Criminal Justice Services requirements for the included portions of the Basic Course for Police Officers. (3 cr. hrs.) (Spring). Prerequisite: Students must be accepted in the Police Basic Training Certificate program and have completed the courses required in the fall semester of the program.
CRJ 1570  Police Community Interaction
Provides a comprehensive overview of community interaction and personal communication skills commonly used in professional law enforcement applications that meets the NYS Department of Criminal Justice Services requirements for the included portions of the Basic Course for Police Officers. (3 cr. hrs.) (Spring). Prerequisite: Students must be accepted in the Police Basic Training Certificate program and have completed the courses required in the fall semester of the program.

CRJ 1580  Police Investigations
Provides a comprehensive overview of police investigative techniques commonly used in professional law enforcement applications that meets the NYS Department of Criminal Justice Service’s requirements for the included portions of the Basic Course for Police Officers. (3 cr. hrs) (Spring). Prerequisite: Students must be accepted in the Police Basic Training Certificate program and have completed the courses required in the fall semester of the program.

CRJ 1590  Police Certified First Responder
Provides a comprehensive overview of police investigative techniques commonly used in professional law enforcement applications that meets the NYS Department of Criminal Justice Service’s requirements for the included portions of the Basic Course for Police Officers. (2 cr. hrs.) (Spring). Prerequisite: Students must be accepted in the Police Basic Training Certificate program and have completed the courses required in the fall semester of the program.

CRJ 2010  Criminal Investigation I
Fundamentals of investigation, crime scene search and recording, collection and preservation of physical evidence. Scientific aids, modus operandi, sources of information, interview and interrogation, follow-up and case preparation. Methods of investigation, initial steps, obtaining information, specific offenses. (4 cr. hrs.) (Fall, Spring). Prerequisite: CRJ 1010 and ENGL 1010, with satisfactory completion of all reading placements. Lecture/laboratory. Fee $25.

CRJ 2015  Criminal Investigations
(New Course) A study of the fundamentals of criminal investigations, including general criminal investigative methods, preliminary investigations, and the subsequent phases of investigations. Topics include investigative and crime scene management, utilization of criminalistics experts and forensic science laboratories, sources of information and informants, basic criminal intelligence analysis, interviews and interrogations, documentation and report writing, witnesses, surveillance operations, various types of investigations including undercover and sting operations, legal issues and case law, search and seizure warrants, case files, prosecution preparation, courtroom testimony and demeanor, and trials. In addition, the course will review the current role of criminal investigations in terrorism and national security issues. (3 credits) (Fall, Spring).

CRJ 2020  Criminal Investigation II
The investigator in court, identification and reproduction, specialized scientific methods, investigative operations. (4 cr. hrs.) (Spring). Prerequisite: CRJ 1010. Lecture/laboratory. Fee $25.

CRJ 2030  Evolution of Criminal Law
The evolution of criminal law from ancient times to current U.S. law. How guilt is established, defining criminal conduct, mala prohibita v. mala in se, the significance of resulting harm, punishment v. rehabilitation, exculpation. (3 cr. hrs.) (Fall). Prerequisite: CRJ 1050, ENGL 1010. Writing in content area. Upper-level course.

CRJ 2040  The Constitution & the Accused
Advanced study of the fourth, fifth, and sixth amendments to the Constitution. Theories and values of the framers, the evolution of these theories and values to our current criminal justice system. (3 cr. hrs.) (Spring). Prerequisite: CRJ 1050, CRJ 2030, ENGL 1010, with satisfactory completion of all reading placements. Writing in content area.

CRJ 2050  Criminal Justice Ethics
Identification and analysis of the diverse ethical issues encountered in the Criminal Justice System. Traditional ethical theories examined and applied to topics such as discretion, deadly physical force, misconduct, gratuities, authority and responsibility, affirmative action, civil disobedience, strikes, undercover operations, whistle blowing, and privacy. (3 cr. hrs.) (Fall, Spring). Prerequisite: CRJ 1010, ENGL 1010, and satisfactory completion of all reading placements.

CRJ 2105  Juvenile Justice System
Examines the social controversy and debate over what should be done with juvenile delinquents and juvenile offenders. Investigates the role corrections should play in society’s campaign against problem youths and youthful offenders, attempting to answer what effects of various social problems as well as the economic, political, religious, and technological forces that influence patterns of juvenile behavior and the formulation of interventions and punishments. (3 cr. hrs.) (ASN).

CRJ 2203  Treatment of Criminal Offender
The post-conviction process. Development of a correctional philosophy, theory, and practice; description of institutional operation, programming and management; community-based corrections; probation and parole. (3 cr. hrs.) (Fall, Spring). Prerequisite: ENGL 1010.

CRPL  Career Planning
Division of Professional Studies

CRPL 1010  Career Directions
Students will explore careers through self-analysis and consideration of the job outlook. Career and college planning will be conducted through self-assessing interests, values and skills as well as defining short and long-range career goals. Includes FOCUS career assessment, career research and informational interviewing. (1 cr. hr.) (Fall, Spring). Lecture/discussion/activities.

CRPL 1020  Job Search Strategies
Development of a plan and portfolio of necessary documents for a job search. Includes resume and cover letter writing, application completion, targeting employers, networking and interviewing techniques. (1 cr. hr.) (Fall, Spring). Lecture/discussion/activities. Co-requisite: ENGL 1010.

CRPL 1030  Understanding Work Expectations
An in-depth exploration of employer expectations including values, ethical behavior, conduct, first impressions, diversity and problem-solving. Importance is directed toward acquiring knowledge and skills in interpersonal relationships and performance on the job to improve job satisfaction and success. (2 cr. hrs.) (Fall, Spring). Lecture/discussion/activities.
CRST  Computer Repair Systems
Division of STEM
Note: Shelf Life Alert! Course may not be used for any computer program if more than 5 years have passed since course was taken.
Faculty: Michael Bilynksy, DJ Dates, Joseph Deleone, Matthew Haas, Joseph Oppenheim

CRST 1010  Computer Hardware Technologies
Prepares students for the PC hardware portion of A+ Certification exams. Topics follow objectives as defined by current CompTIA standards. Topics include computer proper PC assembly/disassembly techniques, motherboard, CPUs, memory, mass storage devices, power supplies, network hardware, and safety. (4 cr. hrs.) (Fall, Spring).
Prerequisite: Ready to take a college-level composition course and have no developmental reading and mathematics requirements. Lecture/Laboratory. Fee $50. Shelf Life Alert.

CRST 1030  Operating System Technologies
Prepares students for the Operating Systems portion of A+ Certification exams. Topics follow objectives as defined by current CompTIA standards. Topics include Operating Systems fundamentals, installation, configuration and upgrading of Windows based systems, basic diagnosis and troubleshooting of operating system problems and an introduction to Windows networking. (4 cr. hrs.) (Spring).
Prerequisite: Ready to take a college-level composition course and have no developmental reading and mathematics requirements. Lecture/Laboratory.

CRST 2040  Systems Configuration and Maintenance
Use of diagnostic hardware and software, virus and spyware scanning tools, troubleshooting of various system level and application packages. Backup/disaster recovery techniques, and preventative maintenance are discussed. Detailed discussion of mass storage devices, such as CD/DVD standards and hard disks included. Attention will be given to current trends in hardware and software technology. (4 cr. hrs.) (Fall).
Prerequisites: CRST 1010 and CRST 1030. Lecture/Laboratory. Lab fee. Shelf Life Alert.

CRST 2050  Computer Repair Practicum
A course containing a supervised work experience in an information technology field at local industries, community agencies and/or education institutions. Work must directly relate to the student’s chosen concentration. (4 cr. hrs.) (Fall, Spring). Pre or co-requisites CRST 2040 or CSWT 2610, and CSNT 1200. Shelf Life Alert.

CRST 2060  Computer Repair Seminar
Discussion of general topics of interest concerning PC’s and networks. Topics derived from real-life problems and include advanced troubleshooting, optimization of systems, system security, repair/upgrade cost analysis, and system maintenance. (4 cr. hrs.) (Spring).
Prerequisites: CRST 2040 and CSNT 1200. Lecture/Laboratory. Fee $50. Shelf Life Alert.

CSCS  Computer Science
Division of STEM
Note: Shelf Life Alert! Course may not be used for any computer program if more than 5 years have passed since course was taken.
Faculty: Michael Bilynksy, DJ Dates, Joseph Deleone, Matthew Haas, Joseph Oppenheim

CSCS 1200  Computer Essentials
Theories and applications of computers. Includes computer architecture, hardware, software, number coding, problem solving paradigms, microcomputer applications, network technology, computer ethics, computer careers, e-commerce, and system software. (4 cr. hrs.) (Fall, Spring).
Prerequisite: Ready to take a college-level composition course and have no developmental reading and mathematics requirements. Recommended for computer majors only; non-majors see CSIT 1390. Lecture/Laboratory. Shelf Life Alert.

CSCS 1240  Structured and Object-Oriented Problem Solving
Logic for analyzing problems and communicating problem-solving procedures to the computer. Data types and variables, control structures, arrays, sorting and searching, “common sense” analysis, problem-solving, logic flow charting, pseudo coding, and Unified Modeling Language (UML). (3 cr. hrs.) (Fall, Spring).
Prerequisites: Ready to take a college-level composition course and have no developmental reading and be taking Math 1015. Lecture/Laboratory. Shelf Life Alert.

CSCS 1320  C/C++ Programming
C/C++ Programming for systems, commercial, and scientific applications. Topics include: procedural vs. object-oriented programming, data types, operators, standard control structures, functions, pointers, arrays, structures, classes, objects, encapsulation, inheritance, polymorphism templates and libraries. (4 cr. hrs.) (Spring).
Prerequisite: CSCS 1240. Lecture/Laboratory. Shelf Life Alert.

CSCS 1730  UNIX/Linux Fundamentals
UNIX Operations System basics. Exploration of the command-line environment, use of the UNIX shell by model editing, shell scripting, regular expressions, file manipulation, filters, wild cards, I/O manipulation, and related topics. Exposure to graphical environments and related components such as X server, Window Manager, and Desktop environments. (4 cr. hrs.) (Fall/Spring).
Prerequisite: Be taking or have taken CSCS 1240 Lecture/Laboratory. Shelf Life Alert.

CSCS 2320  Data Structures
Data and data structures, linear lists, strings, stacks, queues, linked lists, arrays, and orthogonal lists. Trees, multi-linked structure, table search, sorting techniques, storage allocation, and sequential and random file access. (3 cr. hrs.) (Fall). Prerequisite: CSCS 1320. Lecture/Laboratory. Shelf Life Alert.

CSCS 2330  Discrete Structures
Discrete mathematical foundations and their relationship to computing. The foundation of discrete structures, mathematical reasoning, combinatorics, graphs and trees, Boolean Algebra and logic gates, and Karnaugh mapping. (3 cr. hrs.) (Fall).
Prerequisite: MATH 1240 and either CSCS 1320 or CSCS 2420. Students cannot receive credit for this course and MATH 2330. Shelf Life Alert.

CSCS 2420  Java Programming
Basic concepts of object-oriented programming, fundamentals of the language and syntax, algorithmic thinking, problem solving, control structures, data types, operators, input/output, method (user defined and
CSIT 1240  HPC Fundamentals
Introduces students to current computational trends and interdisciplinary collaboration. Survey of applications requiring visualization, data and time intensive processing, concurrency. Case Studies drawn from current problems in the computing, business, scientific, and mathematical disciplines. Students will be exposed to design, implementation, and operational aspects of a High Performance Computing system, as well as skills in resource utilization, system performance optimization, and general problem solving techniques. (3 cr. hrs.) (Spring). Prerequisites: CSIT 1320. Lecture / Laboratory. Shelf Life Alert.

CSIT 2000  Mobile App Development
(New Course) Mobile application development techniques. Skills necessary to design, build, and deploy professional mobile applications. Topics include exploration of mobile environment, tools used to develop mobile applications design considerations and techniques, common libraries utilized, and application testing. (3 cr. hrs.) (Spring). Prerequisite: CSCS2420, CSCS1320, CSCS2210, CSST1600, or ENGR1050. Lecture/Laboratory.

CSIT 2044  HPC Experience I
In-lab seminar/work experience in a High-Performance Computing environment. Student is assigned an administrative role(s) within the lab and learns the basics of on-site/remote maintenance, monitoring, support, documentation, updating and investigating possible functionality. The student functions as if they were in a beginning staff system administration position. (2 cr. hrs.) (Fall). Prerequisites: CSIT 1320 or CSCS 1730. Cannot be taken concurrently with CSIT 2048. Shelf Life Alert.

CSIT 2048  HPC Experience II
Continuation of in-lab seminar/work experience in a High-Performance Computing environment. Student resumes administrative role(s) within the lab and is responsible for on-site/remote maintenance, monitoring, support, more detailed documentation, updating, and investigating/ implementing possible innovations/functionality. Additionally, the student may assist in mentoring/training an incoming student to assume the responsibilities of the role. The student functions as if they were in an intermediate system administration position. (2 cr. hrs.) (Spring). Prerequisites: CSIT 1320, CSCS1730, and CSIT 2044. Lecture/Laboratory.

CSIT 2240  Game Programming
Introduction to game development. Topics include conceptual game design, game mechanics, rules and interaction, multimedia, interface, and implementation considerations. Students will apply game theory and programming skills to a game development project. (3 cr. hrs.) (ASN). Prerequisites: CSCS 1320 and CSCS 1730. Shelf Life Alert.

CSIT 2310  Structured & Object-Oriented Systems Analysis and Design
Techniques for processing data through computers. Input, output, and programming systems. Skills required in system design, the allied areas
of form management, and records retention. Examination of flow charting and data flow diagrams for paperwork flow, unit record equipment, and computer systems. Forms and record design. Practical applications are developed, displayed and presented for integrated procedures and weighed from the viewpoint of economy, efficiency, and expansion. (3 cr. hrs.) (Spring). Prerequisite: CSST 1320, CSCS 2420, or CSCT 2210. A student presentation is required. Shelf Life Alert.

CSNT 2400  Database System
Creating, modifying, and using a database and composing an original database system. Conceptual database design, relational database system, relational query language, programming, menu-driven systems, screen I/O and prompting. Database terminology. (3 cr. hrs.) (Fall). Prerequisite: CSCS 1240. Lecture/Laboratory. Shelf Life Alert.

CSNS  Computer Sci Network Security
Division of STEM
Note: Shelf Life Alert! Course may not be used for any computer program if more than 5 years have passed since course was taken.
Faculty: Michael Bilynksy, DJ Dates, Joseph Deleone, Matthew Haas, Joseph Oppenheim

CSNS 1610  Fundamentals of Information Security
(New Course) An introduction to the fundamental issues, concepts and tools common to areas of security. Topics include who are the attackers, their motivations, and risk tolerance. Essential tools will be introduced covering the areas of anti-virus, monitoring, virtual machines, account control, and access rights management. Security models such as access control lists, role-based access control, Bell-La Padula, and others will be studied. Concept areas such as confidentiality, integrity, availability and privacy will be studied. (4 cr. hrs.) (Lecture/Laboratory) (Spring). Prerequisite: CSNT 1200.

CSNT  Computer Network Tech.
Division of STEM
Note: Shelf Life Alert! Course may not be used for any computer program if more than 5 years have passed since course was taken.
Faculty: Michael Bilynksy, DJ Dates, Joseph Deleone, Matthew Haas, Joseph Oppenheim

CSNT 1200  Network Fundamentals
A theoretical overview of networks. Introduction to the OSI model, communications media, various network equipment, data transmission, protocols, topologies, architectures, Local area networks, Wide area networks, Routing and Routing protocols, IP addressing and structured cabling. (4 cr. hrs.) (Fall/Spring). Prerequisite: Ready to take a college-level composition course and have no developmental reading and mathematics requirements. Lecture/Laboratory.

CSNT 1500  Routing and Switching
The architecture, components, and operations of routers and switches in a small network. Configuring a router and a switch for basic functionality, troubleshooting routers and switches and resolving common issues with RIP v1, RIP v2, single area and multiple-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks. (4 cr. hrs.) (Spring). Prerequisite: CSNT 1200.

CSNT 2200  Network Software
Installation and use of various system and application software packages within a networked environment. The study and understanding of these packages and their relationship to network configuration and function ability. (4 cr.hrs.) (Fall). Prerequisite: CSNT 1200. Lecture/Laboratory.

CSNT 2400  LAN Switching and Wireless
Implementation and configuration of a Local Area Network. Students will use the knowledge that they acquire to design, implement and configure a LAN. Topics include Switching concepts and LAN design, Switch configuration, STP, Virtual LAN and VLAN trunking protocol. (4 cr. hrs.) (Fall). Prerequisite: CSNT 1200. Lecture/Laboratory. Fee $50.

CSNT 2600  Network Troubleshooting
Prevention, diagnosis, and resolution of hardware and software related issues. Problems include bad configuration, disk, printer, NIC, cable, video adapter, hub, etc. (3 cr. hrs.) (ASN). Prerequisites: CSNT 2200 and 2400 Lecture/Laboratory. Fee $50.

CSNT 2800  Accessing the WAN
Creating and evaluating various network systems. Topics include analysis, design, development, implementation, maintenance and evaluation of different kinds of network systems. The focus will be on various WAN technologies and protocols such as Frame Relay, PPP, HDLC, VPN. Students will also become familiar with creating Packet filters for security on routers using Access Control Lists (ACLs) (3 cr. hrs.) (Spring). Prerequisites: (CSNT 1400 and CSNT 2400) or CSNT 1500. Lecture/Laboratory.

CSST  Computer Service Technology
Division of STEM
Note: Shelf Life Alert! Course may not be used for any computer program if more than 5 years have passed since course was taken.
Faculty: Michael Bilynksy, DJ Dates, Joseph Deleone, Matthew Haas, Joseph Oppenheim

CSST 1031  Introduction to Graphical User Interface (GUI)
Graphical environment for applications and documents. Use of icons, simultaneous on-screen applications, and sharing information between application software. Explores various applications within the graphical interface. Includes using a mouse and the “point and click” method. (1 cr. hr.) (Fall, Spring). Lecture/Laboratory. Shelf Life Alert.

CSST 1051  Introduction to Spreadsheets
Use of a microcomputer and current application software to introduce the accounting, arithmetic, and analytical capabilities of the electronic spreadsheet. Spreadsheet construction, pointer movement, arithmetic and logical operations, formulas and functions, file concepts, printing, graphics capabilities, and data management. (1 cr. hr.) (Fall, Spring). Prerequisite: MATH 1015. Lecture/Laboratory. Shelf Life Alert.

CSST 1052  Intermediate Spreadsheet Concepts
Reinforces basic spreadsheet skills and introduces printing and graphing options, file management, logical and lookup functions, range names and database concepts. (1 cr. hr.) (Fall, Spring). Prerequisite: CSST 1051, CSST1390, or equivalent. Lecture/Laboratory. Shelf Life Alert.
CSWT 1053 Advanced Spreadsheet Concepts
Creation and use of macros, database management functions, branching, custom menu development. (1 cr. hr.) (Fall, Spring). Prerequisite: CSST 1052 or equivalent. Lecture/Laboratory. Shelf Life Alert.

CSWT 1091 Introduction to Microcomputer Graphics
Introduction to presentation software. Includes design, transitions, animation effects and inserting charts and other objects. Methods of adding multimedia, manipulating simple graphics and timing the delivery of presentations will also be covered. (1 cr. hr.) (Fall, Spring). Lecture/Laboratory. Shelf Life Alert.

CSST 1101 Microcomputer Database Concept
Creation, maintenance, and retrieval of data records utilizing a current database application package. Structure creation, data entry, editing, sorting, indexing, queries, reports, and record maintenance. (1 cr. hr.) (Fall, Spring). Lecture/Laboratory. Shelf Life Alert.

CSWT 1161 Introduction to the Internet
Introduction to the Data Communications Super Highway (Internet). Methods of connecting to the Internet, searching the Internet for information, and communicating with other users. (1 cr. hr.) (Fall, Spring). Lecture/Laboratory. Shelf Life Alert.

CSST 1600 Object Oriented Programming-NonComputer Major
An introduction for students with little or no programming background. Topics include the Object Oriented environments, properties, controls, and programming procedures and structures. (3 cr. hrs.) (Fall, Spring). Lecture/Laboratory. Shelf Life Alert.

CSWT 1200 Website Development Fundamentals
Web page development techniques using HTML, XHTML, and web site authoring software. Presents skills necessary to build, deploy, and manage professional web pages. Topics include basic tags and more advanced features while emphasizing accessibility, compatibility, security, and emerging Internet trends. (3 cr. hrs.) (Fall, Spring). Prerequisite: Ready to take a college-level composition course and have no developmental mathematics requirements. Shelf Life Alert.

CSWT 2610 Web Programming & Interactivity
Involves hands-on experience with common uses of JavaScript in commercial web sites, including but not limited to: form validation, web applications, and Dynamic HTML. Focus is on the DOM (Document Object Model), and also covers the evolving standards with XML and the integration of XML Style sheets with JavaScript to create robust, complex web applications. (3 cr. hrs.) (Fall). Prerequisite: CSWT 1200. Lecture/Laboratory. Shelf Life Alert.

CSWT 2620 Web Application Development
Database connectivity and other areas related to the construction of commerce-related database driven web sites are the primary focus. Behind the scenes aspects of web programming. Hands-on experience with today’s popular programming languages on the web, emphasis on the HTML-embedded scripting languages PHP (Perl-like in syntax) and ASP (VBScript.) Mod-Perl, JSP, Coldfusion, and other common languages also discussed. (3 cr. hrs.) (Spring). Prerequisite: CSCS 1240. Lecture/Laboratory.

ECED Early Childhood
Division of Professional Studies
Faculty: Julie Dick, Susan Hoobler

ECED 1110 Introduction to Early Childhood Education
Survey of early childhood education theories and principles and the alternative settings available for the care and education of young children. Emphasis on defining program quality as it pertains to developmentally appropriate care and other characteristics of the child care environment. (3 cr. hrs.) (Fall). Lecture/Projects/Field assignments and/or observations.

ECED 1120 Observing and Recording the Behavior of Young Children
An introduction to methods of making behavioral records of young children, both as clinical tools in a “helping” relationship and as guides for curriculum planning of teachers. (3 cr. hrs.) (Fall, Spring). Lecture/Projects/Field assignments and/or observations.

ECED 1130 The Infant & Toddler: Development & Practice
The complex process of development in the human infant from cognitive, and emotional areas with suggestions for activities to promote optimal infant development. (3 cr. hrs.) (Fall/Spring). Lecture/Projects/Field assignments and/or observations.

ECED 1140 Methods & Materials in Early Childhood Education
An introduction to activities suitable for young children and ways of using activities to foster physical, emotional, intellectual, and social growth. Lesson planning is taught and practiced. (3 cr. hrs.) (Fall, Spring). Lecture/Projects/Field assignments and/or observations.

ECED 1150 Partnering with Families, Schools, Communities: a Partnership
Explores the need for and skills necessary for a partnership between parents, human service workers, and educators. Teaches skills of effective listening, confrontation, problem solving, modification of the environment, and values clarification. (3 cr. hrs.) (Fall, Spring). Lecture/Projects/Field assignments and/or observations.

ECED 1524 Language Development and Children
An overview of Language Development Guidelines - birth through school age years. Normal development guidelines of speech and language and important effects of language development on the mastery of reading, spelling, writing and school subjects. For those who work with a pre-school age population. (3 cr. hrs.) (Fall, Spring). Lecture/Projects/Field assignments and/or observations.

ECED 2960 Field Experience: Early Childhood
Demonstration of competencies learned, written documentation and participation in an early education seminar. (6 cr. hrs.) (Fall, Spring). Prerequisites: A grade of C or higher in ECED 1120 and either ECED 1130 or 1140, and instructor’s consent. Practical experience through a minimum of 225 hours of supervised work. (Students who are employed in a state-approved early childhood education setting have the option of preparing for CDA application.)
EDUC 1010 Foundations of Education
The aims of public education in our society: philosophical, historical, economic, political and social bases of our educational system. Current trends in education; popular myths about the teaching profession; roles, responsibilities, problems and concerns of teachers. (3 cr. hrs.) (Fall, Spring). Field observation. Prerequisite: Eligible for ENGL 1010.

EDUC 1510 Digital Electronics
Digital circuits and their application. Binary and hexadecimal number systems and codes, basic logic gates, combinational and sequential logic circuits, Boolean algebra, arithmetic circuits, decoders, encoders, multiplexers, flip flops and counters. Lab work includes design of circuits utilizing integrated circuits and FPGA hardware/software. (4 cr. hrs.) (Spring). Prerequisite: ELEC 1010. Lecture/Laboratory. Lab fee.

ELEC 1501 Digital and Analog Electronics
Introduction to digital and analog circuitry. Topics will include binary and hexadecimal number systems, various circuits using digital logic gates, logic and transistor theory, discrete and operational amplifier circuits. (4 cr. hrs.) (ASN) Prerequisite: ELEC 1010. Lecture/Laboratory. Lab fee.

ELEC 2000 Electronic Construction
Construction of an individual project involving bread boarding, soldering, terminal crimping, heat shrinking, wiring, and mounting of external jacks, controls and switches. CAD-generated printed circuit board artwork design, developing, etching and drilling included. (1 cr. hr.) (Fall). Prerequisite: ELEC 1500. Laboratory. Lab fee. Students will be expected to purchase required tools and parts for the project.

ELEC 2010 Linear Electronics
Advanced course in linear and analog electronics. Linear integrated circuits, power amplifiers, operational amplifiers, regulated power supplies, and active filters. (4 cr. hrs.) (Fall). Prerequisite: ELEC 1500. Lecture/Laboratory. Lab fee.

ELEC 2020 Industrial Electronics
Automatic process control systems. Programmable logic controllers used in industrial control systems. Installation, programming and interfacing of Allen Bradley SLC 500 control Logic controllers. Robotics will be studied including set-up, programming, interfacing, and applications (4 cr. hrs.) (Fall). Prerequisites: ELEC 1500 and 1510; or ELEC 1580. Lecture/Laboratory. Lab fee.
ELEC 2030  Microprocessors
Extensive study and application of the architecture and instruction set of a microprocessor. Includes the use of assemblers and simulators, assembly language programming as well as I/O and memory circuit design. (4 cr. hrs.) (Fall). Prerequisite: ELEC 1510. Lecture/Laboratory. Lab fee.

ELEC 2050  Senior Project
An independent project including the various stages from conception to design and layout, fabrication, testing, modification, and final reporting. Project is of the student's choosing, subject to approval of the instructor. (2 cr. hrs.) (Spring). Prerequisites: ELEC 2000, 2010, 2030. Laboratory/Independent project. Lab fee. Students will be expected to purchase required tools and parts for the project.

ELEC 2060  Electronic Communications
Circuits common to most communications equipment: filters, tuned circuits, oscillators, and amplifiers. AM and FM circuitry, radio receivers, transmitters, and an introduction to digital communications and fiber optics. (4 cr. hrs.) (Spring). Prerequisites: ELEC 1500, 2010. Lecture/Laboratory. Lab fee.

ELEC 2070  Industrial Data Acquisition
Introduces basic process instrumentation and control systems, analog-to-digital and digital-to-analog conversion with emphasis on computer control interfacing to process. Use of LabView data acquisition software to acquire and analyze data. (4 cr. hrs.) (Spring). Prerequisite: Concurrent enrollment in MATH 1230 or Math placement above MATH 1230 except MATH 1310. Lecture/Laboratory. Lab fee.

ELEC 2080  Microprocessor Systems
Advanced microprocessor course dealing with the software and hardware aspects of microprocessor system design. Uses Intel 8051 micro-controller. (4 cr. hrs.) (ASN). Prerequisite: ELEC 2030. Lecture/Laboratory. Lab fee.

ELEC 2090  Programmable Controllers
Programmable logic controllers used in industrial control systems. Installation, programming and interfacing of Allen-Bradley and Texas Instruments programmable logic controllers. (4 cr. hrs.) (ASN). Prerequisite: ELEC 1500. Lecture/Laboratory. Lab fee.

ELEC 2100  Technology Research
Issues and concepts related to the student's field of technology. In consultation with faculty, students select, research, organize, and present in written and oral form, topics of personal and professional interest. The use of the internet and visual presentation systems is required. (3 cr. hrs.) (ASN).

ENGL 1010  College Composition I
Essay writing designed to sharpen the student’s perceptions of the world through the study and use of non-fiction writings and to facilitate communications with correctness, clarity, unity, organization, and depth. Assignments include expository writing, argumentation, and research techniques. (3 cr. hrs.) (Fall, Spring). Prerequisite: Placement, ENGL 0980, or concurrent enrollment in ENGL 0999. Meets SUNY General Education requirement in Basic Communication. Writing Process.

ENGL 1020  College Composition II
Essay writing designed to advance critical, analytical, and writing abilities begun in ENGL 1010. Literary analysis essays and interpretation on works of fiction, poetry, and drama. (3 cr. hrs.) (Fall, Spring). Prerequisites: ENGL 1010 . Writing Process. Meets SUNY General Education requirement in Humanities.

ENGL 1410  Police Report Writing
(New Course) Assists students in developing a knowledge of the conventions of written and spoken English in a variety of writing situations within the context of police work, including incident reports, accusatory instruments, arrest and court documents, accident reports, DWI documents, mental health and domestic violence reports. (2 cr. hrs.) (Spring). Prerequisite: ENGL 1010.

ENGL 1501  Technical Report Writing I
Introduction to technical, in-service writing such as status, trip, trouble reports and memoranda. May be taken in conjunction with a scientific or technical project on campus. (1 cr. hr.) (ASN). Prerequisite: ENGL 1010. Cannot be used as a humanities or liberal arts elective. Writing Process if taken with ENGL 1502.

ENGL 1502  Technical Report Writing II
Introduction to technical, formal writing such as manuals, proposals and reports for presentation. May be taken in conjunction with a scientific or technical project on campus. (2 cr. hrs.) (ASN). Prerequisite: ENGL 1501. Cannot be used as a humanities or liberal arts elective. Writing Process if taken with ENGL 1501.

ENGL 0999  Applied Reading and Writing Strategies
Integrates reading, critical thinking and writing to improve literacy skills for success in College Composition I. Students apply reading strategies to challenging texts, using previewing, annotation, guide questions and discussion. Students will apply writing strategies to produce essays for the ENGL 1010 companion course. Emphasis on selecting and integrating source material with effective critical responses. Rhetorical strategies and strategic editing will be reviewed to improve sentence structure and correct errors. (3 eq. cr. hrs.) (Fall, Spring). Prerequisite: ENGL 0980, placement, or Department recommendation. Co-requisite: ENGL 1010. Grading: Pass/Fail. Does not fulfill degree or program requirements. Lecture/Laboratory.

ENGL 1501  Technical Report Writing I
Introduction to technical, in-service writing such as status, trip, trouble reports and memoranda. May be taken in conjunction with a scientific or technical project on campus. (1 cr. hr.) (ASN). Prerequisite: ENGL 1010. Cannot be used as a humanities or liberal arts elective. Writing Process if taken with ENGL 1502.

ENGL 1502  Technical Report Writing II
Introduction to technical, formal writing such as manuals, proposals and reports for presentation. May be taken in conjunction with a scientific or technical project on campus. (2 cr. hrs.) (ASN). Prerequisite: ENGL 1501. Cannot be used as a humanities or liberal arts elective. Writing Process if taken with ENGL 1501.
ENGL 1510  Honors College Composition I  
Honors course in essay writing designed to sharpen the student’s perceptions of the world through the study and use of non-fiction writings and to facilitate communications with correctness, clarity, unity, organization, and depth. Assignments include expository writing, argumentation, and research techniques. (3 cr. hrs.) (ASN). Prerequisite: Placement or ENGL0980 and departmental permission. Must be Honors eligible. An alternative degree requirement for students in the Honors Program. Cannot earn credit for this course and ENGL1010. Writing Process. Meets SUNY General Education requirement in Basic Communication.

ENGL 1520  Honors College Composition II  
(New Course) Honors course in writing course designed to advance the critical and analytical thinking begun in ENGL 1010. Literary analysis essays on works of fiction, drama and poetry. Entry limited to students who meet qualifications for Honors coursework. (3 cr. hrs.). This is an alternate degree requirement for students in the Honors Program. Can not earn credit for this course and ENGL 1020. Prerequisite: ENGL 1010. Meets SUNY General Education requirement in Basic Communication.

ENGL 2010  American Literature I  
Important writings and American culture from the early 1600’s through 19th century Romanticism. (3 cr. hrs.) (ASN) Prerequisite: ENGL 1020. Writing in content area. Upper-level course. Meets SUNY General Education requirement in Humanities.

ENGL 2020  American Literature II  
Important writings and American culture from the mid-19th century to the present. (3 cr. hrs.). Prerequisite: ENGL 1020. Writing in content area. Upper-level course. Meets SUNY General Education requirement in Humanities.

ENGL 2030  Children’s Literature  
A study of the different types of literature created for children: picture books, young adult novels, poetry, folklore, fairy tales, fantasy, historical fiction, contemporary realistic fiction, biography and non-fiction. Discussion of issues in the field, book selection, etc. through reading, discussion, papers, and projects. (3 cr. hrs.) (Fall, Spring). Prerequisite: ENGL 1020. Writing in content area. Upper-level course.

ENGL 2040  Fantasy and Science Fiction  
An historical approach to the genres of science fiction and fantasy through a study of acknowledged masterpieces and contemporary authors. Adaptations and works in other media may also be examined. (3 cr. hrs.) (Spring). Prerequisite: ENGL 1020. Writing in content area. Upper-level course. Meets SUNY General Education requirement in Humanities.

ENGL 2090  The Bible as Literature  
Secular discussion of readings from the Old and/or New Testaments. Literary qualities of the selected text (genre, philosophical motif and aesthetics) as related to the time, place and conditions of composition. May include historical, textual, reductive and form criticism. (3 cr. hrs.) (Fall). Prerequisite: ENGL 1020. Writing in content area. Upper-level course. Meets SUNY General Education requirement in Humanities.

ENGL 2160  The Short Story  
The short story as a literary form; study of significant writers with emphasis on recent works. (3 cr. hrs.) (ASN). Prerequisite: ENGL 1020. Writing in content area. Upper-level course. Meets SUNY General Education requirement in Humanities.

ENGL 2170  Modern Drama  
Drama in literary form; study of significant playwrights with special attention to recent works. (3 cr. hrs.) (ASN). Prerequisite: ENGL 1020. Writing in content area. Upper-level course. Meets SUNY General Education requirement in Humanities.

ENGL 2180  Modern Novel  
The novel as a literary form; significant authors with special attention to recent works. (3 cr. hrs.) (ASN). Prerequisite: ENGL 1020. Writing in content area. Upper-level course. Meets SUNY General Education requirement in Humanities.

ENGL 2190  Modern Poetry  
Poetry as a literary form and as a reflection of modern trends in human thought and human experience. Special attention is given to the 20th or 21st century. (3 cr. hrs.) (ASN). Prerequisite: ENGL 1020. Writing in content area. Upper-level course. Meets SUNY General Education requirement in Humanities.

ENGL 2220  Major African-American Writers  
Cultural influence of literature by major African-American writers with special attention to themes, language, and style. (3 cr. hrs.) (ASN). Prerequisite: ENGL 1020. Writing intensive. Meets SUNY General Education requirement in Humanities. Upper-level course.

ENGL 2310  English Literature I  
Major writers and their works in England from the beginning of the Anglo Saxon era to the end of the Age of Reason. (3 cr. hrs.) (ASN). Prerequisite: ENGL 1020. Writing in content area. Upper-level course. Meets SUNY General Education requirement in Humanities.

ENGL 2320  English Literature II  
Major writers and their works in Great Britain and Ireland from the beginning of the Romantic Movement to the present. (3 cr. hrs.) (ASN). Prerequisite: ENGL 1020. Writing in content area. Upper-level course. Meets SUNY General Education requirement in Humanities.

ENGL 2330  Shakespeare  
The major plays of Shakespeare with consideration of the Elizabethan theater and culture. (3 cr. hrs.) (ASN). Prerequisite: ENGL 1020. Writing in content area. Upper-level course. Meets SUNY General Education requirement in Humanities.

ENGL 2410  World Literature I  
Masterworks of Western literature in translation from ancient times through the Renaissance. (3 cr. hrs.) (ASN). Prerequisite: ENGL 1020. Writing in content area. Upper-level course. Meets SUNY General Education requirement in Humanities.

ENGL 2420  World Literature II  
Masterworks of Western literature in translation from the beginning of the Age of Reason to the present. (3 cr. hrs.) (ASN). Prerequisite: ENGL 1020. Writing in content area. Upper-level course. Meets SUNY General Education requirements in Humanities.

ENGL 2480  Creative Writing - Fiction & Drama  
A writing course to develop talents in creative writing. Original works will be evaluated by the class and Instructor. Additional outside reading may be assigned. Emphasis will be on creative writing talents. (3 cr. hrs.) (Fall). Prerequisite: ENGL 1020. Writing process. Upper-level course. Meets SUNY General Education requirements in The Art.
ENGL 2490  Creative Writing - Poetry
A writing course to develop talent in creative writing. Focus is on poetry. Original works evaluated by the class and instructor. Emphasis will be on creative writing talents and critical abilities. Additional outside reading may be assigned. (3 cr. hrs.) (ASN). Prerequisite: ENGL 1020. Writing process. Upper-level course. Meets SUNY General Education requirement in the Art.

ENGL 2601  Film: An Introduction Module I
Introduces film, its terms and techniques. (1 cr. hr.) (ASN). Prerequisite: ENGL 1020. Writing in content area. Upper-level course.

ENGR 1010  Engineering Orientation
Aspects of engineering study and the engineering profession. Methods of solution of engineering problems. (2 cr. hrs.) (Fall). Prerequisite: Three years of high school math including intermediate algebra and trigonometry, MATH 1225 or MATH 1240.

ENGR 1030  Graphics for Engineers
Techniques and practices of engineering graphics for communication and interpretation of engineering design intent through the use of the three-dimensional parametric modeling program (SolidWorks) and international standard governing geometric dimensioning and tolerancing. (ASME/ANSI Y14.5 and ISO) Engineering freehand sketching and graphically solving problems including pictorial and multiview drawings, geometric constructions, plane and descriptive geometry, sectioning conventions and coordinate dimensioning and tolerancing. (3 cr. hrs.) (ASN). Prerequisite: MATH 1225 or MATH 1240. Lecture / Laboratory. Lab fee.

ENGR 1050  C for Engineers
An introduction to C programming and debugging procedures. The programming assignments will incorporate input/output techniques, iteration, decision making, arrays and sub programs. Engineering applications will be emphasized. (3 cr. hrs.) (ASN). Prerequisite: MATH 1220 or higher. Lecture / Laboratory.

ENGR 2110  Engineering Mechanics I
Statics and Mechanics of Materials. A vector approach to study the equilibrium of particles and rigid bodies, force systems, friction, properties of areas and analysis of structures. Fundamentals of stress and strain under axial loading, torsion, bending, transverse loading, and combined load. (4 cr. hrs.) (Fall). Prerequisite: PHYS 1820.

ENGR 2120  Engineering Mechanics II

ENGR 2150  Theory & Properties of Material
Structure of crystalline solids, imperfections, diffusion, mechanical properties of metals, strengthening mechanisms, failure analysis phase/ transformation diagrams thermal processing, metal alloys. Research paper/presentation. Lab demonstrations for hardness and mechanical test methods. (3 cr. hrs.) (Fall). Prerequisites: PHYS 1820 and CHEM 1510.

ENGR 2180  Engineering Circuit Analysis
Analysis of circuits using resistors, capacitors, inductors, independent and dependent energy sources, and operational amplifiers. Topics include Kirchhoff’s Laws, voltage and current division, nodal and mesh analysis, source transformations, superposition, linearity, Thevenin’s and Norton’s Theorems, responses of RL, RC, and RLC circuits and sinusoidal analysis using phasors. (3 cr. hrs.) (Spring). Prerequisite: PHYS 2830. Must be taken along with MATH 2620 and PHYS 2840.

ENGR 2200  Thermodynamics I
The first half of the material of classical thermodynamics. Introductory definitions and concepts, properties of a pure substance, use of steam tables, study of work and heat, the first and second laws of thermodynamics, and the topic of entropy. (4 cr. hrs.) (ASN). Prerequisite: MATH 1620 and PHYS 1820.

ERTH 1010  Earth Science
Geology, oceanography, and metrology, selected for their relevance to non-science majors. Field trips to study local geology, map interpretation, and elementary weather forecasting. (3 cr. hrs.) (Fall). Prerequisite: MATH 1015, eligible to take ENGL 1010. It is recommended that this course not be taken for credit after successfully completing any GEOL course. Cannot receive credit for both ERTH 1010 and SCIN 1110. Lecture/laboratory. Lab fee. Meets SUNY General Education requirement in Natural Sciences.
FREN  French
Division of Humanities and Social Sciences
Faculty: Michael Beykirch, Sandra Turner-Vicioso

FREN 1010  Elementary French Conversation and Structure I
Vocabulary and expressions for listening comprehension and speaking ability. Reading and writing introduced. For students with little or no background in the language. (4 cr. hrs.) (Fall). Not intended for students with high school Regents credit or equivalent in French. Lecture / Recitation / Laboratory. Meets SUNY General Education requirement in Foreign Language.

FREN 1020  Elementary French Conversation and Structure II
Additional practice in conversation combined with development of reading and writing skills and a systematic study of French grammar. (4 cr. hrs.) (Fall). Prerequisite: FREN 1010 or two years of high school French. Lecture / Recitation / Laboratory. Meets SUNY General Education requirement in Foreign Language.

FREN 2010  Intermediate French
Development of greater facility in reading, writing, speaking, and understanding the language through a systematic review of its structures. Representative readings introduce the civilization of France. (4 cr. hrs.) (Fall). Prerequisite: FREN 1020 or three years of Regents high school French. Lecture / Recitation / Laboratory. Essential for French majors who plan to take upper-level language and literature studies. Upper-level course. Meets SUNY General Education requirement in Foreign Language.

FREN 2020  Composition and Conversation
A thorough analysis of the language. Intensive discussion of grammar, usage, style, and vocabulary, enhancing expression through composition, oral reports and more informed class discussions and conversations. (4 cr. hrs.) (ASN). Prerequisites: FREN 2010 or 4 years of high school French. Lecture / Recitation / Laboratory. Essential for French majors. (4 cr. hrs.) (Fall). Prerequisite: FREN 2010 or two years of high school French. Lecture / Recitation / Laboratory. Meets SUNY General Education requirement in Foreign Language.

FREN 2310  Brief Introduction to French Literature
Advanced study with an introduction to serious reading of some of the great writers of literature. Develops the ability to exchange ideas through writing and discussion in the foreign language. (3 cr. hrs.) (ASN). Prerequisites: ENGL 1010, FREN 2080 Also fulfills 2000-level communications requirement. Upper-level course. Meets SUNY General Education requirements in Foreign Language.

GEOG  Geography
Division of Humanities and Social Sciences

GEOG 1010  World Geography
Examination of the kinds of physical and cultural features encountered on this planet, their location and significance. Course is organized on an economic and political basis considering developed and developing regions. Extensive map work required. (3 cr. hrs.) (Fall, Spring).

GEOG 1210  Introduction to Geographical Information Systems (GIS)
Geographic Information Systems covers the underlying geographic concepts and provides computer lab tutorials utilizing GIS mapping software as it applies to case studies in social and natural sciences. Emphasis is placed on the development of investigation using visual evidence, spatial thinking, reasoning with quantities, and collaboration. (3 cr. hrs.) (ASN). Prerequisites: MATH 1225 or MATH 1230 or higher or placement in a higher level mathematics and CSST 1051 or CSST 1101 or TECH 120 or CSIT 1390. Lecture / laboratory. Fee $10. Meets SUNY General Education requirements in Social Sciences.

GEOL  Geology
Division of STEM
Faculty: Deborah Dann

GEOL 1510  Physical Geology
Geologic processes on and beneath the earth’s crust. Topics include minerals and rocks, igneous processes, landscape development, earthquakes, plate tectonics, oceanography and map interpretation. (4 cr. hrs.) (Fall) Prerequisite: MATH 1015, eligible to take ENGL 1010. 75% or higher in high school Earth Science/ “C” or higher in college Earth Science/ “C” in any college lab science course. Lecture / Laboratory / Field work. Lab fee. Writing in content area. Meets SUNY General Education requirement in Natural Sciences. This course is designed for science majors.

GEOL 1520  Historical Geology
Physical history of earth and its relation to orderly development of life. The reconstruction of past events, fossil identification, environmental geology, and the physical and biological history of the earth. This course is designed for science majors. (4 cr. hrs.) (Fall) Prerequisite: MATH 1015, eligible to take ENGL 1010. 75% or higher in high school Earth Science/ “C” or higher in college Earth Science/ “C” in any college lab science course. Lecture / Laboratory / Field work. Lab fee. Writing in content area. Meets General Education requirement in Natural Sciences.

GEOL 1530  Environmental Geology
Geologic materials and processes basic to understanding today’s environmental problems. Resources, pollution, waste disposal, land use planning, and geologic hazards such as volcanoes, earthquakes, flooding, landslides. This course is designed for science majors (4 cr. hrs.) (Spring). Prerequisite: MATH 1015. 75% or higher in high school Earth Science/ “C” or higher in college Earth Science/ “C” in any college lab science course. Lecture / Laboratory / Field work. Lab fee. Writing in content area. Meets SUNY General Education requirement in Natural Sciences.
GERM 1010  Elementary German Conversation and Structure I
Everyday German vocabulary and expressions. Emphasis on listening comprehension and speaking ability. Reading and writing introduced. For students with little or no background in the language. (4 cr. hrs.) (Fall). Not intended for students with high school Regents credit or equivalent in German. Lecture / Recitation / Laboratory. Meets SUNY General Education requirement in Foreign Language.

GERM 1020  Elementary German Conversation and Structure II
Additional practice in conversation, development of reading and writing skills, a systematic study of German grammar. (4 cr. hrs.) (Fall). Prerequisite: GERM 1010 or two years of high school German. Lecture / Recitation / Laboratory. Meets SUNY General Education requirement in Foreign Language.

GOVT 2010  Introduction to Political Science
An Introduction to the study of political processes, theories, and structures. Focus is on analysis of political problems on a national and global level. Includes case studies of the political systems of selected nations. (3 cr. hrs.) (ASN). Upper-level course. Pre-requisite: Eligible to take ENGL 1010.

GOVT 2040  Constitution, Law, and Courts
Development and growth of the Constitution as a result of the judicial role in interpretation. Judicial policy-making, checks upon judicial power, and competing demands of individual liberty and public authority. (3 cr. hrs.) (Fall, Spring). Prerequisite: Eligible to take ENGL 1010. Writing in content area. Upper-level course.

GREK 1010  Elementary Classical Greek I
The Greek alphabet, basic vocabulary and grammar; oral reading and translation of brief passages of prose; attention to historical background, cultural connections, and word origins. (3 cr. hrs.) (ASN). Meets SUNY General Education requirements in Foreign Language.

GREK 1020  Elementary Classical Greek II
Continuation of GREK 1010, broadening range of vocabulary and syntax; increased emphasis on reading and translating passages from Classical authors. (3 cr. hrs.) (ASN). Prerequisite: GREK 1010 or one year of Greek study. Meets General Education requirement in Foreign Languages.

HEBR 1010  Elementary Classical (Bible) Hebrew I
Introduction to basic grammar and vocabulary of Hebrew; oral reading and translation of brief passages of prose and Tanakh texts; attention to historical background and cultural connections. (3 cr. hrs.) (ASN). Meets SUNY General Education requirement in Foreign Languages.

HEBR 1020  Elementary Classical (Bible) Hebrew II
Continuation of HEBR 1010, broadening range of syntax and vocabulary; increased emphasis on reading and translating passages from the Tanakh. (3 cr. hrs.) (ASN). Prerequisite: HEBR 1010. Meets General Education Requirement in Foreign Languages.

HIST 1010  History Western Civilization I
Highlights in the political, economic, intellectual and cultural development of Western Civilization from ancient times through the Renaissance. (3 cr. hrs.) (Fall, Spring). Prerequisite: Eligible to take
HIST 1020  History Western Civilization II
Highlights in the political, economic, intellectual and cultural development of Western Civilization from the Renaissance to the present. (3 cr. hrs.) (Fall, Spring). Prerequisite: Eligible to take ENGL 1010. Writing in content area. Meets SUNY General Education requirement in Western Civilization.

HIST 1030  Global History I: To 1500
(New Course) Surveys the foundations of the 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. Students will utilize methods of the social sciences by searching, interpreting, and communicating an understanding of primary and secondary historical sources. This world history course studies human patterns of interaction with a particular focus on change over time, global exchange, and those phenomena that connect people, places and ideas across regional boundaries. (3 cr. hrs.) (ASN). Prerequisite: Eligible to take ENGL 1010. Writing in content area.

HIST 1040  Global History II: 1500 to Present
(New Course) Surveys the cultural and continuities of selected world societies during the early modern and modern eras, from the sixteenth century CE to the present. Students will utilize methods of the social sciences by searching, interpreting, and communicating an understanding of primary and secondary historical sources. This world history course studies human patterns of interaction with a particular focus on change over time, global exchange, and those phenomena that connect people, places and ideas across regional boundaries, with an emphasis on the shaping of the modern age and the implications for the future of the global community. (3 cr. hrs.) (ASN). Prerequisite: Eligible to take ENGL 1010. Writing in content area.

HIST 1050  Contemporary World Affairs
Major current issues and their historical background, in a broad overview. Selected events will be studied in depth to understand why they are globally relevant. (3 cr. hrs.) (Fall, Spring). Prerequisite: Eligible to take ENGL 1010. Meets SUNY General Education requirement in Social Sciences.

HIST 1110  American History I
Dreams and concepts brought to the New World and their development into America's institutions and social fabric. Conflict and consensus among groups, dilemmas facing revolutionaries and reformers, and ways economic, political and social changes have occurred. (3 cr. hrs.) (Fall, Spring). Prerequisite. Eligible to take ENGL 1010. Meets SUNY General Education requirement in American History.

HIST 1120  American History II
End of Civil War to the present. Topics include: industrial-urbanization, racism, sexism, the new manifest destiny, political changes, and the growth of a modern nation. (3 cr. hrs.) (Fall, Spring). Prerequisite: Eligible to take ENGL 1010. Meets SUNY General Education requirement in American History.

HIST 2030  History of Medieval Europe
Surveys the period of European history extending from late Roman Antiquity to the early Renaissance. Emphasizes the use of primary sources. Explores the tension between tradition and change, order and disorder. (3 cr. hrs.) (ASN). Prerequisite: Eligible to take ENGL 1010. Writing in content area. Meets SUNY General Education requirement in Medieval History.

HIST 2040  History of Modern Europe
The history of Europe since 1815, beginning with reactionism after the "excesses" of the French Revolution and Napoleon and covering the European alliances and the wars of the 20th century. (3 cr. hrs.) (ASN). Prerequisite: Eligible to take ENGL 1010. Upper-level course.

HIST 2050  History of England - Prehistory to 1700
The growth of a people, from fragmented beginnings to the early stages of empire building. Focuses on the evolutionary nature of English history; political, economic and social strengths and weaknesses; the gifts and problems England contributed to western culture. (3 cr. hrs.) (ASN). Prerequisite: Eligible to take ENGL 1010. Writing in content area. Upper level history course.

HIST 2060  History of England - 1700 to present day
The continuing development of the political, social and economic contributions of the British people to western history. Includes the Glorious Revolution to the beginning of the Global Society. (3 cr. hrs.) (ASN). Prerequisite: Eligible to take ENGL 1010. Writing in content area. Upper level history course.

HIST 2090  African American History
Historical background and cultural contributions of African Americans. African heritage, the slave trade, African Americans during the colonial and revolutionary periods, slavery in America, emancipation and reconstruction, the coming of Jim Crow, the struggle for equality, and the revolution in race relations are topics. The contributions of African Americans in literature, art, music, drama, and sports are discussed. (3 cr. hrs.) (ASN). Prerequisite: Eligible for ENGL 1010. Upper-level course.

HIST 2100  Modern Africa
Focuses on basic knowledge and understanding of modern Africa, its people, their history and cultures. Socio-political crises will be examined. Helps to eliminate stereotyping of Bantu African civilizations and exposes students to non-European cultures. Student will become proficient in one specific geographic realm. (3 cr. hrs.) (ASN). Prerequisite: Eligible for ENGL 1010. Meets SUNY General Education requirements in Other World Civilizations.

HIST 2110  Twentieth Century America
Significant social, economic, and political changes in contemporary American life since 1898. (3 cr. hrs.) (ASN). Prerequisite: ENGL 1010. Upper-level course. Writing in content area.

HIST 2120  Islam and the Middle East
Introduces the historical and religious events of the contemporary Middle East. (3 cr. hrs.) (ASN). Prerequisite: Eligible for ENGL 1010. Upper-level course. Meets SUNY General Education requirement in Other World Civilizations.

HIST 2180  History of Modern China
Chronological and thematic survey of modern Chinese history from the mid-nineteenth century until the present. Topics covered include imperialism, nationalism, communism, industrialization, modernization, regionalism, internationalism, and globalization. Students will explore the political, economic, and diplomatic features of modern China, as well as the cultural and social influences that have contributed to the rapid evolution and development of modern China. (3 cr. hrs.) (ASN)
Prerequisites: ENGL1010. Upper-level course. Writing in content area. Meets SUNY General Education requirements in Other World Civilizations.

HIST 2320 The Civil War
Explores the defining years of 1861-1865 that created the United States of America much in the way we know it today. Emphasizes the political, social, economic, and military aspects of this turbulent time by utilizing letters, diaries, journals, newspapers, and other historical documents and references. Includes antebellum and Reconstruction periods. (3 cr. hrs.) (ASN) Prerequisite: ENGL 1010. Writing in content area. Upper-level course. Meets SUNY General Education requirements in American History.

HIST 2410 Latin American History
Political, social, and economic development of Latin America from pre-Columbian times to the present. (3 cr. hrs.) (ASN) Prerequisite: Eligible for ENGL 1010. Upper-level course. Meets SUNY General Education requirements in Other World Civilizations.

HIST 2500 Special Topics in History
(New Course) An in-depth examination of historical themes and methods. Topics vary semester to semester. (3 cr. hrs.) Prerequisite: Eligibility to take Honors courses or special permission from the Honors Committee. Writing intensive. Upper-level course. Course may be repeated.

HLTH Health Education
Division of Professional Studies
Note: Unless otherwise indicated, these courses may be used to fulfill the awareness component of the wellness requirement or may be used as free electives.
Faculty: Elaine Corwin, Brian E. Hill, David Rockwell

HLTH 1000 Stress & Stress Management
An overview of stress and stress management techniques. Individual life stresses and practice of stress management techniques. (1 cr. hr.) (Fall, Spring).

HLTH 1001 AIDS: Issues & Perspectives
Definition, risk factors, pathology, transmission, social impact, ethical/legal impact. (1 cr. hr.) (Fall, Spring).

HLTH 1002 Health On-Line
The role of internet technology in health information. Preparation of personal bibliographies of health resources available through on-line sources. Use of the Internet, Usernet groups, E-mail, and other forms of health-related multi-media. (1 cr. hr.) (Spring).

HLTH 1003 Nutrition for Exercise & Sport
Explores the principles of healthy nutritional practices while developing a personalized dietary plan designed to meet the nutritional demands specific to exercise and sport. (1 cr. hr.) (Spring).

HLTH 1004 Occupational Stress Management
Explores the impact of occupational stress and burnout on health. Assessments, strategies for prevention and treatment of stress-related problems will be addressed. (1 cr. hr.) (Fall, Spring).

HLTH 1005 Stress Management for Law Enforcement
Explores the impact of occupational stress and burnout on health and well-being. Assessments, strategies for prevention and treatment of stress-related problems specifically related to law enforcement. (.5 cr. hr.) (Spring). The participant must be currently registered as a cadet in the Southern Tier Law Enforcement Academy or with academy permission.

HLTH 1010 Basic Life Support for the Professional Rescuer
Meets the special needs of individuals who are expected to respond in emergency situations. Presents advanced CPR skills and theory. (1 cr. hr.) (Fall, Spring). Intend for students in the Nursing program. Fee $20.

HLTH 1011 Basic Life Support - Professional Rescuer Recertification
This course is designed for the student who wishes to update current certification in American Red Cross Basic Life Support for the Professional Rescuer. All students enrolled in this course must have a valid card in Basic Life Support for the Professional Rescuer issued by the Red Cross. (.5 cr. hrs.) (ASN). Fee $20.

HLTH 1010 Health & Safety for Residential Child Care Workers
Development of healthy and safe practices in personal life and on the job to prevent harm or injury to self, other staff, or children in their care. Opportunity to discuss, problem solve and practice health and safety techniques in a safe, non-emergency environment. (2 cr. hrs.) (ASN).

HLTH 1011 Understanding Cancer
Prevention, early detection, diagnosis and treatment of cancer emphasized. Biological, clinical and psychological aspects of the disease discussed. (3 cr. hrs.) (ASN).

HLTH 1020 Human Sexuality
A comprehensive, interdisciplinary course dealing with human sexuality, including the biological systems and physiological functioning that determines sexual behavior and response; the psychological influences on sexuality and sexual development; and the socio-cultural factors affecting the many dimensions of our sexuality. (3 cr. hrs.) (Fall, Spring). Prerequisite: Eligibility for ENGL 1010.

HLTH 1021 Perspectives of Drugs
A comprehensive course addressing the use and abuse of drugs in contemporary society, with emphasis on motivation for drug use and abuse; specific types of drugs and their identification; physiological and psychological implications of drug abuse; legal aspects of drug abuse; and treatment of the person with drug dependence. (3 cr. hrs.) (Fall, Spring). Prerequisite: Eligibility for ENGL 1010.

HLTH 1022 Perspectives of Alcohol
A comprehensive course addressing the use and abuse of alcohol in contemporary society, with emphasis on motivation for alcohol use and abuse; causes and symptoms of abuse; legal aspects of alcohol abuse; and treatment of the person with alcohol dependence. (3 cr. hrs.) (Fall, Spring). Prerequisite: Eligibility for ENGL 1010.
HLTH 1204  Healthy Aging
A study of the physiological, psychological and sociological effects of aging on individual health. Selected health problems, health care, and diseases specific to the elderly will be considered, as well as the well-being and enhancement of life styles of the elderly. (3 cr. hrs.) (ASN). Internet or lecture.

HLTH 1205  Consumer Health
Prepares individuals to make intelligent decisions regarding the purchase and use of products and services that will have a direct effect on health. (3 cr. hrs.) (Fall, Spring, Summer).

HLTH 1206  Issues in Women’s Health
Issues and needs related to the health care of women as individuals and members of a family, community and society. Changing roles and life styles and traditional and non-traditional approaches to the health care of women. (3 cr. hrs.) (ASN). Prerequisite: Eligible to take ENGL 1010. Writing in content area.

HLTH 1207  Foundations of Personal Health
A comprehensive course addressing the current health problems facing our society, focusing on behavioral health strategies for prevention; risk-reduction; and basic principles and practices involved with attaining and maintaining optimal personal health and wellness. (3 cr. hrs.) (Fall).

HLTH 1510  Introduction to Nutrition
Comprehensive study of the science of human nutrition. Topics include historical and cultural aspects of diet, food production systems, dietary theories and bioindividuality, food energy, macro and micro nutrients, attainment of optimal health through applied nutritional principles, and global nutrition. (3 cr. hrs.) (ASN). Fee: $25.

HLTH 2000  Perspectives of Drugs for Educators
Familiarity with a range of drug abuse prevention programs. Development of a mock drug prevention program for implementation in either a school or community setting, based on the models and principles explored in class. (1 cr. hr.) (ASN). Prerequisite: HLTH 1202.

HLTH 2007  Advanced First Aid
This comprehensive course deals with first aid treatment for a variety of common emergencies. Successful completion of this course will lead to certification by the American Red Cross. The focus of this course will be hands on experience. (1 cr. hr.) (Fall, Spring, Summer). Prerequisite: HLTH 1010. Cannot receive credit for this course and HLTH 1007 or 1100. Fee $20.

HLTH 2100  Life Coaching for Health Behavior Change
Explore basic models of health and wellness life coaching. Practice introductory coaching skills and techniques designed to help people gain momentum and make positive health behavior changes leading toward healthy lifestyles. (3 cr. hrs.) (Spring). Prerequisite: Completion of 12 credits of the student’s program requirements including PSYC 1101.

HLTH 2200  Environmental Health
The role of the individual in the preservation and promotion of the long-term welfare of the global environment. Covers some of the global environment problems facing society, and how personal choice and responsibility can be used to address some of them. (3 cr. hrs.) (Fall, Spring, Summer). Lecture / Discussion / Projects.

HLTH 2212  Introduction to Health Education and Wellness Education
An overview of the role health and wellness educators play in our society through community and individual health promotion and education. Introduction to the founding principles, models, theories, and practices of the profession from historical and contemporary perspectives. Ethical principles, responsibilities and competencies, and practice setting related to health and wellness will be explored, as well as relevant research, resources, current issues and future trends in the field. (3 cr. hrs.) (ASN). Prerequisite: Eligible to take ENGL 1010.

HLTH 2400  Introduction to Psychoneuroimmunology/Mind-Body Connection
Explore the field of Psychoneuroimmunology (PNI) as it applies to the nature of the mind-body connection and its influence on health and well-being. Current scientific theory and research regarding the mind’s ability to either positively or negatively influence the physical body’s health and immune response will be studied. Research theory and application of a variety of integrative modalities in promoting wellness will be studied. Topics include intuition, meditation, guided imagery, cognitive and emotional restructuring, spirituality and faith, social support, humor and laughter, art, music and movement therapies. (3 cr. hrs.) (Fall, Spring). Prerequisite: Eligible for ENGL 1010.

HLTH 2503  Advanced Life Support
Designed for health care workers who perform critical assessments and take immediate actions to deal with acute health problems. Teaches skills to be used in emergency situations, including implementation of ACLS algorithms. ACLS provider certification by American Heart Association upon completion. (1.5 cr. hrs.) (Spring). Prerequisite: BLS certification, EMT Critical Care or Paramedic certification, or NURS 2100.

HLTH 2800  Fundamentals of Applied Epidemiology and Biostatistics
(New course) Introduces basic concepts of epidemiology and biostatistics as applied to public health problems. Emphasis placed on principles and methods of epidemiologic investigation, appropriate summaries and displays of data, and use of classical statistical approaches to describe the health of populations. Topics include dynamic behavior of disease; usage of rates, ratios and proportions; methods of direct and indirect adjustment, and clinical life table which measures and describes the extent of disease problems. Various epidemiologic study designs for investigating associations between risk factors and disease outcomes are also introduced, culminating with criteria for causal inferences. Application of these disciplines in the areas of health services, screening, genetics, and environmental policy are presented. Influence of epidemiology and biostatistics on legal and ethical issues are also discussed. (3 cr. hrs.) (Fall, Spring). Prerequisites: Eligibility for MATH 1310 and ENGL 1010.

HONS 2960  Honors Forum I
The Honors Forum is a seminar for the discussion of various ideas and topics arising from outside reading or activities. Emphasis is on the preparation, presentation, discussion, and analysis of these topics, as well as on effective communication of ideas. Guest speakers and field trips are also often part of the Forum. Each semester will have a different topic as its underlying theme, with readings and activities changing accordingly. Students can repeat the Honors Forum twice and earn three credits hours
HUMA 2010  The Sexes in Art & Literature
The relationships between the sexes as revealed in works of art and literature from ancient Egypt through the 17th Century. (3 cr. hrs.) (ASN). Prerequisite: HUMA 1010 and ENGL 1010. Writing in content area. Upper-level course. Meets SUNY General Education requirement in Western Civilization or Humanities.

HUMA 2030  General Linguistics
Historical, psychological, structural, geographic and sociological aspects of language. (3 cr. hrs.) (ASN). Prerequisite: ENGL 1010 Upper-level course. Meets SUNY General Education requirement in Humanities.

HUMA 2070  Women in the Humanities
Women as authors, artists, historians, scientists, and philosophers from pre-history to present. (3 cr. hrs.) (ASN). Prerequisite: ENGL 1010. Writing in content area. Upper-level course. Meets SUNY General Education requirement in Humanities.

HUMA 2200  Irish Culture
Examines the humanistic endeavors of the Irish culture to present a panoramic and historical view of this culture’s artistic, literary, musical, philosophical, and religious achievements. (3 cr. hrs.) (ASN). Prerequisite: ENGL 1010. Writing in content area. Upper-level course. Meets SUNY General Education requirement in Humanities.

HOSP 1000  Introduction to Hospitality
A management perspective in introducing the organization and structure of hotels, restaurants, clubs, cruise ships, and casino hotels. Topics also include business ethics, franchising, management contracts, and areas of management responsibility such as human resources, marketing and sales, and advertising. (4 cr. hr.) (ASN). Lecture / Hybrid.

HOSP 2960  Hospitality Practicum
Practice in a supervised work setting to use skills and knowledge acquired in hospitality and other courses. The practicum experience is a minimum of 180 hours and includes a weekly on-campus seminar used for discussion of thepracticum experiences and for assessment of learning. (4 cr. hrs.) (ASN). Prerequisites: HOSP 1000.

HUSR 1000  Achievement Motivation
Experience and learn what achievement motivation is, how much of it an individual has, and how to increase it. Experience defining and setting goals through games, simulated life experiences, a programmed text, and individual and group activities. Opportunity to learn about self and to experience how sharing human resources allows for personal growth. (3 cr. hrs.) (Fall, Spring). Usually taught on weekends. Lecture/group activities. Fee $15.

HUSR 1010  Human Services I
Human services worker’s role and the delivery system. Values, vocabulary, and skills appropriate to human services. (3 cr. hrs.) (Fall, Spring). Prerequisite: Eligible to take ENGL 1010. Lecture and required field trips.

HUSR 1030  Introduction to Helping Skills and Pre-Practicum
Fundamental skills useful in helping relationships: listening, interviewing, confrontation, and problem solving. Video tape sessions provided feedback for evaluation of skills. (3 cr. hrs.) (Fall, Spring). Prerequisite: HUSR 1030. Lecture/skills practice/field trips required. Writing in content area.

HUSR 1040  Human Services II
Further exploration of the human services delivery system. The emphasis is on local resources. Interviewing, case management, using supervision, self-care and team building skills are also enhanced. (3 cr. hrs.) (Fall, Spring). Prerequisite: HUSR 1030. Lecture/skills practice/field trips required. Writing in content area.
HUSR 1070  Death and Dying
Examines the highly controversial responses to death, dying and dying people, and the social/psychological patterns surrounding them. Grief, funeral customs, suicide, and euthanasia are explored. (3 cr. hrs.) (ASN).

HUSR 1110  Substance Use Disorder Counseling I
Introduction to the basic requirements of education, employment, knowledge, core skills of counselors entering the chemical dependency field. Overview includes other behavioral disorders such as gambling and sex. (3 cr. hrs.) (Fall, Spring).

HUSR 1121  Codependency and the Family
An introductory overview of codependency and the dynamics of dysfunctional families. Emphasis on how these relate to substance abuse and compulsive disorders in general. Particularly appropriate for students of substance abuse counseling and family counseling. (1 cr. hr.) (ASN).

HUSR 1211  Managing Disruptive Behavior
Dealing with aggressive and abusive behavior. Intervention on an interpersonal level, including understanding, calming, physical restraint and prevention. (1.5 cr. hrs.) (Fall, Spring). Students cannot earn credit for this course and HUSR 1221. Lecture/skills practice.

HUSR 1221  Therapeutic Crisis Intervention
Provides the skills, knowledge, and confidence to deal with children in crisis, to be in control in a crisis situation, and to help a child learn and grow from the experience. (1.5 cr. hrs.) (Fall, Spring). Ability to restrain a physically aggressive individual is essential. Students cannot earn credit for this course and HUSR 1211.

HUSR 1510  Group Dynamics
This course is an overview of group therapies, stages, processes and problems that occur in group settings. It includes confidentiality and ethics in group environments. (3 cr. hrs.) (Fall). Lecture/group activities. Writing in content area.

HUSR 1520  Intro to Differing Abilities
This course is designed to introduce students to the concept of disability and to increase the awareness of strengths in individual differences. The history, etiology, and characteristics of disabilities will be examined. There will be a review of laws relevant to individuals with disabilities as well as a review of programs and services designed to meet the needs of those individuals. In addition, the course will include a review of current research initiatives regarding disabilities. (3 cr. hrs.) (Spring).

HUSR 1530  Aging in the 21st Century
Issues facing an elderly population and a society containing a large and growing proportion of elderly. Serve the needs of those who work or plan to work with the elderly. (3 cr. hrs.) (Fall).

HUSR 1540  Developmentally Disabled Adult
Developmentally disabled adults and programs that assist them. Current programs, services, trends, and training is essential for staff working in community-based residential and day programs. (3 cr. hrs.) (ASN).

HUSR 1581  Working with Abused Clients, Perpetrators and Survivors I
Concepts of abuse in connection to child abuse/neglect, sexual abuse, domestic violence, rape and elder abuse. Local resources and services for victims. Meets the training requirements of mandated reporters and Human Services majors. (1.5 cr. hrs.) (ASN).

HUSR 1582  Working with Abused Clients, Perpetrators and Survivors II
Includes at risk populations, safety, interviewing skills, information, prevention techniques, effects of violence on children, and resiliency and survival. (1.5 cr. hrs.) (ASN). Prerequisite: HUSR 1581.

HUSR 1590  Work with Child & Youth at Risk
Provides an overview of the factors creating risk for children and youth in the family and society, and the individual characteristics of risk and resilience in children and youth. Includes children and youth at risk in education, for substance abuse and addiction, crime and delinquency and other topics. Strategies and issues for prevention and intervention. (3 cr. hrs.) (ASN).

HUSR 1610  Grant Writing
Skills necessary to write, present, and submit a winning grant proposal: Research, writing, interpersonal, computer, team work, psychological, promotional, and budgeting. (3 cr. hrs.) (ASN). Prerequisite: Must be eligible to take ENGL 1010. Writing in content area.

HUSR 1620  Ethics for Human Services/Chemical Dependency Counselors
Identification and analysis of ethical decision making are reviewed along with its impact on the health, safety and recovery of persons or families. Ethical standards are discussed. Identifying unethical behavior and misconduct is covered, along with problem solving options within the helping professions. (3 cr. hrs.) (Spring). Writing in content area.

HUSR 2010  Substance Use Disorder Counseling II
This course deals with clients’ substance abuse problems. It enhances skills and techniques related to the specific needs of substance-dependent clients. Current research and methods provide a multi-dimensional approach. (3 cr. hrs.) (Spring). Prerequisites: HLTH 1202, HUSR 1110, and HUSR 1030.

HUSR 2960  Human Services Practicum I
Practice of helping skills in a supervised work setting at a human services agency. Students select agency and schedule practicum hours around classroom activities. Weekly seminar on campus to assess performance and learn new skills. (6 cr. hrs.) (Fall, Spring). Prerequisite: Grade of C or higher in HUSR 1010, 1030, 1040 and department chair consent. Supervised work-learning experience and seminar.

HUSR 2961  Human Services Practicum II
Practice of helping skills in a supervised work setting at a human services agency. Students select agency and schedule practicum hours around classroom activities. Weekly seminar on campus to assess performance and learn new skills. (6 cr. hrs.) (Fall, Spring). Prerequisite: Grade of C or higher in HUSR 1010, 1030, 1040 and department chair consent. Supervised work-learning experience and seminar.
HUSR 2963  Chemical Depend Practicum I
Building on the knowledge and skills learned in class, students use them in a professional setting. Exploration of personal beliefs, ideas, characteristics, values, ethics, etc. as they apply to the field of chemical dependency counseling. (6 cr. hrs.) (Fall, Spring). Prerequisites: Grade of C or higher in HUSR 1110, HUSR 1030 and 1040, and credit for HUSR 1510 and HLTH 1202, and Department Chair permission. Supervised work-learning experience and seminar. Consent.

HUSR 2964  Chemical Depend Practicum II
Building on the knowledge and skills learned in class, students use them in a professional setting. Exploration of personal beliefs, ideas, characteristics, values, ethics, etc. as they apply to the field of chemical dependency counseling. (6 cr. hrs.) (Fall, Spring). Prerequisites: Grade of C or higher in HUSR 1110, HUSR 1030 and 1040, and credit for HUSR 1510 and HLTH 1202, and Department Chair permission. Supervised work-learning experience and seminar. Consent.

INTD  Service Learning
Division of Professional Studies

INTD 1000  Service Learning
Requirements, obligations, and strategies for successful community service. Historical impact of community service in U.S. society. Emphasis on benefits of civic engagement and lifelong community involvement. Setting work and commitment expectations, identifying skills, and learning basic skills essential to volunteer situations. (1 cr. hr.) May be taken up to 3 times for a total of not more than 3 credit hours.

ITAL  Italian
Division of Humanities and Social Sciences
Faculty: Michael Beykirch

ITAL 1010  Elementary Italian Conversation and Structure I
Italian vocabulary and expressions. Listening comprehensions, speaking ability, and reading and writing. For students with little or no background in the language. (4 cr. hrs.) (ASN). Lecture/recitation/laboratory. Meets SUNY General Education requirement in Foreign Languages.

ITAL 1020  Elementary Italian Conversation and Structure II
Additional practice in conversation, development of reading and writing skills, and a systematic study of Italian grammar. (4 cr. hrs.) (ASN). Prerequisite: ITAL 1010. Lecture/recitation/laboratory. Meets CCC General Education requirement in Foreign Languages.

ITAL 2010  Intermediate Italian I
Development of facility in reading, writing, and speaking and understanding the language through systematic review and continued study of its structures. (4 cr. hrs.) (ASN). Prerequisite: ITAL 1020. Lecture/recitation/laboratory. Upper-level course. Meets CCC General Education requirements in Foreign Languages.

LATN  Latin
Division of Humanities and Social Sciences
Faculty: Michael Beykirch

LATN 1010  Elementary Latin I
Introduction to basic grammar and vocabulary of Latin; oral reading and translation of brief passages of prose; attention to historical background, cultural connections, and word origins. (3 cr. hrs.) (ASN). Meets SUNY General Education requirement in Foreign Language.

LATN 1020  Elementary Latin II
Continuation of LATN 1010, broadening range of vocabulary and syntax; increased emphasis on reading and translating passages from Classical authors. (3 cr. hrs.) (ASN). Prerequisite: LATN 1010 or one year of Latin study. Meets SUNY General Education requirement in Foreign Language.

LEAR  Learning Skills
Division of Humanities and Social Sciences

LEAR 1010  Strategies of Academic Success
Theory and skills of academic success. Understanding and developing positive attitudes toward learning, increasing motivation, assessing academic skills needed for success, learning to make effective decisions, and how to set and achieve short- and long-term goals. (1 cr. hr.) (ASN). Students cannot earn credit for this course and LEAR 1030.

MACH  Machine Tool Technology
Division of STEM
Faculty: Dale Crandall, John Longwell, Michael Prechtl, Michael Reynolds

MACH 1040  Precision Machining I
Use of hand tools to produce layouts and objects. Theory and practice of grinding tool bits, turning, facing, taper turning, boring and thread cutting on lathe and drill sharpening. Operation and setup of lathes, grinders, mills, drill presses. Identification, demonstration and application of machine shop safety equipment and procedures. Second semester focuses on more advanced theory and projects. (5 cr. hrs.) (Fall). Prerequisite: Math 1015 recommended. Lecture/laboratory. Lab fee.
MACH 1250  Metallurgy for the Machinist
Metallurgy as applied to machining operations. Structure of metals, thermal processing, hardness and mechanical testing, metals (steel, stainless steel, copper, aluminum, irons), tooling materials, near net shape processes. Lab demonstrations include hardness and mechanical testing. (3 cr. hrs.) (ASN). Lecture/demonstration.

MACH 1540  Precision Machining II
Theory and practice of turning, facing, taper turning, boring and thread cutting on lathe, and drill sharpening. Operation and setup of lathes, grinders, mills, drill presses. Identification, demonstration and application of machine shop safety equipment and procedures. Semester focuses on more advanced theory and projects. (5 cr. hrs.) (Fall, Spring). Prerequisites: MACH 1040, MACH 1540, and MECH 1560.

MACH 2350  Machine Tool Co-Op
Students will be placed in local machining companies where they will experience production-related issues and problems. Includes meetings with faculty, worksite supervisor, and completion of workbook and term paper describing job-related activities. (3 cr. hrs.) (Summer). Prerequisites: MACH 1040, MACH 1540, and MECH 1560.

MACH 2380  Mastercam I
Introduces the principles and procedures used in PC based CAD/CAM part programming. Uses Mastercam, a PC-based CAD/CAM system, to produce complex machined parts from detailed drawings on advanced CNC machine tools. Topics include basic and advanced CAD/CAM principles and procedures and identification, demonstration and application of machine shop safety equipment and procedures. (3 cr. hrs.) (Fall, Spring). Prerequisites: TECH 1080 or MACH 1040; MECH 1050 and 1560. Lecture/laboratory. Lab fee.

MACH 2400  CNC Machining
Use of advanced CNC machine tools in the manufacture of metal parts. Emphasis on automatic tool changers, multiple work coordinates, tapping, machining and tool monitoring. Advanced programming using sub-routines and helical interpolation for three and four axis machining centers. Identification, demonstration and application of machine shop safety equipment and procedures. (5 cr. hrs.) (Fall). Prerequisites: MECH 1560 and MACH 1040. Lecture/laboratory. Lab fee.

MACH 2410  Tooling Technology
Theory and practice of advanced metal cutting. Design and building of jigs and fixtures to properly locate and hold parts for metalworking. Lectures supplemented by demonstrations of current tooling and manufacturing techniques by industrial representative. Identification, demonstration and application of machine shop safety equipment and procedures. (4 cr. hrs.) (Spring). Prerequisites: MACH 2400. Lecture/Laboratory. Lab fee.

MACH 2510  CNC Lathe Programming
Introduces basic and intermediate concepts associated with M & G code programming (in the Fanuc format) for two axis CNC lathes. Students will learn how to write the codes necessary to create parts on state-of-the-art CNC turning centers, and the basic set-up procedures associated with operating these advanced machine tools. Topics will also include manual programming, advanced canned cycle programming and sub-programming, as well as identification, demonstrations and application of machine shop safety procedures. Students will utilize the advanced CNC laboratory to machine parts from the programs they create. (3 cr. hrs.) (Fall). Prerequisite: MACH 1040. Prerequisite or co-requisite: MECH 1050. Lecture/laboratory.

MATH 1120  Elementary Functions I
Topics include: addition, subtraction, multiplication, and division of fractions, decimals, and signed numbers. (1 eq. cr. hr.) (Fall, Spring). Does not fulfill degree or program requirements. Students must earn a B- or higher to pass. No C or D grades. For certain topics and portions of exams, no students will be allowed to use a calculator.

MATH 0860  Basic Math Review
Basic computational skills. Basic operations of whole numbers, integers, fractions, and decimals; ratios, proportions, and percents; averages, exponents and square roots; introduction to algebra; applications; math anxiety, study and test taking skills. (4 eq. cr. hrs.) (Fall, Spring). Prerequisite: Mathematics Diagnostic Exam. Does not fulfill program or degree requirements. Students must earn a B- or higher to pass. No C or D grades. For certain topics and portions of exams, no students will be allowed to use a calculator.

MATH 1140  Math for Nursing I
Theory and practice of advanced metal cutting. Design and building of jigs and fixtures to properly locate and hold parts for metalworking. Lectures supplemented by demonstrations of current tooling and manufacturing techniques by industrial representative. Identification, demonstration and application of machine shop safety equipment and procedures. (3 cr. hrs.) (ASN). Lecture/demonstration.

MATH 1610  Calculus I
Math 1110  Structures of Math I
Math 1120  Structures of Math II
Math 1130  Math for El. Ed. I
Math 1140  Math for El. Ed. II
Math 1215  College Math I
Math 1220  College Math II
Math 1225  College Math II
Math 1310  Elementary Statistics
Math 1240  Elements of Applied Math II
Math 1240  Elements of Applied Math II
Math 1410  Probability and Statistics
Math 2410  Calculus III
Math 2610  Intro to Linear Algebra
Math 2560  Ordinary Differential Eq.
Math 2620  Pre-Algebra
Math 1015  Introductory Algebra
Math 1005/1006  Math for Nursing I and II
Math 1110  Structures of Math I
Math 1120  Structures of Math II
Math 1130  Math for El. Ed. I
Math 1140  Math for El. Ed. II
Math 1215  College Math I
Math 1220  College Math II
Math 1225  College Math II
Math 1310  Elementary Statistics
Math 1240  Elements of Applied Math II
Math 1411  Elementary Functions I
Math 1412  Elementary Functions II
Math 1610  Calculus I
Math 1620  Calculus II
Math 2330  Discrete Structures
Math 2410  Probability and Statistics
Math 2610  Calculus III
Math 2560  Ordinary Differential Eq.
MATH 1005  Math for Nursing I
This course is the first in a two-course sequence designed for students in the Nursing Program. Students will develop their skills in dimensional analysis for unit conversion and dosage calculation. Proportional thinking will be used to evaluate results. The International System (SI) of Units and non-SI units will be studied. For certain topics and portions of exams, no students will be allowed to use a calculator. Does not fulfill Nursing program math requirement. (1 cr. hr.) (Fall). Prerequisite: MATH 0960 or placement in MATH 1015 or higher. Intended for students who are preparing to enter NURS 1100 or currently enrolled in NURS 1100.

MATH 1006  Math for Nursing II
This course is the second in a two-course sequence designed for students in the Nursing Program. Students will develop skills to solve clinical calculation problems, calculate pediatric dosages, and calculate intravenous (IV) dosages that incorporate drip rates and body weights. For certain topics and portions of exams, no students will be allowed to use a calculator. Does not fulfill Nursing program math requirement. (1 cr. hr.) (Spring). Prerequisite: MATH 1005 or eligible to enroll in NURS 1500.

MATH 1015  Introductory Algebra
This course develops problem-solving skills as students learn the fundamentals of algebra. Linear, quadratic, rational equations and linear systems will be solved. Linear and polynomial equations will be graphed. An emphasis will be placed on analyzing various types of graphs and using the basic tools of algebra and graphical analysis in meaningful application. (4 cr. hrs.) (Fall, Spring). Prerequisite: MATH 0860, MATH0960 or placement. Cannot receive credit for this course if previously received credit for MATH 1013 or MATH 1011/1012.

MATH 1110  Structures of Mathematics I
Topics include problem-solving techniques and number patterns, base systems, numeration systems, number theory, and the study of the natural through the complex number systems. (3 cr. hrs.) (Fall, Spring). Prerequisite: MATH 1015, placement, or equivalent math background. Designed for students who wish to end their mathematics education after meeting minimum degree requirements.

MATH 1120  Structures of Mathematics II
Topics include sets, geometry, an introduction to right triangle trigonometry, counting principles, probability, and an introduction to statistics. (3 cr. hrs.) (Fall, Spring). Prerequisite: MATH 1015, placement, or equivalent math background. Designed for students who wish to terminate their mathematics education after meeting minimum degree requirements. Meets SUNY General Education requirement in Mathematics.

MATH 1130  Math for Elementary Teachers I
Develops a comprehensive understanding of the mathematical curriculum as recommended by the National Council of Teachers of Mathematics Standards. Topics include foundations for learning mathematics, fundamental concepts, the four fundamental operations of arithmetic, number theory, and extending the number system. (3 cr. hrs.) (Fall, Spring). Prerequisite: MATH 1015. Cannot receive credit for this course and MATH 1110.

MATH 1140  Math for Elementary Teachers II
This course is the second of a two-semester sequence for the prospective Pre-K through Grade 6 teacher. Students will develop a comprehensive understanding of the mathematical curriculum as recommended by the National Council of Teachers of Mathematics (NCTM) Standards. Topics will include: proportional reasoning, data and chance, basic two-dimensional and three-dimensional geometry, congruence transformations, symmetry, tessellations, similarity, fraction sense, perimeter and area, and surface area and volume. (3 cr. hrs.) (Spring). Prerequisite: MATH 1015. Cannot receive credit for both MATH 1120 and MATH 1140. Meets SUNY General Education requirement in Mathematics.

MATH 1215  College Mathematics I
This course is the first of a two-semester sequence designed to meet the SUNY General Education Standards. The primary emphasis in this course is to use mathematics to solve problems. Topics include: functions, modeling with functions, linear functions, systems of linear equations and inequalities, composition and inverse functions, quadratic and higher order polynomial functions. (3 cr. hrs.) (Fall, Spring). Prerequisite: MATH 1015 or placement. Cannot receive credit for this course if previously received credit for MATH 1210 or MATH 1230 - MATH 1240. A graphing calculator is required; Texas Instruments TI-83 or TI-84 recommended. Meets SUNY General Education requirements in Mathematics.

MATH 1225  College Mathematics II
This course is the second of two-semester sequence designed to meet the minimum mathematics needs of college students. The primary emphasis in this course is to use mathematics to solve problems. Topics include: exponential functions, logarithmic functions, rational functions, power functions, and trigonometric functions. (3 cr. hrs.). Prerequisite: MATH 1215. Cannot receive credit for this course if previously received credit for MATH 1220 or MATH 1230-1240. A graphing calculator is required; Texas Instruments TI-83/84 recommended. Meets SUNY General Education requirements in Mathematics.

MATH 1230  Elements of Applied Math I
Primarily for students enrolled in the technology programs. Problems in science and engineering are stressed. First semester includes algebraic operations review, functions and graphs, trigonometric functions and graphs, vectors and oblique triangles. (3 cr. hrs.) (Fall, Spring). Prerequisite: High school algebra and geometry or MATH 1015. Cannot receive credit for this course if previously received credit for MATH 1210-1220 or MATH 1215-1225. A graphing calculator is required; Texas Instruments TI-83 or TI-84 recommended. Meets SUNY General Education requirement in Mathematics.

MATH 1240  Elements of Applied Math II
Second semester of a two-semester sequence. Primarily for students enrolled in the technology programs. Problems in science and engineering are stressed. Topics include systems of equations, factoring, algebraic fractions, quadratic equations, exponential and logarithmic functions, analytic geometry and complex numbers. (3 cr. hrs.) (Fall, Spring). Prerequisite: MATH 1230. Cannot receive credit for this course if previously received credit for MATH 1210-1220 or MATH 1215-1225. A graphing calculator is required; Texas Instruments TI-83 or TI-84 recommended. Meets SUNY General Education requirements in Mathematics.

MATH 1310  Elementary Statistics
An intuitive approach to statistics. Analysis and description of numerical data using frequency distributions, histograms and measures of central tendency and dispersion, elementary theory of probability with applications of binomial and normal probability distributions, sampling distributions, confidence intervals, hypothesis testing, chi-square, linear regression, and correlation. The statistical computer language Minitab will be used. (4 cr. hrs.) (Fall, Spring). Prerequisite: MATH 1215, 1230.
MATH 1411  Elementary Functions I
Semester includes definitions and axioms of the number systems, inequalities, absolute value, graphical analyses of polynomial and rational functions, systems of equations, matrices, and determinants. (3 cr. hrs.) (Fall, Spring). Prerequisite: Three years of high school math including intermediate algebra and trigonometry, MATH 1225 or MATH 1240. Cannot take both MATH 1411-1412 and MATH 1413 for credit. A graphing calculator is required; Texas Instruments TI-83 or TI-84 recommended. Meets SUNY General Education requirement in Mathematics.

MATH 1412  Elementary Functions II
This course is the second semester of a two semester sequence to prepare students to take Calculus. The course thoroughly studies trigonometric functions of real numbers, including their graphs, and trig identities and applications of trigonometry. Analytical geometry is covered and an introduction to polar coordinates. Mathematical induction and the binomial theorem are also introduced. (3 cr. hrs.) (Spring). Prerequisite: MATH 1411. Cannot take both MATH 1411-1412 and MATH 1413 for credit. A graphing calculator is required; Texas Instruments TI-83 or TI-84 recommended. Meets SUNY General Education requirements in Mathematics.

MATH 1413  Pre-Calculus Mathematics
The characteristics of elementary real functions including algebraic and graphical analysis, inequalities, absolute values, logarithms, trigonometry of real numbers, plane analytic geometry, polar coordinates, complex numbers and Binomial Theorem. (4 cr. hrs.) (Fall, Spring). Prerequisite: Four years of high school math, MATH 1225 or MATH 1240. Cannot take both MATH 1411-1412 and MATH 1413 for credit. A graphing calculator is required; Texas Instruments TI-83 or TI-84 recommended. Meets SUNY General Education requirements in Mathematics.

MATH 1510  Fundamental Concepts of Calculus I
Beginning calculus for business, technology and the social and life sciences. Applications are stressed. Limits, rules for differentiation, higher-order and implicit differentiation, related rates, extrema, optimization and curve sketching. (3 cr. hrs.) (Fall, Spring). Prerequisites: MATH 1225 or MATH 1240 or equivalent. A graphing calculator is required; Texas Instruments TI-83 or TI-84 recommended. Cannot receive credit for this course and MATH 1610. Meets SUNY General Education requirements in Mathematics.

MATH 1520  Fundamental Concepts of Calculus II
Introduction to integral calculus; differentiation and integration of exponential, logarithmic and trigonometric functions; further integration techniques; brief introduction to differential equations. (3 cr. hrs.) (ASN). Prerequisite: MATH 1510. Cannot receive credit for this course and MATH 1610. A graphing calculator is required; Texas Instruments TI-83 or TI-84 recommended.

MATH 1610  Calculus I
The first semester of differential and integral single variable calculus. Basic theory using algebraic and trigonometric function and applications are covered concurrently. Topics include limits, derivatives, considered algebraically and graphically, differentials and their use as approximations, the indefinite and definite integrals with applications to areas, volumes, surface area, arc length, moments and center of mass. (4 cr. hrs.) (Fall, Spring). Prerequisite: Four years of high school math, including pre-calculus, or either MATH 1411-1412 or MATH 1413. Cannot receive credit for this course and MATH 1510-1520. A graphing calculator is required; Texas Instruments TI-83 or TI-84 recommended. Meets SUNY General Education requirement in Mathematics.

MATH 1620  Calculus II
A continuation of Calculus I. Topics include calculus of conics, logarithmic, exponential, and hyperbolic functions, techniques of integration, infinite series, parametric equations and polar coordinates. (4 cr. hrs.) (Fall, Spring). Prerequisite: MATH 1610. A graphing calculator is required; Texas Instruments TI-83 or TI-84 recommended. Meets SUNY General Education requirement in Mathematics.

MATH 2330  Discrete Structures
Discrete mathematical foundations and their relationship to computing. Sets and set relations, functions, graphs and digraphs, trees and strings, permutations and combinations, Boolean algebra, algebraic structures and concepts. (3 cr. hrs.) (ASN). Prerequisite: MATH 1411 or higher. Meets SUNY General Education requirement in Mathematics.

MATH 2350  Introduction to Proofs

MATH 2410  Probability and Statistics I
Introduces the basic concepts of probability theory. Topics include descriptive statistics, axioms of probability, conditional probability, independence, continuous and discrete random variables, distribution functions, expectation, variance, and the Central Limit Theorem. Mathematical software will be used to reinforce concepts. (3 cr. hrs.) (ASN). Prerequisite: MATH 1620. Meets SUNY General Education requirement in Mathematics.

MATH 2560  Introduction to Linear Algebra
An introductory course in linear algebra, blending theory, computational techniques and applications. Includes vector spaces, determinants, systems of linear equations, algebra of matrices, inner product spaces, mapping, subspaces, bases, linear transformations, and eigenvectors. (3 cr. hrs.) (ASN). Prerequisite: MATH 1620. A graphing calculator is required; Texas Instruments TI-83 or TI-84 recommended. Meets SUNY General Education requirement in Mathematics.

MATH 2610  Calculus III
Ordinary differential equations, including first and second order equations; applications in science, engineering, and geometry; the use of infinite series and complex numbers in solving equations; a discussion of nth order linear differential equations; an introduction to LaPlace transforms; numerical methods and systems of differential equations. (4 cr. hrs.) (Fall). Prerequisite: MATH 1620. A graphing calculator is required; Texas Instruments TI-83 or TI-84 recommended. Meets SUNY General Education requirement in Mathematics.

MATH 2620  Ordinary Differential Equation
Ordinary differential equations, including first and second order equations; applications in science, engineering, and geometry; the use of infinite series and complex numbers in solving equations; a discussion of nth order linear differential equations; an introduction to LaPlace transforms; numerical methods and systems of differential equations. (4 cr. hrs.) (Spring). Prerequisite: MATH 1620. A graphing calculator is
MCOM Media Communications
Division of Humanities and Social Sciences
Note: These courses may be used to fulfill humanities, liberal arts, and free elective degree requirements.
Faculty: Maarit Clay, Paul McNaney

MCOM 1010 Media and Society: Introduction to Mass Communication
An introduction to mass media, its influences on society, and the business of mass media. The media will include the Internet, digital media, digital gaming, sound recording, broadcast and print media. The business of mass media includes advertising, public relations, and media economics, along with ethical expression. (3 cr. hrs.) (ASN). Prerequisite: Eligible to enroll in ENGL 1010.

MCOM 1510 Basic Filmmaking
Introduction to the tools and techniques of filmmaking. Exercises span a variety of short film genres including silent, documentary, fictional narrative, and music video. Includes storyboarding, script writing, camera operation, sound recording, lighting, and editing. (3 cr. hrs.) (ASN). Eligible to enroll in ENGL1010. Lecture/Studio/Field.

MCOM 2150 Basic TV Production Techniques
Introduction and exercises in the use of the tools of television production. Includes camera operation, audio and video switching, lighting, basic script writing, and editing. (3 cr. hrs.) (ASN). Prerequisite: ENGL 1010. Lecture/studio. Upper-level course.

MCOM 2160 TV: Production & Performance
Television scripting, directing and acting in a variety of formats including broadcast journalism, the interview, daytime drama and sitcom. (3 cr. hrs.) (ASN). Prerequisites: ENGL 1020 and MCOM 1510 or MCOM 2150 or THEA 1020. Writing in content area. Lecture/studio. Upper-level course.

MCOM 2700 The History of Film I
An introduction to film, including its artistic, cultural, technological, and historical development and impact from 1900 to 1950. Eight to ten films will be viewed. (3 cr. hrs.) (ASN). Prerequisite: ENGL 1020. Students may be required to attend films at commercial venues or rent videos. Some films will contain graphic depiction of adult themes and attitudes. Writing in content area. Upper-level course. Meets SUNY General Education requirement in Humanities.

MCOM 2710 The History of Film II
An introduction to film, including its artistic, cultural, technological, and historical development and impact from 1950 to present. Eight to ten films will be viewed. (3 cr. hrs.) (ASN). Prerequisite: ENGL 1020. Students may be required to attend films at commercial venue or rent videos. Some films will contain graphic depiction of adult themes and attitudes. Writing in content area. Upper-level course. Meets SUNY General Education requirement in Humanities.

MCOM 2961 Radio/TV Internship
Practical work experience under the guidance of an on-the-site work supervisor. The internship may not be taken for pay. (1 cr. hr.) (ASN).

MCOM 2962 Radio/TV Internship
Practical work experience under the guidance of an on-the-site work supervisor. The internship may not be taken for pay. (2 cr. hrs.) (ASN).

MCOM 2963 Radio/TV Internship
Practical work experience under the guidance of an on-the-site work supervisor. The internship may not be taken for pay. (3 cr. hrs.) (ASN).

MCOM 2971 Journalism/Technical Writing, Public Relations Internship
Journalism/Technical Writing, Public Relations Internship Practical work experience under the guidance of an on-the-site work supervisor. The internship may not be taken for pay. (1 cr. hr.) (ASN).

MCOM 2972 Journalism/Technical Writing, Public Relations Internship
Journalism/Technical Writing, Public Relations Internship Practical work experience under the guidance of an on-the-site work supervisor. The internship may not be taken for pay. (2 cr. hrs.) (ASN).

MCOM 2973 Journalism/Technical Writing, Public Relations Internship
Journalism/Technical Writing, Public Relations Internship Practical work experience under the guidance of an on-the-site work supervisor. The internship may not be taken for pay. (3 cr. hrs.) (ASN).

MECH Mechanical Technology
Division of STEM
Faculty: Dale Crandall, Debra Dudick, John Longwell, Michael Prechtl, Michael Reynolds

MECH 1050 Engineering Graphics I
Engineering graphics fundamentals, incorporating both manual and computer-aided drafting. Includes freehand sketching, principles of applied geometry, multiview drawings, dimensioning, sectioned views, pictorals, conventional drawing practices and standards, and an introduction to AutoCAD. (3 cr. hrs.) (Fall, Spring). Prerequisite: MATH 1015. Lecture/lab. Lab Fee.

MECH 1060 Technical Mechanics
A problem-solving course covering free body diagrams, vectors and vector computations, force systems, moments of forces, couples and equilibrium. The concept of kinematics; the study of displacement, velocity, and acceleration as related to both straight line and curvilinear motion. (2 cr. hrs.) (Fall). Prerequisites: MATH 1230 and PHYS 1010. Lecture/Laboratory.

MECH 1550 Engineering Graphics II
Continuation of MECH 1050 utilizing both manual and computer-aided drafting methods to produce engineering drawings. Includes auxiliary views, surface intersections, sheet metal developments, screw threads and fasteners, surface finish specifications, conventional and geometric tolerancing, and assembly drawings, advanced AutoCAD techniques and an introduction to AutoDesk Inventor. (3 cr. hrs.) (Spring). Prerequisite: MECH 1050. Lecture/laboratory. Lab fee.

MECH 1560 CNC Programming
Computer Numerical Control (CNC) program creation for milling machines and machining centers, edit and simulation using Direct Numerical Control (DNC) software, setup and operation of milling
centers to verify program tool paths. (3 cr. hrs.) (Spring). Prerequisites: MATH 1015 and MACH 1040 or TECH 1080. Individual/group projects required. Lecture/laboratory. Lab fee.

MECH 1570 Dimensional Metrology
Introduction to ANSI Y-14.5M standard for geometric dimensioning and tolerancing (GD&T) and various inspection, measurement and testing methods. Includes use of basic inspection tools (rules, verniers, micrometers, dial calipers, indicators), gage blocks, surface plates, bore gages, fixed gages, sine plate, digital height gages, transfer gages, profilometer, optical comparator and coordinate measuring machines (CMM) using software PC-DMIS. Calibration methods and measurement system analysis (MSA) techniques are covered. Field trip to industrial Metrology department. (3 cr. hrs.) (Spring). Prerequisite: MECH 1050 and either MACH 1040 or TECH 1080. Lecture/laboratory. Lab fee.

MECH 2010 Machine Design (Kinematics)
Graphic and analytic approaches to the basic principles of mechanisms. Displacement, velocity and acceleration arecalculated for various linkages. Cams, gears, and gear trains are analyzed. Manual and CAD techniques used. (3 cr. hrs.) (Spring). Prerequisites: CADD 1700, MECH 1060 and MECH 1550. Lecture/laboratory. Lab fee.

MECH 2050 Hydraulics and Pneumatics
Basic components of hydraulics and fluidic systems such as cylinders, valves, and logic elements. Experiments to design and analyze circuits related to power transmission and control. (3 cr. hrs.) (Fall). Prerequisite: MATH 1230, TECH 1120. Lecture/laboratory. Lab fee.

MECH 2170 Strength of Materials
A problem-solving course including analysis of coplanar forces applied to simple structures, the resulting stresses and deformations, and design considerations. Effects of tension, compression, shear, torsion, and bending are studied through problem-solving and laboratory experiences. (4 cr. hrs.) (Spring). Prerequisites: PHYS 1010 and MECH 1060. Lecture/laboratory. Lab fee.

MECH 2210 Materials
Introduction to materials and selection methods. Topics include structure/properties relationships, mechanical properties of metals, strengthening mechanisms, failure analysis phase/transition diagrams, thermal processing/metal alloys, corrosion, near net shape processes. Research paper/presentation. Lab experiments include hardness and mechanical test methods, thermal processing with micromoisture evaluation. (4 cr. hrs.) (Fall). Prerequisite: PHYS 1010, TECH 1110, TECH 1120. Lecture/laboratory. Lab fee.

MEDT 1020 Principles Medical Terminology
Advanced application of principles of medical term building. Students build an extensive medical vocabulary. Covers circulatory, respiratory, gastrointestinal, nervous and endocrine systems and psychiatric conditions. Some self-teaching features and on-line components are included. (1 cr. hr.) (ASN). Prerequisite: MEDT 1010. Internet course.

MEDT 1030 Applied Medical Terminology
Enhances the knowledge of medical terminology related to physiological conditions and treatments modalities. Covers musculoskeletal, integumentary, urinary systems; and oncological, reproductive system, maternal/fetal/neonatal conditions. Some self-teaching features are included. (1 cr. hr.) (ASN). Prerequisite: MEDT 1010. Internet course.

MFGT Manufacturing
Division of STEM
Faculty: Debra Dudick, John Longwell

MFGT 2010 Production Control
Functions of production control, organization, procedures, forecasting, scheduling, materials explosion, loading, and sequencing. Includes economic order quantities, ABC analysis, and inventory planning and control. Various types of production control systems. Practical methods of performing these functions. (3 cr. hrs.) (ASN). Prerequisite: MATH 1230.

MFGT 2020 Quality Management
A basic practical course presented from the industrial engineering standpoint. Includes basic theory in probability and statistics as required for quality control applications. Control concepts and control chart methods for attributes and variables. Acceptance sampling plans, process capabilities, quality costs, Six Sigma, quality control responsibilities, and quality improvement techniques. (3 cr. hrs.) (ASN). Prerequisite: MATH 1240, TECH 1120.

MFGT 2030 Robots in Manufacturing
Operation of a four-axis horizontal assembly robot using AML/E Version 4 language. Set-up and full operation of the robot and the use of a personal computer for program creation and execution. Use of robot simulation software for off-line program development and analysis; robot safety. (3 cr. hrs.) (ASN). Lecture/laboratory. Lab fee.

MFGT 2050 Methods Design and Analysis
Methods design and analysis with concentration on general problems of work measurement. Process and operation analysis, micro-motion study, design of preferred methods, stopwatch studies, related methods for work measurement and evaluation, standard time data and predetermined time systems. (3 cr. hrs.) (ASN). Prerequisite: MATH 1240. Lecture/laboratory. Lab fee.
MGT  Management
Division of Professional Studies
Faculty: Timothy Bonomo, Deborah Dunbar

MGT 2041 Principles of Management
Basic concepts of management using the process approach which identifies four basic functions of management: planning, organizing, leading, and controlling. Emphasis on the applied and theoretical aspects of the subject matter. (3 cr. hrs.) (Fall, Spring). Recommended only for sophomores in a business program.

MGT 2042 Small Business Management
Locating an opportunity, start-up and continuing operation of a small business including developing a business plan, marketing and management. (3 cr. hrs.) (ASN).

MGT 2045 Office Management
Office organization, layout and equipment, systems management, scientific analysis and control, and office personnel. (3 cr. hrs.) (ASN). Lecture/discussion/case problems.

MGT 2047 Human Resource Management
Human resource management in organizations including recruiting, selection, placement, performance appraisals, and labor relations through transactional analysis concepts. (3 cr. hrs.) (ASN). Lecture/discussion/simulation exercises.

MGT 2960 Managerial Field Experience
Practice of managerial skills in a supervised work setting. A field experience journal, paper, and a supervisor evaluation will be used to assess performance. (3 cr. hrs.) (ASN). Prerequisites: GPA 2.75 or better and MGMT 2041.

MKTG  Marketing
Division of Professional Studies
Faculty: Timothy Bonomo

MKTG 2050 Principles of Marketing
Interrelationship of marketing to the other business functions. Problems concerning product, planning, pricing, promoting, and distributing goods and services to markets. Role of the consumer from the viewpoint of the marketing manager. (3 cr. hrs.) (ASN).

MKTG 2058 Principles of Selling
Study of successful personal selling. Analysis of buying motives, location of prospects, developing the approach, demonstration techniques, handling objectives, and closing the sale. (3 cr. hrs.) (ASN).

MUSC  Music
Division of Humanities and Social Sciences
Faculty: Loueda Bleiler

MUSC 1110 Music Theory I
Music notation, scales, modes, keys, intervals, simple chord progressions, elementary sight singing, and elementary keyboard accompaniment using primary chords. (3 cr. hrs.) (Fall, ASN). Prerequisite: MUSC1010. Meets SUNY General Education requirement in Humanities.

MUSC 1230 History & Appreciation of Music I
Music in Western Civilization during Medieval, Renaissance, Baroque and classical periods. Essential trends of musical thought and style, formal structures, principles, and selected composers. (3 cr. hrs.) (Fall). Prerequisite: Eligible to enroll in ENGL 1010. Lecture/listening. Meets SUNY General Education requirement in Humanities and Western Civilization.

MUSC 1240 History & Appreciation of Music II
Development of music in western civilization during the nineteenth and twentieth centuries. Essential trends of musical thought and style, formal structures, principles, and selected composers. (3 cr. hrs.) (Spring). Prerequisite: Eligible to enroll in ENGL 1010. Lecture/listening. Meets SUNY General Education requirement in Humanities and Western Civilization.

MUSC 1311 Instrumental Performing Ensemble
Participation in one or more instrumental areas. Depending on student interest and potential instrumentation, such groups might include a stage band, a brass ensemble, or a string trio. (1 cr. hr.) (Fall, Spring). Ensemble/rehearsal/performance. Meets SUNY General Education requirement in the Arts.

MUSC 1312 Class Piano I
Practical knowledge and facility at the keyboard. Approach and content to meet individual need. (1 cr. hr.) (Fall, Spring). Class/laboratory. Meets SUNY General Education requirement in the Arts.

MUSC 1325 Class Guitar I
Practical knowledge and facility in playing the guitar. Approach and content to meet individual need. (1 cr. hr.) (Fall, Spring). Class/laboratory.

MUSC 1411 Vocal Performing Ensemble
Participation in one or more vocal areas. Depending on student interest and potential, groups might include a chorus, chamber singers, male quartet, or women’s chorus. (1 cr. hr.) (Fall, Spring). Ensemble/rehearsal/performance. Meets SUNY General Education requirement in The Arts.

MUSC 1412 Select Vocal Ensemble
A small vocal ensemble open to all students with prior choral experience. The repertoire includes compositions from a wide variety of stylistic choices. (1 cr. hr.) (Fall, Spring). Prerequisite: Instructor consent. Ensemble/rehearsal/performance. Meets SUNY General Education requirement in The Arts.

MUSC 1421 Class Voice I
To improve vocal abilities and knowledge about the singing voice. Vocal techniques applied through the interpretation of song, in class singing and individual solo work. (1 cr. hr.) (Fall). Class/laboratory. Meets SUNY General Education requirement in The Arts.
MUSC 1500  American Musical Theater
A study of American musical theater from the early 1900's to the present with special emphasis upon major contributors, significant works and the progressive development of this art form, and focusing upon historical events and societal changes which have influenced trends in production and performance. (3 cr. hrs.) (ASN). Prerequisite: Students must be eligible to enroll in ENGL 1010.

MUSC 1510  American Popular Music
Designed to help students think creatively and critically about American popular music while learning about its history and the people and institutions that produced it. Special attention given to the interaction of European American, African American, and Latin American traditions. Covering a wide range of popular music styles starting in the 19th century and continuing through the 1990's and beyond. (3 cr. hrs.) (ASN). Prerequisite: Eligible to enroll in ENGL 1010. Lecture/Listening/Discussions.

MUSC 1920  Voice
Repertoire, techniques, and sight reading suggested by the College Proficiency Examination Program and the Handbook for Applied Music of the NYS Education Department. (1 cr. hr.) (Fall, Spring). Prerequisite: Music department’s approval. Meeting time to be arranged with the instructor. Fee for private lessons. Meets SUNY General Education requirement in the Arts.

MUSC 1930  Strings
Repertoire, techniques, and sight reading suggested by the College Proficiency Examination Program and the Handbook for Applied Music of the NYS Education Department. (1 cr. hr.) (Fall, Spring). Prerequisite: Music department’s approval. Meeting time to be arranged with the instructor. Fee for private lessons. Meets SUNY General Education requirement in the Arts.

MUSC 1940  Brass
Repertoire, techniques, and sight reading suggested by the College Proficiency Examination Program and the Handbook for Applied Music of the NYS Education Department. (1 cr. hr.) (Fall, Spring). Prerequisite: Music department’s approval. Meeting time to be arranged with the instructor. Fee for private lessons. Meets SUNY General Education requirement in the Arts.

MUSC 1950  Woodwinds
Repertoire, techniques, and sight reading suggested by the College proficiency Examination Program and the Handbook for Applied Music of the NYS Education Department. (1 cr. hr.) (Fall, Spring). Prerequisite: Music Department’s approval. Meeting time to be arranged with the instructor. Fee for private lessons. Meets SUNY General Education requirement in the Arts.

MUSC 1960  Percussion
Repertoire, techniques, and sight reading suggested by the College Proficiency Examination Program and the Handbook for Applied Music of the NYS Education Department. (1 cr. hr.) (Fall, Spring). Prerequisite: Music Department’s approval. Meeting time to be arranged with the instructor. Fee for private lessons. Meets SUNY General Education requirement in The Arts.

MUSC 1970  Keyboard
Repertoire, techniques, and sight reading suggested by the College Proficiency Examination Program and the Handbook for Applied Music of the NYS Education Department. (1 cr. hr.) (Fall, Spring). Prerequisite: Music Department’s approval. Meeting time to be arranged with the instructor. Fee for private lessons. Meets SUNY General Education requirement in the Arts.

MUSC 1980  Early Instruments
Repertoire, techniques, and sight readings suggested by the College Proficiency Examination Program and the Handbook for Applied Music of the NYS Education Department. (1 cr. hr.) (Fall, Spring). Prerequisite: Music Department’s approval. Meeting time to be arranged with the instructor. Fee for private lessons. Meets SUNY General Education requirement in the Arts.

MUSC 1990  Folk Instruments
Repertoire, techniques, and sight readings suggested by the College Proficiency Examination Program and the Handbook for Applied Music of the NYS Education Department. (1 cr. hr.) (Fall, Spring). Prerequisite: Music Department’s approval. Meeting time to be arranged with the instructor. Fee for private lessons. Meets SUNY General Education requirement in the Arts.

MUSC 2120  Introduction to Harmony
Part writing, harmonic analysis, modulation, melodic and harmonic dictation. (3 cr. hrs.) (Spring). Prerequisite: MUSC 1110. Upper-level course. Meets CCC General Education requirement in Humanities.

MUSC 2130  Reading Vocal Music
Practice of frequently used pitch and rhythm patterns to sing at sight simple melodic and rhythm material found in simple songs, folk songs, art songs, and choral music. Preparation for participation in school and community choruses and church choirs. (2 cr. hrs.) (Fall). Prerequisite: MUSC 1110. Lecture/practice. Upper-level course.

MUSC 2140  Aural Skills I
(New Course) Read and perform written music (sight-reading). Identify and notate heard music (dictation). Skills include aural identification of intervals, primary triads, major and minor scales. Vocal reading includes one and two part diatonic vocal lines in major and minor keys using moveable-do solfege and la-based minor. One and two part rhythm drills include various note values, subdivision of the beat, simple and compound meters, and basic conducting patterns. Dictation exercises include hearing and notating basic diatonic melodies in simple and compound meters with only basic subdivisions of the beat. (2 cr. hrs.) (Spring) Prerequisite: MUSC 1010 or MUSC 1110. Lecture/practice. Upper-level course.

MUSC 2150  Aural Skills II
Read and perform written music (sight-reading). Identify and notate heard music (dictation). Continue to advance the skills introduced in Aural Skills I. Aural Skills II content includes aural identification of intervals, primary triads, scales and basic harmonic progressions. Vocal reading includes one and two part vocal lines in major and minor keys with increasing use of large intervals, chromaticism and modulation, using moveable-do solfege and la-based minor. One and two part rhythm drills include subdivisions of the beat using various note values and meters, syncopation, and irregular or changing meters. Dictation exercises include hearing and notating basic diatonic melodies in simple and compound meters with the inclusion of new melodic and rhythmic concepts introduced in this course. (2 cr. hrs.) (Spring) Prerequisite: MUSC 2140 Aural Skills I. Lecture/practice. Upper-level course.
MUSC 2321 Class Piano II
Extends knowledge and performance developed in MUSC 1321. (1 Cr. hr.) (Fall, Spring). Prerequisite: MUSC 1321. Class/lab. Scheduled to meet at the same time as MUSC 1321. Meets CCC General Education requirement in the Arts. Upper-level course.

MUSC 2325 Class Guitar II
Extends knowledge and performance developed in MUSC 1325. (1 Cr. hr.) (Fall, Spring). Prerequisite: MUSC 1325. Class/lab. Scheduled to meet at the same time as MUSC 1325. Meets CCC General Education requirement in the Arts. Upper-level course.

MUSC 2421 Class Voice II
Extends knowledge and performance developed in MUSC 1421. (1 Cr. hr.) (Fall). Prerequisite: MUSC 1421. Class/lab. Scheduled to meet at the same time as MUSC 1421. Meets CCC General Education requirement in the Arts. Upper-level course.

MUSC 2821 Individual Study: Voice
Basic vocalizes and repertoire to fit individual needs. Includes voice building, correct intonation, breath control, phrasing, and articulation. (1 Cr. hr.) (Fall, Spring). Prerequisite: Music Department's approval. Upper-level course. Meeting time to be arranged. Meets CCC General Education requirement in the Arts.

NURS Nursing
Division of Professional Studies
Faculty: Claudia Haile, Lola Hardy, Chelsea Kemmerer, Gail Ropelewski-Ryan, Lisa Rose, Molly Welch

NURS 0500 Nurse Aide/Home Health Aide Module
Offered for nursing students who have completed two nursing courses (NURS 1100 and NURS 1500 or their equivalent) and plan to work as nurse aides or home health aides. (.5 cr. hr.) (Spring). Prerequisite: NURS 1500 (Not considered a nursing elective or free elective for the Nursing program). Students completing NURS 1500 and this course are eligible to sit for the NYS Certified Nursing Aid Certification exam.

NURS 0501 Nurse Aide/Home Health Aide
Focus is on Maslow’s Hierarchy of Needs. Includes hygiene, activity, ambulation, nutrition, elimination, comfort, safety, psycho-social and spiritual needs. Basic communications techniques and functioning as members of the healthcare team. Introduces elementary nursing process concepts. Students completing this course are eligible to sit for the NYS Certified Nursing Aid Certification Exam. (7 Eq. cr. hrs.) (ASN). Lecture/skill practice/clinical laboratory. Fee. Students must pass a criminal background check, submit required health form with evidence of flu vaccine. Not considered a nursing or a free elective for the Nursing Program.

NURS 1100 Nursing I
The first in a sequence of four nursing courses. Content is based on Maslow’s Hierarchy of Needs and growth and development throughout the life cycle. Students will learn how to meet the physiological needs of the patients within the legal and ethical parameters of the nursing profession. (8 cr. hrs.) (Fall). Prerequisite: Submission of Nursing I eligibility packet (available online or from the Nurse Education Department) verifying successful completion of any developmental work required as a result of CCC assessment test; Eligible for MATH 1215; Biology & Chemistry in high school with a 75% or higher or a college course with a “C” or higher. Professional level CPR certification through an American Heart Association American Red Cross course only; Evidence of current health insurance; Updated health form specific for nursing students must be maintained throughout the program. Obtain a current criminal background check with a company designated by the Nurse Education Department and a Pennsylvania child abuse screening. Program requirements and prerequisites can be found in the “Programs” section of this catalog. Concurrent enrollment or completion of BIOL 1210 with a grade of C or higher (or prior completion of SCIN 1010 or BIOL 2020 with a grade of C or higher). General Assembly Session (4 hrs./wk.), Small Assembly Sessions (2 hrs./wk.), hospital or campus laboratories (9 hrs./wk.). Labs can be assigned during day, evening and/or weekend hours. A grade of C or higher is required to continue in the program; satisfactory and safe performance in the lab is required to pass the course. Some Internet/Blackboard assignments are required in the course. Liability insurance, lab fee, testing fee, and course fee. A required orientation will be held prior to the start of the semester.

NURS 1150 Success in Freshman Nursing
Study techniques for the nursing curriculum. Includes presentation of information and group discussion of progress. (1 Cr. hr.) (Fall). Co-requisite: NURS 1100. Not considered a nursing elective or free elective for the Nursing program.

NURS 1500 Nursing II
This is the second in a sequence of four clinical nursing courses which builds on previously acquired skills and knowledge to provide nursing care to patients with threats to physiological and psychosocial needs within the legal and ethical parameters of the nursing profession. (8 Cr. hrs.) (Spring). Prerequisites: NURS 1100 or equivalent and BIOL 1210 with a grade of C or higher (or completion of SCIN 1010 with a grade of C+ or higher). Completion of or concurrent enrollment of BIOL 1220 with a grade of C or higher (or completion of SCIN 1020 or BIOL 2030 with a grade of C+ or higher. For advanced placement students: Submission of Advanced Placement LPN packet (available on-line or from the Nurse Education Department) verifying successful completion of any developmental work required as a result of CCC assessment test: Eligible for MATH 1215; Biology or Chemistry in high school with a 75% or higher or a college course with a C or higher. Professional level CPR certification through an American Heart Association or American Red Cross course only; Evidence of current health insurance; Updated health form specific for nursing students must be maintained throughout the program. Obtain a current criminal background check with a company designated by the Nurse Education Department and a Pennsylvania child abuse screening. Submission of current LPN license registration and official PN transcript. Program requirements and prerequisites can be found in the “Programs” section of this catalog. General Assembly Session (4 hrs./wk.) Small Assembly Sessions (2 hrs./wk.), hospital or campus laboratories (9 hrs./wk.). Labs can be assigned during day, evening and/or weekend hours. A grade of C or higher is required to continue in the program; satisfactory and safe performance in the lab is required to pass the course. Some Internet/Blackboard assignments are required in the course. Liability insurance, lab fee, testing fee, and course fee.

NURS 1502 Pharmacology for Nurses II
This course is designed to be taken concurrently with NURS 1500. The medications that will be presented will correspond with the class content in NURS 1500. This course will provide the student an opportunity to learn about the characteristics of medications, therapeutic use, adverse reactions and nursing implications. (1 Cr. hr.) (Spring). Concurrent enrollment or completion of NURS 1500. Considered a nursing elective for the nursing program.
NURS 1506 Nutrition: Its Therapeutic Role
Major health issues as they relate to therapeutic nutrition. Selected aspects of nutrition and diet therapy. (1 cr. hr.) (Fall/Spring/Summer). Prerequisite: NURS 1100. Internet course. Designed for health care personnel directly involved with patient care. Considered a nursing elective for the Nursing program.

NURS 1511 Seminar for Entry into Nursing II
Reviews theory and skills from Nursing I to prepare advanced placement or returning students to enter or re-enter Nursing II. Not for students progressing from Nursing I into Nursing II. (1.5 cr. hr.). Fee $10. Prerequisite: NURS 1100 or the equivalent. Not considered a nursing or a free elective for the Nursing program. All prerequisites required for NURS 1500.

NURS 1515 Pediatric Assessment
This course will provide the student with the theory and clinical skill application to complete a pediatric health assessment. (1 cr. hr.) (ASN). Prerequisite: successful completion of Nursing 1100. Considered a nursing elective for the nursing program, not considered as a free elective.

NURS 1550 Success in Freshman Nursing
Study techniques for the nursing curriculum. Includes presentation of information, exam review and discussion of progress. (1 cr. hr.) (Spring). Co-requisite: NURS 1500. Not considered a nursing or a free elective for the Nursing Program.

NURS 1551 Clinical Nursing
Allows students enrolled in the nursing program to utilize in the clinical setting the knowledge, skills, abilities gained in NURS 1100 or NURS 1500 or their equivalent. (1 cr. hr.) (ASN). Prerequisite: Eligible to enroll in NURS 2100. All prerequisites for NURS 1500 with any updates needed. Liability insurance. Considered a nursing elective for the Nursing program. Proof of health insurance, criminal background and child abuse screening results required, CPR and health form required.

NURS 2000 Issues/Perspectives in Nursing
Historical influences, current issues, and trends for the future to understand the evolution of the profession. Nursing and the registered nurse’s role, responsibilities and opportunities in the healthcare delivery system. (2 cr. hrs.) (Fall, Spring, Summer). Prerequisite: NURS 2100 or NURS 2500. A grade of C or higher is required to meet graduation requirements. Writing in content area.

NURS 2100 Nursing III
This is the third in a sequence of four clinical nursing courses which builds on previously acquired skills and knowledge. The focus is on chronic health problems across the life span related to the physiological and psychosocial needs of the patient within the legal and ethical parameters of the nursing profession. (9 cr. hrs.) (Spring). Prerequisites: NURS 1500, BIOL 1210 and BIOL 1220 with a grade of C or higher; prior completion or concurrent enrollment in BIOL 210 with a grade of C or higher; or SCIN 1010, 1020 with a grade of C+ or higher or a grade of C or higher in alternative sciences BIOL 2020, 2030 and either BIOL 2010 or CHEM 1010/1020 or 1510). Professional level CPR certification through an American Heart Association or American Red Cross course; evidence of current health insurance; updated health form specific for nursing students must be maintained throughout the program. Program requirements and prerequisites can be found in the “Programs” section of this catalog. General Assembly Session (4 hrs./wk.), Small Assembly Sessions (2 hrs./wk.), hospital laboratory (11 hrs./wk.). Labs can be assigned during day, evening and/or weekend hours. During planned mental health/community health experiences, lab times may change. The last two weeks of the semester will include 48 hours of clinical that may be days/evenings/weekends. Some Internet/Blackboard assignments are required in the course. A grade of C or higher is required to graduate from the program. Satisfactory and safe performance in the lab is required to pass the course. Liability insurance, lab fee, testing fee and course fee. A required orientation will be held prior to the start of the semester.

NURS 2102 Pharmacology for Nurses IV
This course is designed to be taken concurrently with NURS 2100. The medications that will be presented will correspond with the class content in NURS 2100. This course will provide the student an opportunity to learn about the characteristics of medications, therapeutic use, adverse reactions and nursing implications. (1 cr. hr.) (Fall). Eligibility for concurrent enrollment or completion of NURS 2100. Can be considered a nursing elective for the Nursing program.

NURS 2110 Seminar for Entry into Nursing III
Reviews theory and skills from Nursing I & II to prepare re-entering students for Nursing III. Not for students progressing from Nursing II into Nursing III. (1 cr. hr.) (Summer). Fee $10. Not considered a nursing or free elective for the Nursing program.

NURS 2500 Nursing IV
This is the fourth and final course of the Nursing program which builds on previously acquired skills and knowledge and focuses on the physiological and psychosocial needs of the patient within the legal and ethical parameters of the nursing profession. The focus is on concepts of patient care management and the role of entry-level nurse. NCLEX preparation for the licensure exam is included in this course. Students must be within 15 credits of graduation in order to register for this course. (9 cr. hrs.) (Spring). Prerequisites: NURS 2100 and successful completion of all required science courses. CPR certification through American Heart Association “Health Care Provider” or American Red Cross “Basic Life Support for the Professional Rescuer”; evidence for current health insurance; updated health form specific for nursing students must be maintained throughout the program. Returning students must obtain a current criminal background check with company designated by the Nurse Education Department and a Pennsylvania child abuse screening. Program requirements and prerequisites can be found in the “Programs” section of this catalog. General Assembly Session (4 hrs./wk.), Small Assembly Sessions (2 hrs./wk.), hospital laboratory (11 hrs./wk.). Labs can be assigned during day, evening and/or weekend hours. During planned mental health/community health experiences, lab times may change. The last two weeks of the semester will include 48 hours of clinical that may be days/evenings/weekends. Some Internet/Blackboard assignments are required in the course. A grade of C or higher is required to graduate from the program. Satisfactory and safe performance in the lab is required to pass the course. Health insurance is required. Liability insurance, lab fee, testing fee, and course fee.

NURS 2502 Pharmacology for Nurses IV
This course is designed to be taken concurrently with NURS 2500. The medications that will be presented will correspond with the class content in NURS 2500. This course will provide the student an opportunity to learn about the characteristics of medication, therapeutic use, adverse reactions and nursing implications. (1 cr. hr.) (Spring). Concurrent enrollment in NURS 2500. Can be considered a nursing elective.

NURS 2510 Seminar for Entry into Nursing IV
Reviews theory and skills from Nursing I, II & III to prepare a returning student to re-enter Nursing IV. Not for a student progressing from Nursing III into Nursing IV. (1 cr. hr.) (Spring). Fee $10. Not considered a nursing elective for the Nursing program.
NURS 2992 Fluid and Electrolytes
Regulation of fluids and electrolytes and how they function within the body; imbalances caused by illness. (1 cr. hr.) (Fall, Spring, Internet). Prerequisite: NURS 1100. Considered a nursing elective for the Nursing Program.

NURS 2993 Nursing of Patients with Pregnancy-Induced Hypertension
This course focuses on the nursing process in helping a patient and her family solve problems when a major complication threatens the progress of a normal pregnancy. The physical, psychological, nutritional, pharmacological and rehabilitation needs of the patient are discussed in relation to the care needed for treatment and the effect the complication may have on the mother, infant and family. The major focus is on nursing responsibilities. (1 cr. hr.) (ASN). Prerequisite: NURS 1500.

PEPD Physical Education Prof Dev
Division of Professional Studies
Faculty: Brian E. Hill, David Rockwell

PEPD 1000 Sports and the Law
Legal issues surrounding negligence, discrimination, liability, equipment and facilities, activity guidelines, risks. (1 cr. hr.) (ASN). Prerequisite: Eligible to take ENGL 1010. Writing in content area.

PEPD 1007 Lifeguard Training
Develop knowledge and skills to manage aquatic emergencies. Satisfies NYS requirement to become a lifeguard. (1 cr. hr.) (Spring). Prerequisite: At least 15 years of age; strong swimming skills. Lecture/activity. Fee $40.

PEPD 1018 Cooper Norm Standards Preparation
Provides students an understanding of civil service physical performance floor tests, the history and science underlying Cooper Institute norms testing, and the skills and knowledge needed to make lifestyle changes that will result in the successful completion of civil service physical floor test to the fiftieth (50th) percentile of the Cooper norms. (3 cr. hrs.) (Fall). Lecture/Activity.

PEPD 1050 Theory of Coaching Baseball
Strategies and methods of coaching baseball will be discussed. Fundamentals of hitting, fielding, base running, pitching, conditioning and throwing will be covered. (1 cr. hr.) (Spring).

PEPD 1200 Introduction to Physical Education: The Profession
Includes professional aspects of physical education and recreation philosophy, related career possibilities, history, qualifications for work in the field, educational requirements and sociological perspectives. (3 cr. hrs.) (Fall).

PEPD 1201 Philosophy, Principles, and Organization of Coaching
One of three certification courses for those interested in coaching in a New York State public school system and structured to assist coaches in developing an athletic team. (3 cr. hrs.) (Fall).

PEPD 1202 Introduction to Athletic Training
Prevention and management of athletic injuries. Knowledge and understanding of health care for the recreational and competitive athlete. Organizing and establishing an effective athletic health care system. Techniques for preventing or minimizing sports related injuries. Recognition and management of specific injuries and conditions. This is a required course for the NYS Coaching Certification. (3 cr. hrs.) (Fall, Spring). Fee $25.

PEPD 1203 Principles of Strength Training
The value of strength training and the means to design and implement a program based on needs and goals. Supportive nutritional guidance. (3 cr. hrs.) (Spring). Lecture/laboratory.

PEPD 1204 Organization and Administration of Physical Education and Sport
This course includes the study of financial management, legal issues and responsibilities, facility and equipment planning, evaluation and scheduling from programs in physical education and sport.(3 cr. hrs.) (Summer).

PEPD 1205 Theory &Techniques of Coaching
This course is designed for an individual preparing to meet New York State Certification requirements to coach in the public school system. It is a mandatory component to the certification process. The course will discuss objectives, rules, regulations, and policies of athletics, as well as performance skills, technical information, and organization and management practices. (2 cr. hrs.) (ASN). Lecture.

PEPD 2007 Water Safety Instructor
Preparation for qualification as instructor in Red Cross Water Safety. Emphasis is on swimming strokes, life saving skills, and teaching techniques. (2 cr. hrs.) (Spring). Lecture/activity. Fee $40.

PFIT Physical Education
Division of Professional Studies
Note: The intercollegiate courses involve highly competitive participation in the sport and require skills beyond the basic level. Competition involves games/matches and tournament play with area colleges & conference.
Faculty: Brain E. Hill, David Rockwell

PFIT 1021 Jogging
Techniques to develop and maintain cardiovascular and physical fitness. Effect of exercise and maintenance of health through physical activity. Individualized jogging and exercise programs. (1 cr. hr.) (Fall, Spring). Lecture/activity.

PFIT 1022 Soccer Fundamentals
Soccer Fundamentals is a co-ed class designed to be an introduction to the rules of soccer and the basic skills and knowledge to effectively play and enjoy watching the game. Students will be required to participate actively in skills development leading to match play. This class is intended for students with limited previous soccer experience. (1 cr. hr.).

PFIT 1025 Badminton
Fundamentals and skills of badminton. Offensive and defensive strategy, terminology, and knowledge necessary to participate. (1 cr. hr.) (Fall, Spring). Lecture/activity.

PFIT 1033 Golf
Fundamentals of golf. Equipment, grip, approach, address, swing, putting, golf terms, rules, and etiquette. (1 cr. hr.) (Fall, Spring). Lecture/activity.
PFIT 1045  Pickleball
Pickleball is a slowed-down version of tennis and includes some badminton skills and strategies. Skills and techniques for play, strategies, rules, and shot selection. Practice and tournament situations. (1 cr. hr.) (Fall, Spring). Lecture/activity.

PFIT 1051  Self Defense
Martial arts, wrestling, and street fighting techniques in defense against unarmed assailants. Includes a variety of hits, kicks, blocks, and throws, with some emphasis on physical fitness, attitudes, and strategies. (1 cr. hr.) (Fall, Spring). Lecture/activity.

PFIT 1052  Softball
Builds on the individual’s fielding, hitting, and pitching skills and provides drills, team play, and content on strategy. Designed for all levels of ability. (1 cr. hr.) (Fall). Lecture/activity. Credit cannot be earned for this course and PFIT 1510 or PFIT 1511.

PFIT 1055  Volleyball
Knowledge, strategies, and team concepts for co-ed play. A variety of formats, playing styles, and scoring systems introduced. (1 cr. hr.) (Fall, Spring). Lecture/activity.

PFIT 1060  Weight Training
Techniques to improve physical and cardiovascular fitness. Weight training and a personal program in strength, endurance, and body trimming. (1 cr. hr.) (Fall, Spring). Lecture/activity.

PFIT 1500  Soccer I (Men)
Individual skills are refined, perfected and integrated into concepts of team play. Season runs from August through October. (1 cr. hr.) (PFIT 1500 first fall season, PFIT 1501 second fall season). Prerequisite: Soccer skills beyond the basic skill level; PFIT 1500 is a prerequisite for PFIT 1501. Team participation.

PFIT 1517  Basketball (Men)
Individual skills are refined, perfected and integrated into concepts of team play. Season runs from August through November. (1 cr. hr.) (Second Fall season). Prerequisite: Basketball skills beyond the basic skill level; PFIT 1504 is a prerequisite

PFIT 1505  Volleyball II (Women)
Individual skills are refined, perfected and integrated into concepts of team play. Season runs August through November. (1 cr. hr.) (Second Fall season). Prerequisite: Volleyball skills beyond the basic level; PFIT 1504 is a prerequisite

PFIT 1510  Softball (Women)
Individual skills are refined, perfected and integrated into concepts of team play. Season runs January through May. (1 cr. hr.) (First Spring season). Prerequisite: Softball skills beyond the basic skill level; PFIT 1510 is a prerequisite for PFIT 1511. Team participation.

PFIT 1515  Basketball (Men)
Individual skills are refined, perfected and integrated into concepts of team play. Season runs October through March. (1 cr. hr.) (First Fall season). Prerequisite: Basketball skills beyond the basic skill level; PFIT 1512 is a prerequisite for PFIT 1513. Team participation.

PFIT 1501  Soccer II (Men)
Individual skills are refined, perfected and integrated into concepts of team play. Season runs August through October. (1 cr. hr.) (PFIT 1500 first Fall season, PFIT 1501 second Fall season). Prerequisite: Soccer skills beyond the basic skill level; PFIT 1500 is a prerequisite for PFIT 1501. Team participation.

PFIT 1514  Basketball I (Men)
Individual skills are refined, perfected and integrated into concepts of team play. Season runs October through March. (1 cr. hr.) (First Fall season). Prerequisite: Basketball skills beyond the basic skill level; PFIT 1512 is a prerequisite for PFIT 1513. Team participation.

PFIT 1502  Soccer I (Women)
Individual skills are refined, perfected and integrated into concepts of team play. Season runs August through October. (1 cr. hr.) (PFIT 1502 first fall season, PFIT 1503 second fall season). Prerequisite: Soccer skills beyond the basic level; PFIT 1502 is a prerequisite for PFIT 1503. Team participation.

PFIT 1515  Basketball (Men)
Individual skills are refined, perfected and integrated into concepts of team play. Season runs October through March. (1 cr. hr.) (First Spring season). Prerequisite: Basketball skills beyond the basic level; PFIT 1514 is a prerequisite for PFIT 1516; PFIT 1515 is a prerequisite for PFIT 1517. Team participation.

PFIT 1503  Soccer II (Women)
Individual skills are refined, perfected and integrated into concepts of team play. Season runs August through October. (1 cr. hr.) (PFIT 1502 first fall season, PFIT 1503 second fall season). Prerequisite: Soccer skills beyond the basic level; PFIT 1502 is a prerequisite for PFIT 1503. Team participation.

PFIT 1516  Basketball III (Men)
Individual skills are refined, perfected and integrated into concepts of team play. Season runs October through March. (1 cr. hr.) (Second Fall season). Prerequisite: Basketball skills beyond the basic level; PFIT 1514 is a prerequisite for PFIT 1516; PFIT 1515 is a prerequisite for PFIT 1517. Team participation.

PFIT 1517  Basketball (Men)
Individual skills are refined, perfected and integrated into concepts of team play. Season runs October through March. (1 cr. hr.) (Second Spring season). Prerequisite: Basketball skills beyond the basic level; PFIT 1514 is a prerequisite for PFIT 1516; PFIT 1515 is a prerequisite for PFIT 1517. Team participation.

PFIT 1518  Basketball I (Women)
Individual skills are refined, perfected and integrated into concepts of team play. Season runs October through March. (1 cr. hr.) (First Fall season). Prerequisite: Basketball skills beyond the basic skill level; PFIT
1518 is a prerequisite for PFIT 1520; PFIT 1519 for PFIT 1521. Team participation.

PFIT 1519 Basketball (Women)
Individual skills are refined, perfected and integrated into concepts of team play. Season runs October through March. (1 cr. hr.) (First Spring Season). Prerequisite: Basketball skills beyond the basic skill level; PFIT 1518 is a prerequisite for PFIT 1520; PFIT 1519 for PFIT 1521. Team participation.

PFIT 1520 Basketball III (Women)
Individual skills are refined, perfected and integrated into concepts of team play. Season runs October through March. (1 cr. hr.) (Second Fall season). Prerequisite: Basketball skills beyond the basic skill level; PFIT 1518 is a prerequisite for PFIT 1520; PFIT 1519 for PFIT 1521. Team participation.

PFIT 1521 Basketball (Women)
Individual skills are refined, perfected and integrated into concepts of team play. Season runs October through March. (1 cr. hr.) (Second Spring Season). Prerequisite: Basketball skills beyond the basic skill level; PFIT 1518 is a prerequisite for PFIT 1520; PFIT 1519 for PFIT 1521. Team participation.

PFIT 1620 Intercollegiate Bowling I
Students participating in this activity should have considerable knowledge and skills. Skills are refined and perfected and team concepts are developed by changing alley conditions and environments. Competition includes individual matches and tournaments at local, regional, and national levels. (1 cr. hr.). PFIT 1620 first Fall season, PFIT 1622 second Fall season, PFIT 1621 first Spring season, PFIT 1623 second Spring Season.

PFIT 1621 Intercollegiate Bowling II
Students participating in this activity should have considerable knowledge and skill. Skills are refined and perfected and team concepts are developed by changing alley conditions and environments. Competition includes individual matches and tournaments at local, regional, and national levels. (1 cr. hr.) Prerequisite: PFIT 1620. (PFIT 1620 first Fall season, PFIT 1622 second Fall season; PFIT 1621 first Spring season, PFIT 1623 second Spring season).

PFIT 1622 Intercollegiate Bowling III
Students participating in this activity should have considerable knowledge and skill. Skills are refined and perfected and team concepts are developed by changing alley conditions and environments. Competition includes individual matches and tournaments at local, regional, and national levels. (1 cr. hr.) Prerequisite: PFIT 1620. PFIT1620 first Fall season, PFIT 1622 second Fall season; PFIT 1621 first Spring Season, PFIT 1623 second Spring season.

PFIT 1623 Intercollegiate Bowling IV
Students participating in this activity should have considerable knowledge and skill. Skills are refined and perfected and team concepts are developed by changing alley conditions and environments. Competition includes individual matches and tournaments at local, regional, and national levels. (1 cr. hr.) Prerequisite: PFIT 1620. PFIT 1620 first Fall season, PFIT 1622 second Fall season; PFIT 1621 first Spring Season, PFIT 1623 second Spring Season.

PHIL 1010 Introduction to Philosophy
Basic problems and topics of philosophy, e.g., theories of knowledge, reality and art, problems of science, politics, and religion. (3 cr. hrs.) (Fall, Spring). Prerequisite: Must be eligible to enroll in ENGL 1010. Meets SUNY General Education requirement in Humanities.

PHIL 1230 Philosophy of Life
Examines how and why people use a philosophy to deal with life’s concerns, for our relationships with society and the world, and our pursuit of a meaningful place within these wider realms. (3 cr. hrs.) (ASN). Prerequisite: Must be eligible to enroll in ENGL 1010. Writing in content area. Meets SUNY General Education requirement in Humanities.

PHIL 1300 Current Moral Issues
Examines today’s important social questions about abortion, euthanasia, drug legalization, racial harmony, free speech, environmentalism, welfare, affirmative action, world hunger and similar issues. Attention to underlying larger philosophical concerns on nature, value, rights, and responsibilities of human beings. (3 cr. hrs.) (ASN). Prerequisite: Eligible to take ENGL 1010. Meets SUNY General Education requirement in Humanities.

PHIL 2010 Introduction to Ethics
Main ethical theories of traditional Western thought. Meanings and validity of value judgments, social consequences of value theory, examination of major traditional moral philosophies, and a survey of contemporary development in ethical theory. (3 cr. hrs.) (Spring). Prerequisite: ENGL 1010 or any philosophy course. Writing in content area. Upper-level course. Meets SUNY General Education requirement in Humanities.

PHIL 2070 Contemporary Philosophy
Introduction to issues, problems, and modes of thinking in contemporary philosophy. Explores topics of current concern in both the analytic and continental traditions of philosophy. Readings selected from works of contemporary authors such as Russel, Moore, Ayer, Austin, Heidegger, Gadamer, Derrida, and Rorty. (3 cr. hrs.) (ASN). Prerequisite: ENGL 1010 or another philosophy course. Writing in content area. Upper-level course. Meets SUNY General Education requirement in Humanities.

PHIL 2200 Environmental Ethics
Explores issues concerning how humans ought to relate to and interact with their environment as individuals, through organizations and as a species. Examines environmental dilemmas relating to human population, poverty, animal rights, and intrinsic versus instrumental valuations of nature. (3 cr. hrs.) (ASN). Prerequisite: ENGL 1010, any Philosophy course. Writing in content area. Upper-level course. Meets SUNY General Education requirement in Humanities.

PHIL 2250 Health Care Ethics
Ethical issues arising in medicine, nursing, and other health care professions. Truth-telling and confidentiality, informed consent, fetal vs. maternal rights, euthanasia, the treatment of AIDS, genetic testing and engineering, medical resources, and social health care. (3 cr. hrs.) (ASN). Prerequisite: ENGL 1010 or any philosophy course. Writing in content area. Upper-level course. Meets SUNY General Education requirement in Humanities.
PHIL 2310  Philosophy of Religion  
Fundamental problems of religious thought. Arguments for the existence of God, the problem of evil, criteria of plausibility of religious claims, immortality, and church and state. Some attention to non-Western religions. (3 cr. hrs.) (Fall). Prerequisite: ENGL 1010 or any philosophy course. Writing in content area. Upper-level course. Meets SUNY General Education requirement in Humanities.

PHIL 2330  Honors Philosophy of Religion  
Advanced version of the following: Fundamental problems of religious thought. Arguments for the existence of God, the problem of evil, criteria of plausibility of religious claims, immortality, and church and state. Some attention to non-Western religions. (3 cr. hrs.) Prerequisite: ENGL1010 or any philosophy course. Must be honors-eligible. Upper-level course.

PHIL 2420  Social & Political Philosophy  
Republicanism, libertarianism, democracy, socialism, communism, fascism, and anarchism are discussed and compared. The historical origins and contemporary views of justice, liberty, human rights, the public good, and political participation are examined. (3 cr. hrs.) (ASN). Prerequisite: Must be eligible to enroll in ENGL 1010; philosophy course recommended. Upper-level course. Writing in content area. Meets General SUNY Education requirement in Humanities. Upper-level course.

PHIL 2500  Business Ethics  
Application of ethical views to problems which arise in doing business in the U.S. Topics range from interpersonal relationships to advertising and investment policies to quality control. (3 cr. hrs.) (ASN). Prerequisite: Must be eligible to enroll in ENGL 1010; philosophy course recommended. Upper-level course. Writing in content area. Meets General SUNY Education requirement in Humanities.

PHYS 1740  Principles of Physics II  
The second semester in the physics sequence, continuation of PHYS 1730; electricity, magnetism, optics, and modern physics. (4 cr. hrs.) (Spring). Prerequisite: PHYS 1730. Lecture/laboratory. Lab fee. Meets SUNY General Education requirement in Natural Sciences.

PHYS 1820  Physics I  
The first semester of a three semester sequence in calculus-based physics. Mechanics, including vectors, particle kinematics and dynamics, work and energy, impulse and momentum, rotational motion, and certain aspects of gravitational and fluid mechanics, if time permits. (4 cr. hrs.) (Spring). Prerequisite: MATH 1610. The three-semester, calculus-based sequence, PHYS 1820, 2830, 2840, is intended for students majoring in engineering, mathematics, physics, and computer science. Lecture/laboratory. Lab fee. Meets General Education requirement in Natural Sciences.

PHYS 2830  Physics II  
The second semester in the calculus based physics; Harmonic motion, heat transfer and thermodynamics, electrostatic fields, and D.C. circuits. (4 cr. hrs.) (Fall). Prerequisite: PHYS 1820, MATH 1620. Co-requisite: MATH 2610. Lecture/laboratory. Lab fee. Meets General Education requirement in Natural Sciences.

PHYS 2840  Physics III  
Capacitance, the magnetic field, mechanical waves and sound, electromagnetic field and waves, nature and propagation of light, geometrical and physical optics, and an introduction to atomic and nuclear physics. Certain aspects of quantum theory and relativity, if time permits. (4 cr. hrs.) (Spring). Prerequisites: PHYS 2830 and concurrently taking MATH 2620. Lecture/laboratory. Lab fee. Meets SUNY General Education requirement in Natural Sciences.

PSYC 1101  Introduction to Psychological Science  
An introduction to psychology. Includes scientific method, measurement in psychology, motivation, learning, thinking and problem solving, perception, behavior disorders and varieties of treatment, biological basis of behavior, social determinants of behavior, human development and personality. (3 cr. hrs.) (Fall, Spring). Prerequisite: Eligible to enroll in ENGL 1010. Lectures/demonstrations/discussion/field assignments. Meets SUNY General Education requirement in Social Sciences.

PSYC 1620  Honors Introduction to Psychological Science  
An advanced introduction to Psychology. Includes scientific method, measurement in psychology, biological bases of behavior, motivation and emotion, learning, memory, thinking, intelligence, individual differences and assessment. Extensive reading, conduct of an experiment and presentations are required. (3 cr. hrs.) (Fall, Spring). Prerequisite: Eligible to enroll in ENGL 1010 and entering freshmen with a high school gpa of at least a 3.5 and CCC students with a epga of at least a 3.5 and at least 12 completed credit hours. Lectures, readings, discussions, field assignments, an experiment. Meets CCC General Education requirements in the Social Sciences. Cannot earn credit for this course and PSYC 1101.
PSYC 2030  Organizational Behavior
Psychological analysis of human behavior in formal organizations. Structure of organizations, worker motivation, communication, leadership, and organizational change. (3 cr. hrs.) (Fall, Spring). Prerequisite: PSYC 1101. Online component included as part of this course. Upper-level course.

PSYC 2201  Social Psychology
Relationships between the individual and social environment. Formations of attitude, group process and structure, prejudice, and the relationship of the developing individual to sociocultural systems. (3 cr. hrs.) (Fall, Spring). Prerequisite: PSYC 1101. Writing process. Upper-level course. Meets SUNY General Education requirement in Social Sciences.

PSYC 2206  Research Methods in the Social Sciences
An introduction to major research methods. Includes survey, experimental, and field research. The logic, design, and execution of the research process with concern for elementary data analysis. Evaluation of social science research for scientific rigor, usefulness, relevance, and ethics. (3 cr. hrs.) (Spring). Prerequisite: ENGL 1010; MATH 1215; and either PSYC 1101 or SOCI 1010. MATH 1310 is also recommended. Cannot earn credit for this course and SOCI 2060. Upper-level course.

PSYC 2207  Child Psychology
Human growth and change from conception through middle childhood. Critical theoretical and methodological issues; concentration on physical, cognitive and psychosocial development. Includes a research project based on observation of children. (3 cr. hrs.) (Fall, Spring). Prerequisite: PSYC 1101. Lectures/observations in child behavior. Upper-level course. Meets SUNY General Education requirement in Social Sciences.

PSYC 2208  Adolescent Psychology
Basic psychological processes such as motivation, intelligence, learning, and social relationships of the adolescent. Theories from psychology, sociology, social psychology, and cultural anthropology in explanation of the transition from child to adult in our culture. Emphasis on identity development, value clarification, and coping skills. (3 cr. hrs.) (ASM). Prerequisite: PSYC 1101. Writing process. Upper-level course. Meets SUNY General Education requirement in Social Sciences.

PSYC 2209  Psychology of Adult Development
Development, change and adjustment during early, middle and late adulthood. Dynamics of the life cycle, psychological and biological determinants of adult development, adjustment to work and retirement, the aging process, and societal forces affecting growth of the mature personality. (3 cr. hrs.) (ASM). Prerequisite: PSYC 1101. Writing in content area. Upper-level course.

PSYC 2212  Educational Psychology
Introduction to educational theory and practice. Emphasis on recent developments in theories of learning, maturation, and motivation. Methods of pupil assessment and evaluation included. (3 cr. hrs.) (ASM). Prerequisite: PSYC 1101. Upper-level course. Meets SUNY General Education requirement in Social Sciences. This course has an Internet component.

PSYC 2214  Health Psychology
An introduction to an emerging field that studies the ways in which the discipline of psychology contributes to the promotion and maintenance of health, the prevention and treatment of illness, and the development of policies that contribute to the improvement of health in the community. (3 cr. hrs.) (ASM). Prerequisite: PSYC 1101. Writing process. Upper-level course. Meets SUNY General Education requirement in Social Sciences.

PSYC 2215  Abnormal Psychology
Historical concepts of abnormal behavior and current theoretical perspectives including: behavioral, psychodynamic, existential and neuroscience perspectives. Includes stress related anxiety, emotional, social, psychotic, organic, and developmental disorders; individual, group, family, community, and biological therapy. (3 cr. hrs.) (Fall, Spring). Prerequisite: PSYC 1101. Writing process. Upper-level course. Meets SUNY General Education requirement in Social Sciences.

PSYC 2221  Behavior Modification
Principles of learning (respondent and operant conditioning), and their application to analyze and modify everyday behaviors. Use of this technology to observe, record, analyze, and modify behaviors encountered in a variety of work experiences such as teaching, nursing, criminal justice, human services, and counseling psychology. Includes a personal behavior modification research project. (3 cr. hrs.) (ASM). Prerequisite: PSYC 1101. Lecture/behavior exercises/internet component. Upper-level course. Meets SUNY General Education requirement in Social Sciences.

RECC  Recreation
Division of Professional Studies
Note: Unless otherwise indicated, these courses may be used to meet the activities component of the wellness requirement or as free electives.
Faculty: Brian E. Hill, David Rockwell

RECC 1000  Introduction to Yoga
Teaches the basic practices of yoga: warm-ups, breathing, yogic postures, massage, diet, hygiene, and other related practices. (1 cr. hr.) (Fall, Spring, Summer). Lecture/activity.

RECC 1004  Introduction to Current Dance Trends
Learn to dance with today’s new rhythms. It provides an understanding of the art of dance with a focus on current trends. (1 cr. hr.) (Fall, Spring).

RECC 1007  Walking
Emphasis on improving cardiovascular fitness and overall wellness through development and participation in individualized walking program. Techniques, safety, motivation, and nutrition discussed. (1 cr. hr.) (Fall, Spring). Lecture/activity/internet.

RECC 1009  Basic Sailing
Basic knowledge and skills in the terminology and seamanship of small sailboat handling. Due to physical constraints of the watercraft available for the course, some students may not be able to be accommodated due to height/weight limitations. (1 cr. hr.) (Summer). Prerequisite: Swimming ability. Fee $60.

RECC 1010  Canoeing
Basic knowledge of purchasing equipment, paddling, planning, and canoeing survival. Due to physical constraints of the watercraft available for the course, some students may not be able to be accommodated due to height/weight limitations. (1 cr. hr.) (Summer, Fall). Prerequisite: Swimming ability. Lecture/weekend canoe trip. Fee $50.
RECC 1011 Kayaking
Provides basic knowledge and skills in purchasing equipment, paddling, planning, and survival in a kayak. Trips to pool, pond, and river provide the opportunity to practice and implement skills learned. Due to physical constraints of the kayaks available for the course, some students may not be able to be accommodated due to height/weight limitations. (1 cr. hr.) (Spring, Summer). Prerequisite: swimming ability. Lecture/activity. Fee $50.

RECC 1013 Backpacking I
Backpacking equipment, trip planning, technique, map reading, orienteering, and preservation of the back country. (1 cr. hr.) (Fall, Spring, Summer). Lecture/weekend backpacking trip. Fee $50.

RECC 1014 Cross-Country Skiing
Introduction to cross-country skiing. Types, purchase and maintenance of equipment. Waxing, weather conditions, techniques, and preparing for a day’s tour. A variety of tours. (1 cr. hr.) (Spring). Lecture/tours. Fee $50.

RECC 1015 Wilderness Navigation
Provides basic knowledge in map use and map reading, compass use and compass reading, using a map and compass together, using electronic equipment and maps together, equipment types and selection, and how to move quickly and safely through all kinds of terrain. (1 cr. hr.) (Fall). Lecture.

RECC 1017 Introduction to Fly Fishing
Teaches the basics of fly fishing for the novice. Includes equipment selection, casting, fly tying, reading the stream, entomology, and environmental and stream ethics. Experience is gained through lectures, discussions, demonstrations, videos, and hands-on. (1 cr. hr.) (Spring, Summer). Fee.

RECC 1020 Nourishing Mind, Body, and Spirit
Independently explore a variety of enjoyable structured and unstructured activities to increase body movement. Create a personalized, healthy action plan for living well as a result of the experiences and information learned in this class. (1 cr. hr.) (Fall, Spring). Note: Some sections of this course will be held at community fitness facilities requiring membership fees for the duration of the course.

RECC 1022 Archery I
Skills, techniques, and safety of target archery. Use of and care of equipment and scoring. Shooting form and correction of individual errors. (1 cr. hr.) (Fall, Spring). Lecture/activity. Fee $50.

RECC 2013 Backpacking II
Equipment, trip planning, techniques, environmental preservation skills, nature study, firebuilding, first-aid, climatology, use of map and compass, and special considerations for winter backpacking. (2 cr. hrs.) (Spring). Prerequisite: RECC 1013 and instructor consent. Lecture/six-day backpacking trip. Fee $100.

REPD Recreation Development
Division of Professional Studies
Faculty: Elaine Corwin, Brian E. Hill, David Rockwell

REPD 1004 Camp Management
Explore a variety of programs/set-ups, including resident, day, trip/travel and special interest/talent (i.e., sports) camps. Emphasis will be placed on counselors and administrative duties related to state health codes, agency accreditation programs, specific program development, and site development and maintenance. (3 cr. hrs.).

REPD 1202 Introduction to Recreation & Leisure
Concepts of recreation and leisure from historical and contemporary perspectives. An overview of public and private recreation resources and career opportunities. Philosophical, sociological, and psychological views of the role of leisure in the human experience. (3 cr. hrs.) (Fall).

REPD 1400 Wilderness First Responder
Recognition, treatment, and prevention of problems within a wilderness environment. Covers accident prevention and hands-on care. Successful students receive a SOLO Wilderness First Responder and American Heart Association Health Care Provider card. (5 cr. hrs.) (ASN). Lecture/activity. Fulfills both wellness awareness and wellness activity requirements. Can be substituted for HLTH 2007. Fee $50.

REPD 1502 Recreation Leadership
Introduction to programming principles and techniques for education, leisure, and other human service settings. Particular focus on the design and implementation of recreation programs for leisure-related services. (3 cr. hrs.).

REPD 1503 Program Planning in Recreation
Introduction to programming principles and techniques for education, leisure, and other human service settings. Particular focus on the design and implementation of recreation programs for leisure-related services. (3 cr. hrs.).

REPD 1999 Recreation Education Independent Study
Independent study course in the discipline of recreation education. (1 cr. hr.).

RUSS Russian
Division of Humanities and Social Sciences
Faculty: Michael Beykirch

RUSS 1010 Elementary Russian I
Everyday Russian vocabulary and expressions. Listening, comprehension, speaking ability, and extensive practice in reading and writing the Cyrillic alphabet. For students with little or no background in the language. (4 cr. hrs.) (ASN). Not intended for students with high school Regents credit or equivalent in Russian. Lecture/recitation/laboratory. Meets SUNY General Education requirement in Foreign Language.

RUSS 1020 Elementary Russian II
Additional practice in conversation, development of reading and writing skills, and systematic study of Russian grammar. (4 cr. hrs.) (ASN). Prerequisite: RUSS 1010 or equivalent. Lecture/recitation/laboratory. Meets SUNY General Education requirement in Foreign Languages.
RUSS 2010 Intermediate Russian
Development of greater facility in reading, writing, speaking and understanding the language through systematic review of its structures. (4 cr. hrs.) (ASN). Prerequisite: RUSS 1020 or equivalent. Lecture/recitation/laboratory. Upper-level course. Meets SUNY General Education requirement in Foreign Languages.

SCIN Science, General
Division of Professional Studies
Faculty: Deborah Dann, Cathie Genselman, Brenda Gustin, Erikho Heise, Bill Jarvis, Kamesh Narasimhan, David Pindel, Jennifer Sellers, Ruth Wenner

SCIN 1070 Sustainability and Natural History of Spencer Crest Nature Center
This course surveys the natural history and ecology of Spencer Crest Nature Center, with particular attention paid to various ecosystems, biodiversity, ponds, streams and deciduous forests, as they apply to Spencer Crest. Students will perform field work to identify plant and animal species common to the area. Students will also take part in several presentations related to various aspects of sustainability and alternative energy, as well as learn the background of Spencer Crest and how current educational programs are conducted. (1 cr. hr.) (Fall). Lecture/student participation/field notebook. A free elective only.

SCIN 1080 Field Experience Spencer Crest
Provides the student with the opportunity to gain real-world experience working within the sciences. Work will focus on one or two specific projects tailored to the student’s interests and the needs of the Center. Students will develop leadership skills and become a resource for the community. (2 cr. hrs.) (Spring). Prerequisite: Completion of or concurrent enrollment in SCIN 1070. Fulfills lab science requirement in all programs except Liberal Arts and Sciences: Mathematics & Sciences.

SCIN 1090 Special Topics in the Sciences
This course will explore and analyze several aspects of a relatively new and emerging area within the natural sciences. The overall topic or theme of the course changes from semester to semester. Students will learn about the science behind the topic, critically think about it, and apply what they have learned. (3 cr. hrs.) (Spring). Prerequisite: Eligible to take ENGL 1010, MATH 1015 or higher. Lecture/laboratory. Lab fee.

SCIN 1100 Physical Sciences
Develops a comprehensive understanding of the fundamental principles of physics, astronomy, geology, meteorology, and oceanography. Designed for students planning to transfer as Childhood Education Majors, but would be appropriate for any non-science program. Selected topics comply with the learning standard established for science curricula in New York State. (3 cr. hrs.) (Fall). Prerequisite: MATH 1130 or higher; Eligible to take ENGL 1010. Cannot receive credit for this course and ERTH 1010. Not for science majors. Lecture/laboratory/recitation. Lab fee. Meets SUNY General Education requirement for Natural Sciences.

SCIN 1120 Natural Science
Develops a comprehensive understanding of the fundamental principles of chemistry and biology. Designed for students planning to transfer as Childhood Education majors, but can comply with the learning standards established for science curriculum in the State of New York. (3 cr. hrs.) (Spring) Prerequisite: MATH 1130 or higher; eligible to take ENGL 1010. Not for science majors. Lecture/laboratory/recitation. Lab fee.

SIGN Sign Language
Division of Humanities and Social Sciences

SIGN 1010 American Sign Language I
Development of conversational fluency in ASL. Students will accurately recognize and produce ASL with appropriate non-manual behaviors and grammatical features. Development of linguistic/cultural behaviors conducive to the deaf community and awareness of, and respect for deaf culture. Receptive and expressive skills are fostered. (4 cr. hrs.) (ASN). Prerequisite: Eligible to enroll in ENGL 1010. Lecture/laboratory. Meets SUNY General Education requirement in Foreign Language for students who transfer to programs leading to certification in elementary and secondary education or to careers in health or social service agencies where there is likely to be significant contact with the hearing-impaired.

SIGN 1020 American Sign Language II
Continued development of conversational fluency in ASL. Emphasis on the production and comprehension of increasingly complex linguistic expressions through dialogue and conversation. More complex receptive and expressive skills are fostered through interactive ASL lessons and participatory activities. (4 cr. hrs.) (ASN). Prerequisite: SIGN 1010. Lecture/laboratory. Meets CCC General Education requirement in Foreign Language for students who transfer to programs leading to certification in elementary and secondary education or to careers in health or social service agencies where there is likely to be significant contact with the hearing-impaired.

SIGN 1030 American Sign Language III
Continued focus on specific grammatical and cultural topics using non-manual signals and markers. Emphasis is on greater fluency in idiomatic language usage and mastery of vocabulary and syntax. Skill is enhanced through in-class interactions with native language users. (4 cr. hrs.) (ASN). Prerequisite: SIGN 1020. Lecture/laboratory. Meets CCC General Education requirement in Foreign Language for students who transfer to programs leading to certification in elementary and secondary education or to careers in health or social service agencies where there is likely to be significant contact with the hearing-impaired. Upper-level course.

SIGN 1040 American Sign Language IV
Continued development of grammatical features of ASL, specialized vocabulary and the use of locatives, numbers and fingerspelling. The use of space in ASL discourse will be expanded. Deaf culture will continue to be focused. (4 cr. hrs.) (ASN). Prerequisite: SIGN 1030. Lecture/laboratory. Meets CCC General Education requirement in Foreign Languages for students who transfer to programs leading to certification in elementary and secondary education or to careers in health or social service agencies where there is likely to be significant contact with the hearing-impaired. Upper-level course.

SOCI Sociology
Division of Humanities and Social Sciences
Faculty: Tyson Abbott

SOCI 1010 Introduction to Sociology
Social and cultural factors in the origin, structure, and functioning of group life. Sub-divisions to be emphasized include social structure, culture, socialization, institutions, and stratification. (3 cr. hrs.) (Fall, Spring) Prerequisite: Eligible for ENGL 1010. Meets SUNY General Education requirement in Social Sciences.
SOCI 2000  Social Problems
Contemporary social problems from the perspective of sociology. Analysis of deviant behavior, war and terrorism, race relations, crime, poverty, and illness. (3 cr. hrs.) (Spring). Prerequisites: SOCI 1010 and ENGL 1010. Writing process. Upper-level course. Meets SUNY General Education requirement in Social Sciences.

SOCI 2030  The Family
American family and cross-cultural family patterns in a rapidly changing world. Topics include dating and cohabitation, couple communication, marriage, family conflict/divorce, divorce, stepfamilies, birth technologies & adoption, and parenting in a diverse society. (3 cr. hrs.) (Fall, Spring). Prerequisite: SOCI 1010 or PSYC 2201. Writing process. Upper-level course. Meets SUNY General Education requirement in Social Sciences.

SOCI 2060  Research Methods in the Social Sciences
An introduction to major research methods. Includes survey, experimental, and field research. The logic, design, and execution of the research process with concern for elementary data analysis. Evaluation of social science research for scientific rigor, usefulness, relevance, and ethics. (3 cr. hrs.) (Spring). Prerequisites: ENGL 1010, MATH 1215, and either PSYC 1101 or SOCI 1010. MATH 1310 also recommended. Cannot earn credit for this course and PSYC 2206. Upper-level course. Meets SUNY General Education in Social Sciences.

SOCI 2210  Diversity and Discrimination in American Society
Diversity and dominant-minority relations in the United States; development of sociological theory and the trends and policies that may reduce or produce structural and personal discrimination by race/ethnicity, gender, age or sexual orientation. (3 cr. hrs.) (Fall, Spring). Prerequisite: SOCI 1010 or PSYC 1101 or HIST 1110 or HIST 2090. Upper-level course.

SOCI 2310  Sociology of Crime and Delinquency/Criminology
An examination of criminal and delinquent behavior in the United States, and its descriptive, empirical, and theoretical explanations. Social control in society, the major theoretical perspectives in the field, and developing theories and issues. Topics include the definition and measurement of crime, types of crime, theories of crime causation and social policy issues involving crime prevention. (3 cr. hrs.) (Fall, Spring). Prerequisite: SOCI 1010. Upper-level course. Meets SUNY General Education requirement in Social Sciences.

SOCI 2400  Environment and Society
Focuses the tools of environmental sociology and social theory, using both classical and modern sociology to explain and analyze social behavior and its relationship to nature. Students use these tools to examine local issues. (3 cr. hrs.) (Spring). Prerequisite: SOCI 11010. Upper-level course.

SPAN 1010  Elementary Spanish Conversation and Structure I
Spanish vocabulary and expressions. Listening comprehension, speaking ability, reading and writing. For students with little or no background in the language. (4 cr. hrs.) (Fall). Not intended for students with high school Regents credit or equivalent in Spanish. Lecture/recitation/laboratory. Meets SUNY General Education requirement in Foreign Languages.

SPAN 1020  Elementary Spanish Conversation and Structure II
Additional practice in conversation, the development of reading and writing skills, and a systematic study of Spanish grammar. (4 cr. hrs.) (Spring). Prerequisite: SPAN 1010 or equivalent or two years of high school Regents Spanish. Lecture/recitation/laboratory. Meets SUNY General Education requirement in Foreign Languages.

SPAN 1050  Spanish Field Study Trip
Two-week study tour to Madrid, Spain. Daily classes in Spanish grammar and conversation with native Spanish instructors. Students reside in a student residence or may live with Spanish families. Excursions to cultural sites. Designed for students with or without previous knowledge of Spanish. (3 cr. hrs.) (Summer).

SPAN 2010  Intermediate Spanish
Development of facility in reading, writing, speaking, and understanding the language through a systematic review of its structure. Representative readings as an introduction to Spanish civilizations. (4 cr. hrs.) (Fall). Prerequisite: SPAN 1020 or equivalent or three years of Regents high school Spanish. Lecture/recitation/laboratory. Upper-level course. Meets SUNY General Education requirement in Foreign Languages.

SPAN 2020  Composition and Conversation
A thorough analysis of the language; intensive discussion of grammar, usage, style and vocabulary, enhancing expression through composition, oral reports, and more informed class discussions and conversations. (4 cr. hrs.) (ASN). Prerequisite: SPAN 2010 or equivalent. Lecture/recitation/laboratory. Essential for Spanish majors who plan to take upper-level language and literature studies. Upper level-course.

SPAN 2030  The Family
An introduction to research methods. Includes survey, experimental, and field research. The logic, design, and execution of the research process with concern for elementary data analysis. Evaluation of social science research for scientific rigor, usefulness, relevance, and ethics. (3 cr. hrs.) (Spring). Prerequisites: ENGL 1010, MATH 1215, and either PSYC 1101 or SOCI 1010. MATH 1310 also recommended. Cannot earn credit for this course and PSYC 2206. Upper-level course. Meets SUNY General Education in Social Sciences.

SPAN 2060  Research Methods in the Social Sciences
An introduction to major research methods. Includes survey, experimental, and field research. The logic, design, and execution of the research process with concern for elementary data analysis. Evaluation of social science research for scientific rigor, usefulness, relevance, and ethics. (3 cr. hrs.) (Spring). Prerequisites: ENGL 1010, MATH 1215, and either PSYC 1101 or SOCI 1010. MATH 1310 also recommended. Cannot earn credit for this course and PSYC 2206. Upper-level course. Meets SUNY General Education in Social Sciences.

SPAN 2000  Social Problems
Contemporary social problems from the perspective of sociology. Analysis of deviant behavior, war and terrorism, race relations, crime, poverty, and illness. (3 cr. hrs.) (Spring). Prerequisites: SOCI 1010 and ENGL 1010. Writing process. Upper-level course. Meets SUNY General Education requirement in Social Sciences.

SPCH 1060  Interpersonal Communication (Individual)
Develops self-awareness and audience awareness by communicating interpersonally. Exercises reflect all components of interpersonal interactions: verbal, nonverbal, paralinguistic, emotional, visual,
SPCH 1080  Public Speaking
Develops self-awareness and audience awareness through oral presentation. Organize and present material in a variety of speaking occasions, including information, visualization, demonstration, argumentation, persuasion. (3 cr. hrs.) (Fall, Spring). Lecture/presentations.

TECH 1030  Manufacturing Methods
A study of the machines and methods by which various materials are formed into useful products. Topics will include principles of manufacturing, materials used in manufacturing, conventional and non-traditional processes, forming, joining and assembling, finishing operations, CIM and the future technology of manufacturing. (3 cr. hrs.) (Fall, Spring).

TECH 1050  Orientation to Technology
An orientation course designed to assist technology students to be successful in college. The course will include academic strategies for learning, time management, transition issues, career development and planning, computer orientation and computer skills assessment, note taking, campus familiarization, and technical communications. (.5 cr. hr.) (Fall, Spring).

TECH 1060  LabVIEW Programming
An introduction to LabVIEW programming, editing and debugging procedures. The course emphasis is the core concepts of variables, constants, data types and flow control as related to structured programming. Applied engineering applications will be utilized that include data input and output, decision making structures, loops, and arrays. Mathematical functions are applied using Sub VI's and function node methods. (3 cr. hrs.). Prerequisite: MATH1230 or concurrent enrollment in MATH1230, placement in a higher mathematics.

TECH 1080  Manufacturing Methods Lab
Basic and advanced metal-cutting processes with related lab experience. Use of hand tools, selection of feeds and speeds; gauging and precision measurements; and the operation of basic shop equipment including drill presses, saws, manual lathes and milling machines, grinders and basic CNC milling machines. Identification, demonstration and application of machine shop safety equipment and procedures. Develops a technician’s appreciation of, rather than proficiency in, operations of machine tools. (1 cr. hr.) (Fall, Spring). Does not have to be taken concurrently with TECH 1030. Lab Fee.

TECH 1100  Technical Word Processing & Research
Use of word processing functions for technical applications. Includes functions essential for laboratory report writing, such as formatting of text, numbered and bulleted lists, tables, cover pages, table of contents, headers and footers, inserting graphics and annotation, special symbols and equations. (1 cr. hr.) (Fall, Spring). Slideshow lectures and assignments will be delivered and submitted online.

TECH 1120  Spreadsheet Applications in Technology
Use of spreadsheet functions for technical applications. Includes functions such as print settings and page setup, experimental data entry, worksheet manipulation and formatting, mathematical formulas and functions, XY Scatter charts and tend line column and pie charts. (1 cr. hr.) (Fall, Spring). Slideshow lectures and assignments will be delivered and submitted online.

TECH 1130  Industrial Presentations
Use of software to design technical presentations. Includes design outline and layout appropriate for a presentation in an industrial setting, template selection and creation, master slide creation, inserting text, lists, CAD drawings, schematics, data sheets, graphs, and equations. Special emphasis is given to presentation methods appropriate for industry. Students will be required to give presentations in a simulated industrial setting. (1 cr. hr.) (ASN). Slideshow lectures and assignments will be delivered and submitted online.

TECH 1500  Architectural Drawing I
Fundamentals concerning small buildings. Architectural lettering, drafting, geometry, conventional projection principles, pictorial drawings, basic residential working drawings of small homes, light construction principles, and simple solar, mechanical and electrical systems. (3 cr. hrs.) (ASN). Lecture/laboratory. Lab fee.

THEA 1010  Introduction to Theatre
Presents theatre as an all-encompassing art form. Surveys the history of theatre and the diversity of theatrical genres from story-telling to 20th century ‘Realism’ to performance art. Studies dramatic literature as it relates to practical theatrical production. Examines the collaborative process leading to production. Students present a full production plan as a final project. (3 cr. hrs.) (Fall). Meets SUNY General Education requirement in The Arts and Western Civilization.

THEA 1020  Introduction to Acting
For students considering acting as a career. Considers contemporary approaches to the craft. Memorization techniques, scene study, and textual analysis. Audition materials. The final examination is a fully produced live performance. Not recommended for students seeking public speaking experience. (3 cr. hrs.) (ASN). Discussion/rehearsal/performance. Meets SUNY General Education requirement in The Arts.

THEA 1030  Introduction to Technical Theatre
An introduction to the technical aspects of theatrical production, including principles of stagecraft, lighting, sound, stage props, and costuming, stage crew organization and responsibilities, and theatre safety. Hands-on experience in constructing and running productions in weekly lab work and serving on stage crews for theatre productions. (3cr. hr.) (ASN).

THEA 1040  Voice and Movement
For actors working toward development of a free, flexible voice. Techniques of movement and vocal production. (3 cr. hrs.) (ASN). Meets SUNY General Education requirement in The Arts.

THEA 1050  Broadway Styles in Dance
(New Course) For students considering the theatre as a career. Students will be exposed to a wide variety of styles representative of the diverse...
range of dancing on the Broadway stage, including original choreography and audition combinations from various shows. This course focuses on diversifying students in a range of styles, as well as execution improvisation, and increased awareness of performance. (3 cr. hrs.)

**THEA 1100 Rehearsal, Performance, and Production**
Practical application of acting and production techniques, i.e., acting, stage managing, backstage operation, set construction, house management, costumes, and makeup. Minimum of 45 supervised hours of rehearsal and performance of productions under faculty guidance. (1 cr. hr.) (Fall, Spring). Prerequisite: Instructor consent. Rehearsal/ performance. Meets SUNY General Education requirement in the Arts.

**THEA 1101 Rehearsal, Performance, and Production**
Practical application of acting and production techniques, i.e., acting, stage managing, backstage operation, set construction, house management, costumes, and makeup. Minimum of 45 supervised hours of rehearsal and performance of productions under faculty guidance. (1 cr. hr.) (Fall, Spring). Prerequisite: Instructor consent. Rehearsal/ performance.

**THEA 1110 Rehearsal, Performance, and Production**
Practical application of acting and production techniques, i.e., acting, stage managing, backstage operation, set construction, house management, costumes, and makeup. Minimum of 45 supervised hours of rehearsal and performance of productions under faculty guidance. (1 cr. hr.) (Fall, Spring). Prerequisite: Instructor consent. Rehearsal/ performance. Meets SUNY General Education requirement in the Arts.

**THEA 1111 Rehearsal, Performance, and Production**
Practical application of acting and production techniques, i.e., acting, stage managing, backstage operation, set construction, house management, costumes, and makeup. Minimum of 45 supervised hours of rehearsal and performance of productions under faculty guidance. (1 cr. hr.) (Fall, Spring). Prerequisite: Instructor consent. Rehearsal/ performance.

**THEA 1112 Rehearsal, Performance, and Production**
Practical application of acting and production techniques, i.e., acting, stage managing, backstage operation, set construction, house management, costumes, and makeup. Minimum of 90 supervised hours of rehearsal and performance of productions under faculty guidance. (2 cr. hrs.) (Fall, Spring). Prerequisite: Instructor consent. Rehearsal/ performance. Meets SUNY General Education requirement in the Arts.

**THEA 2020 Theatre History I**
The history of the theatre from its origins through the 19th century. Traces the development of theatre architecture and technology. Explores changes in western theatrical styles and conventions. (3 cr. hrs.) (ASN). Prerequisite: Eligible to enroll in ENGL 1010. Upper-level course.

**THEA 2030 Audition Preparation**
A course on researching, selecting, editing, memorizing, staging, and performing audition material from classical, contemporary, comic, and serious literature for various types of audition, including competitive academic or professional theatre/film programs and productions, as well as community theatres. (1 cr. hr.) (ASN). Prerequisite: Instructor consent or successful completion of THEA 1020. Upper-level course.

**THEA 2100 Rehearsal, Performance, and Production**
Practical application of acting and production techniques, i.e., acting, stage managing, backstage operation, set construction, house management, costumes and makeup. Minimum of 90 supervised hours of rehearsal and performance of productions under faculty guidance. (2 cr. hrs.) (Fall, Spring). Prerequisite: Instructor consent. Rehearsal/ performance. Meets SUNY General Education requirement in the Arts. Upper-level course.

**THEA 2101 Rehearsal, Performance, and Production**
Practical application of acting and production techniques, i.e., acting, stage managing, backstage operation, set construction, house management, costumes, and makeup. Minimum of 90 supervised hours of rehearsal and performance of productions under faculty guidance. (2 cr. hrs.) (Fall, Spring). Prerequisite: Instructor consent. Rehearsal/ performance. Upper-level course.

**THEA 2102 Rehearsal, Performance, and Production**
Practical application of acting and production techniques, i.e., acting, stage managing, backstage operation, set construction, house management, costumes, and makeup. Minimum of 90 supervised hours of rehearsal and performance of productions under faculty guidance. (2 cr. hrs.) (Fall, Spring). Prerequisite: Instructor consent. Rehearsal/ performance. Upper-level course.

**THEA 2110 Introduction to Make-Up for the Actor**
Basic application and use of stage make-up. (3 cr. hrs.) (ASN). Free elective only. Meets SUNY General Education requirement in the Arts. Upper-level course.

**THEA 2111 Rehearsal, Performance, and Production**
Practical application of acting and production techniques, i.e., acting, stage managing, backstage operation, set construction, house management, costumes and makeup. Minimum of 90 supervised hours of rehearsal and performance of productions under faculty guidance. (2 cr. hrs.) (Fall, Spring). Prerequisite: Consent of instructor. Rehearsal/ performance. Upper-level course.

**THEA 2112 Rehearsal, Performance, and Production**
Practical application of acting and production techniques, i.e., acting, stage managing, backstage operation, set construction, house management, costumes and makeup. Minimum of 90 supervised hours of rehearsal and performance of productions under faculty guidance. (2 cr. hrs.) (Fall, Spring). Prerequisite: Instructor consent. Rehearsal/ performance. Upper-level course.

**THEA 2120 Intro to Acting II**
Continues the study of the craft of acting through scene study and monologue work. Emphasis on acting exercises, script analysis, and characterization. (3 cr. hrs.) (ASN) Prerequisite: THEA 1020. Upper-level course. Meets SUNY General Education requirement in The Arts.

**THEA 2220 Script Analysis**
(New Course) Introduces approaches to theatrical research for the director, actor, and designer. Examines dramatic texts of various theatrical periods with emphasis on genre, elements of dramatic structure, and artistic collaboration. Scripts are read and broken down into performance, design, and directorial/dramaturgical elements and examined both individually and in terms of their interaction with other elements of production. (3 cr. hrs.) (ASN). Pre-requisite: Eligible for ENGL 1010. Upper-level course.

**THEA 2501 Honors Special Topics Theater**
An in-depth examination of theater from a particular period, by a particular playwright, having a particular theme, or belonging to a specific movement. (3 cr. hrs.). (ASN) Prerequisite: Eligibility to take Honors courses, or approval from the Honors Committee. Writing intensive. Upper-level course. Meets SUNY General Education requirements in Humanities.
WELL  Wellness
Division of Professional Studies
Note: These courses may be used to fulfill the awareness/instructional component of the wellness requirement or as free electives.
Faculty: Elaine Corwin, Brian E. Hill, David Rockwell

WELL 1000 Introduction to Wellness
Awareness and participation in a positive, balanced wellness lifestyle. Dimensions of wellness, health related assessments, and the development of personal wellness action plan. (1 cr. hr.) (ASN). Cannot earn credit for this course if you already have credit for HLTH 1207.

WELL 1001 Principles of Getting Fit
For those who need to begin an exercise program. Focus on low stress exercise. Physical and emotional changes that exercise produces, proper methods of exercise, and techniques for maintaining a program once started. (1 cr. hr.) (ASN). Internet. Will include some movement. Street clothes acceptable.

WELL 1003 Quit Smoking Your Way
A variety of strategies for expanding the personal range of options in planning a self-designed smoking cessation program. (1 cr. hr.) (ASN). Internet.

WELL 1004 Personal Environment Wellness
Emphasis on self-assessment and awareness related to environmental hazards in the home. Includes crime prevention; reducing accidents; improving energy; water, radon and carbon monoxide testing; food, fire and chemical safety. (1 cr. hr.) (ASN). Internet.

WELL 1005 Learning to Meditate
Explore and practice a variety of meditative techniques and develop a personalized program to improve attention and alleviate stress symptoms. (1 cr. hr.) (Fall, Spring). Internet.

WELL 1006 Guided Imagery for Health Enhancement
Explore and practice a variety of visualization techniques which have been demonstrated to have direct, positive effects on health and well-being. (1 cr. hr.) (Fall, Spring).

WELL 1007 Eating Well
Covers the need for the nutrients found in food and to clarify the relationship between diet and health. Students will learn to do a dietary assessment and how to evaluate a diet. Proactive and healthy food choices will be encouraged. (1 cr. hr.) (ASN). Internet. Credit may not be received for this course and HLTH 1003.

WELL 1011 The Vegetarian Adventure
A study of the dietary and nutritional aspects of vegetarianism. Students will prepare, sample and compare healthy non-meat cuisine. Environmental impacts of food choices will be discussed. (1 cr. hr.) (Fall, Spring). Fee $25.

WELL 1013 Humor and Health
Positive health effects of humor and laughter. Explores a variety of successful humor therapy programs and develops skills and resources for improving your sense of humor and well-being. (1 cr. hr.) (ASN). Internet.

WELL 1016 Happiness and Health
Explore current research related to health and happiness, conduct self-assessments, practice a variety of positive wellness techniques, and create a plan that supports long lasting health and happiness. (1 cr. hr.) (ASN). Internet.

WELL 1500 Journaling for Health & Wellness
Participate in a variety of journaling techniques designed to explore thoughts, attitudes, emotions, and behaviors. Also includes the research supporting the health benefits of journaling and ways to enhance your own health and well-being. (1 cr. hr.) (ASN). Prerequisite: Eligibility for ENGL 1010. Internet.

WELL 1505 Contemplative Meditation
Explore and practice a variety of contemplative meditative techniques that build upon basic meditation skills. Develop a personalized meditation practice for enhanced health and well-being. (1 cr. hr.) (ASN).

WINE  Wine Making
Division of Professional Studies
Faculty: Brenda Gustin

WINE 1010 Introduction to Winemaking
Overview of the history of wine, viticulture, fermentation, winery operations, wines produced in New York State and other areas, and sensory evaluation of wine. (3 cr. hrs.) (Spring). Students must be at least 18 to enroll.

WRIT  Writing Skills
Division of Humanities and Social Sciences

WRIT 1701 Tutor in Writing Center I
Trains students to become effective tutors in the Writing Center. (1 cr. hr.) (Fall, Spring). Prerequisite: Instructor recommendation or approval of the Writing Center staff. Writing in content area. Grading is A, B, C, F. Offered the first few days before each semester begins followed by weekly workshops and meetings. Taken the first semester a student becomes a tutor.
Building Codes
(as used in your class schedule):

C  Classroom Building
E  Planetarium
G  Gymnasium
J  Criminal Justice Center
K  Ceramics
L  Library
M  Commons
N  Nursing
O  Observatory
PH  Perry Hall
Q  Auto Tech Building on Spencer Hill Campus
R  Learning Resource Center
S  Science Building
T  Airport Corporate Park
U  Academic and Workforce Development Center (Elmira)
V  Spencer Crest Nature Center
Y  High School - ACE Program
Z  Off Campus Location

Course Locations
(courses that meet at locations other than CCC designated campus sites are designated with a room code starting with a “Z”)
See Appendix F for a full list of locations

Z1401  GST BOCES, Bush Campus, 459 Philo Road, Elmira
Z1402  Corning West High School, Victory Highway, Painted Post
Z1414  Arnot Ogden Medical Center, 600 Roe Avenue, Elmira
Z1417  GST BOCES, Wildwood Campus, 1126 Bald Hill Road, Hornell
Z1418  Chemung County Department of Social Services, 425 Pennsylvania Avenue, Elmira
Z1424  Corning Hospital, 176 Denison Parkway, Corning
Z1425  Ira Davenport Hospital, 7571 State Route 54, Bath
Z1426  Schuyler Hospital, 220 Steuben Street, Montour Falls
Z1427  St. Joseph’s Hospital, 555 East Market Street, Elmira
Z1428  Robert Packer Hospital, Guthrie Square, Sayre, PA
Z1429  Arnot Ogden Medical Center, Clute Building, Ivy Street, Elmira
Z1431  Crystal Lanes, Route 352, East Corning
Z1432  Haverling High School, 25 Ellas Street, Bath
Z1446  Broad Street School, 800 West Broad Street, Horseheads
Z1447  Aquinas Building, 373 Canisteo Street, Hornell
Z1458  Waverly High School, 1 Frederick Street, Waverly
Z1459  171 Cedar Arts Center, 171 Cedar Street, Corning
Z1460  Notre Dame High School, 1400 Maple Avenue, Elmira
Z1464  ProAction, 117 East Steuben Street, Bath
Z1484  Soldiers & Sailors Memorial Hospital, 32-36 Central Avenue, Wellsboro, PA
Z1486  JCC Cattaraugus County Campus, 260 N. Union St., Olean
Z1487  Elcor, 48 Colonial Drive, Horseheads
Z1504  EMSTAR, 1058 West Church Street, Elmira
Z1505  Bath VA Medical Center, Argonne Avenue, Bath
Z1538  Paramount Lanes, 2446A Corning Road, Elmira Heights
Z1546  Troy Hospital, 100 John Street, Troy, PA
Z1557  Corning YMCA, 127 Centerway, Corning
Z1568  Bath Rod & Gun Club, 7771 Telegraph Rd., Bath, NY
Z1569  Founder’s Pavilion, 20 East First St., Corning, NY
Z1575  ARC of Steuben, 1 Arc Way, Bath, NY
Appendix A: Fire Courses available for Life Experience Credit

Subject: FIRE   Fire Science
Division of Social Sciences & Social Services

FIRE 1100   Introduction to Fire Prevention
Fire department organizations; attitude; fire hazards; inspection programs; and a survey of local, state, and national codes per-training to fire prevention and its technology. (3 cr. hrs.).

FIRE 1010   Emergency Medical Technician  8.0
FIRE 1058   Firefighter Survival  0.5
FIRE 1059   Firefighter Assist & Search  1.0
FIRE 1060   Health & Safety Officer  1.0
FIRE 1063   Highway Safety for Emergency Responders  1.0
FIRE 1121   Firefighter I  5.0
FIRE 1136   Apparatus Operator: Emergency Vehicle Op  1.0
FIRE 1151   Basic Structural Collapse Operations  0.5
FIRE 1152   Principles of Building Construction: Noncombustible  1.0
FIRE 1153   Principles of Building Construction: Combustible  1.0
FIRE 1251   Hazardous Materials Technician-Basic  2.5
FIRE 1260   Computer-Aided Management of Emergency Operations (CAMEO)  2.0
FIRE 1301   Introduction to Code Enforcement Practices  4.5
FIRE 1400   Principles of Fire Investigation  1.5
FIRE 1500   Fire Service Instructor I  3.0
FIRE 1621   Introduction to Fire Officer  1.5
FIRE 1622   Fire Officer I  1.5
FIRE 1701   Rescue Technician - Basic  1.5
FIRE 1730   Accident Victim Extrication Training  1.0
FIRE 1771   Confined Space Rescue  1.5
FIRE 2121   Firefighter II  2.0
FIRE 2131   Truck Company Operations  1.5
FIRE 2132   Apparatus Operator: Pump  1.5
FIRE 2133   Apparatus Operator: Aerial Device  1.5
FIRE 2300   Inspection of Existing Structures  1.5
Appendix B: Automotive Tool List

Tools for all first Semester Mechanical Program Students:

1/4" Drive Components
Includes:
- 6 point sockets 3/16" to 9/16" 5mm to 14mm
- 6 point deep sockets 3/16" to 9/16" 5mm to 14mm
- 6" extension
- 2" extension
- ¼" drive ratchet
- Universal joint
- ¼" to 3/8" & 3/8" to ¼" drive adapters

3/8" Drive Components
Includes:
- 6 point shallow sockets 1/4" to 7/8"
- 6 point deep sockets 1/4" to 7/8"
- 12 point shallow sockets 5/8" to 3/4"
- 10" flex handle / breaker bar
- 3" extension
- 6" extension
- 10" extension
- 3/8" ratchet
- 13/16" spark plug socket
- 5/8" spark plug socket
- 6 point shallow sockets 10mm to 19mm
- 6 point deep sockets 10mm to 19mm
- 3/8" drive flex head ratchet
- 3/8" ratchet to ½" socket adapter
- 3/8" universal (IMPACT)

1/2" Drive Components
Includes:
- 6 point shallow sockets 1/2" to 1"
- 6 point deep sockets 1/2" to 1" (IMPACT)
- 6 point shallow sockets 13mm to 24mm (IMPACT)
- 6 point deep sockets 12mm to 36mm (IMPACT)
- 6" extension
- 3" extension: ½" ratchet to 3/8" socket reducer/adapter
- 1/2" drive ratchet
- 15" flex handle / breaker bar
- 1/2" universal (IMPACT)
- ½" ratchet to 3/8" socket reducer adapter

Combination Wrenches
Includes:
- 12-point combination wrenches 1/4" to 1"
- 12-point combination wrenches 7mm to 21mm

Pliers
- 10" Water Pump Pliers (channel-lock style)
- Diagonal Pliers
- 12" Adjustable wrench
- 6.5" Long Nose Pliers
- Electrical side cutters

Screw Drivers
Includes:
- 1/8" X 3-1/2' Slotted
- 3/16" X 3" Slotted
- 1/4" X 4" Slotted
- No. O X 2-1/2" Phillips
- No. 1 X 3" Phillips
- No. 2 X 4" Phillips
- 1/4" X 1-1/2" Stubby Slotted
- No. 2 X 1-1/2" Stubby Phillips

Torx Bit Set
Includes:
- T-15 Bit through T-55 Bit

Hex Drive sets
- 3/8" drive 1/8" 10 3/8"
- 3/8" drive 4mm to 10mm

Line Wrenches
- Standard 3/8" – 11/16"
- Metric 13mm – 18mm

Brake Tools
- Brake Pliers
- Brake Hold-down Spring Tool

Hammers
- 8 oz. Ball Peen
- 16 oz. Ball Peen
- 3LB Mallet
- Rubber Mallet; Plastic Face Hammer

Test Light
- Circuit Tester with 5’ minimum lead

Multi Meter
- Automotive Multi-Meter (DMM) with minimum of 10MegaOhm Input impedance.

Compression Gauge
Glossary:
The following terms/definitions are probably only a few of those which you might find confusing. Ask your adviser, Advising & Counseling Services, or Enrollment Advisement Center for the explanation of any confusing term which you find used at CCC.

A.A. Degree
Associate in Arts degree. A transfer degree requiring at least 45 hours of liberal arts and sciences courses.

A.A.S. Degree
Associate in Applied Science degree. A career degree preparing students for employment upon completion of their CCC program. Requirements include at least 20 hours of liberal arts and sciences courses while the remaining courses provide the training needed for the student’s chosen career field. Although not designed for transfer, many four-year colleges do accept CCC graduates with A.A.S. degrees.

ADI
Associate Dean of Instruction. Oversees an academic division.

A.O.S. Degree
Associate in Occupational Studies degree. A career degree in which all the courses relate directly to preparing students for specific careers. It differs from the A.A.S. degree program in that it does not require any liberal arts and sciences courses.

A.S. Degree
Associate in Science degree. A transfer degree requiring at least 30 credit hours of liberal arts and sciences courses.

Academic Progress
Set of standards established by an Institution that a student must maintain in order to keep matriculation in a degree program and eligibility for financial aid.

Academic Standing
Official designation by an Institution of a student’s standing with reference to academic progress standards.

Advanced Standing
Receiving credit for prior course work, life experience, or examination.

Articulation Agreements
Formal agreements between CCC and bachelor degree-granting colleges describing conditions for transfer such as GPA and program or course requirements. Also called transfer articulation agreement.

Associate Degrees
Degrees which require a minimum of 60 credit hours (excluding physical education and certain writing modules) and may be completed in two years of full-time study.

Auditing a Course
A student is not taking a course for credit, is not required to submit assignments or take tests, and any assignments submitted might not be graded by the Instructor.

Baccalaureate Degrees
Degrees which are completed in approximately four years of full-time study, generally about 120 to 128 credit hours. They require two years of study at a transfer college after graduating from CCC.

Career Pathways of the Southern Tier Region
Articulated sequences in a “4+2” program linking high schools and college.

Career Program
Programs designed to prepare you for a career at the end of two years. They generally lead to A.A.S. (Associate in Applied Science) or A.O.S. (Associate in Occupational Studies) degrees and immediate employment.

Certificate
Programs requiring approximately 30 hours of course work in a specific career area. Students do not earn an associate degree, but most courses can be applied toward a degree if a student wishes to take additional courses later.

COIL
Collaboration Online International Learning. An initiative linking SUNY courses with international partners.

Co-requisite
A course that must be taken at the same time as another course. Course descriptions will identify any co-requisites.

Credit Hour
Courses are assigned credit hours or equivalent credit hours. A three-credit hour course would meet approximately three hours per week during a regular semester. Laboratory and studio courses require additional time. Equivalent credit hours are awarded in courses which are not applicable to an associate degree. A credit hour is assigned for every fifteen 50-minute sessions of classroom instruction per week for a semester of fifteen weeks, with the expectation of two hours of outside study for each classroom session. If less than two hours of outside study is expected for each session, the amount of in-class time is increased accordingly, as in laboratories and studio courses. Classroom instruction time is also adjusted proportionally for modified academic calendars. For full information on SUNY policy, see SUNY document number 1305, Credit/Contact Hour, http://www.suny.edu/sunypp/documents.cfm?doc_id=168.

Credit Load
The total number of credit and equivalent credit courses for which a student has registered. Example: A registration of 9 credit hours and 4 equivalent credit hours equals a load of 13 hours.

Curriculum
All courses offered. Also refers to program and the full scope of courses needed to complete it.

Enrollment Advisement Center
The Enrollment Advisement Center (EAC) combines the services of registration, financial aid, and student accountants to create a simplified one-stop location where students can receive assistance with all of these administrative processes.
Email
The College uses @corning-cc.edu as an official communication tool for students and employees.

Equivalent Credit Hours
When the content of a course is developmental and not considered college level, equivalent credit hours are earned and are not counted toward degree requirements. Registration in these courses does not count toward full-time status for financial aid purposes unless enrollment is a result of placement tests.

Free Elective
Almost any course. Exceptions include physical education activities, equivalent credit courses, and courses designated for a particular program only.

Full-Time Student
Anyone enrolled for 12 or more load hours in a semester. A typical course load would be 15 credit hours per semester or approximately five courses.

General Education
An undergraduate curriculum of broad, high-quality courses that provides students with a set of non-specialized, coherent and focused educational experiences aimed at enabling students to acquire knowledge and skills that are useful and important for all educated persons regardless of their jobs or professions.

Local General Education Requirements. General education requirements established by individual SUNY campuses to either add specificity to the SUNY-GER.

Programmatic General Education Requirements. Specific general education requirements associated with individual academic programs, such as requirements in programs leading to teacher certification that are externally mandated. These may be met within the 30-credit SUNY-GER, but they may also exceed the SUNY-GER (e.g., additional courses, minimum course grades).

SUNY General Education Requirement (SUNY-GER).
See SUNY General Education Requirement.

Good Standing
Students who meet the minimum requirements of the Student Progress Policy are considered to be students in good standing.

GPA (Grade Point Average)
Cumulative Grade Point Average (CGPA): For each credit hour, points are assigned based on the grade received. This average is calculated by dividing the total grade points earned by the number of credit hours taken.

Program Grade Point Average (PGPA)
This is based only on courses being used to fulfill degree and program requirements and is calculated at the time of graduation. Students must have a minimum 2.0 PGPA to graduate.

Humanities
Art; Music; Foreign Languages; Philosophy; most 2000-level English; Media Communications; Speech; or Theatre; and courses with the prefix HUMA.

Institutional Learning Outcomes
The Institutional Learning Outcomes are the expectation of student achievement through curricular and co-curricular activities.

Laboratory Science
Any science course which has a laboratory experience along with lectures. Examples include Astronomy, Biology, Chemistry, Geology, and Physics.

Liberal Arts and Sciences (LAS)
The New York State Education Department requires a minimum number of credits in liberal arts and sciences courses in each registered undergraduate degree program. In all cases, SUNY General Education courses may be counted as liberal arts and sciences courses.

Liberal Arts Elective
Any course from the areas of Communication, Humanities, Sciences, Mathematics, and Social Sciences.

Matriculation
This is a process that involves application to the College, admission to a specific academic program and enrollment in courses. An advantage of matriculation is that you officially come under the set of regulations described in the catalog in effect at the date of your matriculation. You must be matriculated to receive financial aid.

Module
A short, .5 or one credit course; sometimes independent studies outside a regular classroom setting.

MyCCC
Online access to your educational record.

Occupational Degree
A.A.S. and A.O.S. degrees are generally considered occupational degrees. Students in these programs are preparing for a career or job upon graduation from CCC.

Part-Time Student
Anyone who is enrolled for fewer than 12 load hours in a semester.

Placement into Courses
Except in special circumstances, students entering CCC are required to take assessment tests to determine their level of reading, writing, and mathematical ability for placement into appropriate entry-level courses.

Prerequisite
A requirement that must be met before you take a course. Each course description indicates whether or not there is a prerequisite.

Prior Learning Assessment (PLA)
The award of academic credit based on the evaluation of verifiable college-level learning achieved outside of a traditional academic environment.

Probation
Students who have met the minimum requirements of the Student Progress Policy but have a CGPA below 2.0 are placed on proba-
tion. Students on probation are in good standing, but the number of credit hours for which they can register is limited.

**Recitation**
In addition to lectures and laboratories, some courses require a recitation, which is an individual or small group meeting with an instructor.

**Registration**
The process of selecting and registering into courses through self-service or through an adviser.

**Retest for Course Placement**
Students are allowed one retest without special permission. See Enrollment Advisement Center for details. To confirm placements, students can view their placement information on their MyCCC account under student records and view placements.

**Separated**
Students who do not meet minimum academic requirements under the Student Progress Policy are prohibited from taking a full-time load. Separated students can take no more than seven credit hours.

**Social Sciences**
Anthropology, Economics, Geography, Government, History, Psychology, or Sociology.

**STEM**
Division of Science, Technology, Engineering, and Mathematics.

**SUNY**
All of the units of the State University of New York, including CCC.

**SUNY General Education Requirement (SUNY-GER)**
The 30-credit requirement for SUNY baccalaureate degree recipients, which supports academic excellence as well as student choice, mobility and degree attainment by expecting students to demonstrate achievement of University-wide learning outcomes in seven of ten knowledge and skill areas (two of which are required) and two required competency areas (Basic Communication and Mathematics).

**Sustainability**
Meeting the needs of the current generation without compromising the needs of future generations.

**Syllabus**
A statement of the requirements in a course and the course material to be covered. Each professor should give you a syllabus in the first week of class.

**Tobacco**
Includes any lighted or unlighted cigarette, cigar, pipe, bidi, clove cigarette, and any other smoking product, and smokeless or spit tobacco, also known as dip, chew, snuff or snus, in any form.

**Transfer Program**
Programs which are generally designed for students who want to continue their studies at a four-year college. Programs which lead to the A.A. (Associate in Arts) and the A.S. (Associate in Science) degrees transfer easily.

**Waiver**
An exemption from a requirement. Course waiver request forms are available from faculty advisers and Advising & Counseling Services.

**Withdrawal From the College**
Official notification to the College that a student will not complete the semester. Grades of R are recorded for all courses in progress at the time of the withdrawal.

**Writing Designations**
To uphold its commitment to the continuing development of students’ skills in written communication, CCC has designated courses as Writing-Process or Writing-in-Content Area if those courses meet the following criteria:

**Writing-Process**
At least 60% of the final grade must be determined from structured writing assignments: essays, research projects, technical and laboratory reports, etc. The assignments are designed to develop, reflect, and reinforce writing expertise appropriate to college-level learning and thinking required in a particular discipline. Structured writing assignments must total at least 3,000 words throughout the semester. All structured assignments are read and evaluated by the classroom instructor. Assignments are graded not solely on content, but also on aspects of writing skills: focus, structure, development, standard written English, etc. The assignments emphasize writing process, including planning, shaping, drafting, revising, proofreading, and editing. A specific revision policy for enhancing and honing student writing skills is provided. Classroom time is devoted to topics directly related to writing in the discipline.

**Writing-in-Content Areas**
30 to 100% of the final grade must be determined from structured writing assignments: essays, essay examinations, technical and laboratory reports, observation reports, journals, concept illustrations (tie-ins), etc. The assignments are designed to evaluate, apply, reflect, and reinforce course concepts; the writing should be appropriate to college-level learning and thinking required in a particular discipline. Structured writing assignments must total at least 1,500 words throughout the semester. All structured assignments are read and evaluated by the classroom instructor. Assignments are graded mostly on content, coherence, and standard written English.

**Transcript**
An official copy of the permanent record of every course taken and the resulting grades. This permanent record is maintained in the Office of the Registrar.
Addendum
Cybersecurity

Associate in Science Degree, Transfer program
Division of STEM, Associate Dean: Bradley Cole
Department Chair: DJ Dates

In an increasingly networked world, the threat to critical infrastructures and personal data is real and pervasive. There is a clear need for skilled professionals to help prevent damaging and costly security breaches. This program places emphasis on the fundamental skills and knowledge required to safeguard an organization’s information and defend systems while preparing students for successful transfer to a 4-year institution to continue their studies in computer and/or network security related field. Entry and continuation in the program requires approval from the program coordinator. Persons with a felony conviction are not guaranteed entry to the program. Applications will be reviewed by a subcommittee prior to approval/refusal, or, if enrolled, continuation in the program.

Graduates are prepared to:
- Demonstrate knowledge and understanding of essential facts, concepts, design principles, policies, laws and threats relating to computer and network security
- Identify and explain the impact of technology on individuals and organizations, including security and ethical issues
- Demonstrate the ability to program effectively and securely
- Configure and administer systems and networks with an understanding of vulnerabilities and defensive techniques utilized to keep data secure
- Communicate effectively with individuals in and outside of the field.

Program Requirements:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010 and 1020.)*</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics (MATH 1310-1413 or higher)*</td>
<td>8</td>
</tr>
<tr>
<td>Laboratory Science (PHYS 1730-1740)</td>
<td>8</td>
</tr>
<tr>
<td>Social Sciences elective</td>
<td>3</td>
</tr>
<tr>
<td>Humanities elective</td>
<td>3</td>
</tr>
<tr>
<td>Liberal Arts &amp; Science elective</td>
<td>3</td>
</tr>
<tr>
<td>Computer Courses (CSNT1200, CSNT1500 or CRST1010,</td>
<td></td>
</tr>
<tr>
<td>CSNS1610, CSNS2620, CSCS1240, CSCS1730,</td>
<td></td>
</tr>
<tr>
<td>CSCS1320 or CSCS2420, CSIT2400)</td>
<td>28-29</td>
</tr>
<tr>
<td>Philosophy (PHIL 2010)</td>
<td>3</td>
</tr>
<tr>
<td>Wellness (Activity and/or Awareness)</td>
<td>1</td>
</tr>
<tr>
<td>Total hours</td>
<td>63-64</td>
</tr>
</tbody>
</table>

Sample Sequence: (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.)

**First Semester**
- Mathematics (MATH 1310 or higher)\(^1\)
- English (ENGL 1010 or higher)
- Structured & OO Problem-Solving (CSCS 1240)
- Social Sciences elective\(^2\)
- Network Fundamentals (CSNT1200)

**Second Semester**
- Mathematics (MATH 1413\(^3\) or higher)
- English (ENGL 1020)
- Fundamentals of Information Assurance (CSNS 1610)
- UNIX/Linux (CSCS 1730)
- Wellness (Activity and/or Awareness)

**Third Semester**
- Principles of Physics (PHYS 1730)
- Routing and Switching (CSNT1500) or CRST1010 Computer Hardware\(^a\)
- Database System (CSIT 2400)
- C/C++ Programming (CSCS1320) or (CSCS2420 Java Programming)\(^b\)

**Fourth Semester**
- Principles of Physics II (PHYS1740)
- Fundamentals of Information Assurance (CSNS 2620)
- Humanities elective\(^2\)
- Introduction to Ethics (PHIL 2010)
- Liberal Arts and Sciences elective\(^2\)

Footnotes:
1 Math courses higher than MATH 1413 may be preferred by some transfer schools.
2 Students must choose from courses that are in the following different SUNY Gen Ed Knowledge and Skills areas: Social Science, American History, Western Civilization, Other World Civilizations, The Arts, and Foreign Languages. Advisor assistance is strongly encouraged.
3 or MATH1411 and MATH1412
4 If transferring to Alfred State
*Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and math courses. *Students in this program who plan to transfer to a SUNY college can meet 30 credits of the general education requirement.
* Since programs at transfer colleges vary greatly, it is essential that students meet early with their advisor in order to select appropriate electives.
* High school or equivalent preparation required: biology, chemistry or physics and four years of mathematics, including algebra, geometry or intermediate algebra, trigonometry, and pre-calculus. Students who don't have this preparation will be able to get it here, but it may take longer to complete the program.
* Any student enrolling or currently enrolled in the program is required to inform the program coordinator of any felony convictions that occur while the student is enrolled or have occurred prior to enrollment.
Environmental Science
Associate in Science Degree, Transfer Program
Division of STEM, Associate Dean Bradley Cole
Department Chair: Brenda Gustin

The Environmental Science A.S. degree is designed to enable students to transfer to most baccalaureate institutions with standing as a junior. The program outcomes prepare students for “green” employment in industries that are targeting global climate change, management of natural resources, and protection of the environment. While completion of this degree alone prepares students for work as environmental technicians, continuation through transfer institutions qualifies the graduate for work as environmental engineers, educators, environmental field biologists, and other environmental scientists in both the public and private sector.

Graduates will demonstrate:
- A thorough understanding of the theoretical principles, processes, and relationships underlying the environmental sciences;
- An ability to apply this knowledge to a wide variety of practical situations;
- An understanding of the social, economic, political, and ethical issues related to the environmental sciences, perform relevant laboratory experiments and interpret data gathered from such experiments;
- The ability to critically analyze and formulate possible solutions to environmental issues.

Inherent in Corning Community College’s mission is preparing students for a life of service to their professions and their communities in a globally interdependent society. The environmental analysis community is a key player in directing important public policy objectives related to quality of life issues, economic development, and environmental responsibility.

Program Requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010 and 1020)*</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics (MATH 1310 or higher)*</td>
<td>6</td>
</tr>
<tr>
<td>Social Science electives</td>
<td>6</td>
</tr>
<tr>
<td>Laboratory Science (BIOL 1510-1520; CHEM 1510-1520)</td>
<td>16</td>
</tr>
<tr>
<td>Environmental Science (BIOL 1500)</td>
<td>4</td>
</tr>
<tr>
<td>Ecology (BIOL 2040)</td>
<td>4</td>
</tr>
<tr>
<td>Environmental Geology (GEOL 1530)</td>
<td>4</td>
</tr>
<tr>
<td>English Ethics (PHIL 2200)</td>
<td>3</td>
</tr>
<tr>
<td>Program Electives **</td>
<td></td>
</tr>
<tr>
<td>BIOL 2010, 2080, BIOL 2060, GEOL 1510, PHYS 1730-1740</td>
<td></td>
</tr>
<tr>
<td>CHEM 2010-2020</td>
<td>7</td>
</tr>
<tr>
<td>Wellness Activity or Awareness</td>
<td>1</td>
</tr>
<tr>
<td>Free electives</td>
<td>6</td>
</tr>
<tr>
<td>Total Hours</td>
<td>63</td>
</tr>
</tbody>
</table>

Sample Sequence:

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010)</td>
<td>English (ENGL 1020)</td>
</tr>
<tr>
<td>General Chemistry I (CHEM 1510)</td>
<td>General Chemistry II (CHEM 1520)</td>
</tr>
<tr>
<td>General Biology I (BIOL 1510)</td>
<td>General Biology II (BIOL 1520)</td>
</tr>
<tr>
<td>Environmental Science (BIOL 1500)</td>
<td>Mathematics (MATH 1310 or higher)</td>
</tr>
<tr>
<td>Wellness (Activity or Awareness Component)</td>
<td>Social Science elective</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Ethics (PHIL 2200)</td>
<td>Social science elective</td>
</tr>
<tr>
<td>Mathematics (MATH 1310 or higher)</td>
<td>Environmental Geology (GEOL 1530)</td>
</tr>
<tr>
<td>Ecology (BIOL 2040)</td>
<td>Program electives</td>
</tr>
<tr>
<td>Program electives</td>
<td>Free electives</td>
</tr>
</tbody>
</table>

Footnotes:

- Program electives: Select courses from the following to total 10 credit hours: BIOL 2010, BIOL 2060, BIOL 2080, CHEM 2010, CHEM 2020, GEOL 1510, PHYS 1730, PHYS 1740. (Please note: all courses identified as program electives are not offered both fall and spring semesters.)
- Students in this program who plan to transfer to a SUNY college can meet 21 credits of the general education requirement.
- Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and Math courses. Successful completion of some or all developmental courses may also be required before students can enroll in the science classes pertinent to this program.
- Program electives option to be determined by desired transfer school program requirements.
Liberal Arts and Sciences: Mathematics and Science
Associate in Science Degree, Transfer program
Division of STEM, Associate Dean: Bradley Cole
Department Chair Mathematics: Julie Croteau; and Department Chair Sciences: Brenda Gustin

This program is recommended for students interested in the mathematics/sciences area of liberal arts and sciences. Students who choose this program are typically interested in transferring to major in mathematics or the natural or physical sciences, or are those who have interest in careers such as pharmacy, medicine, physical therapy, veterinary medicine, or mathematics or science education. It involves a more rigorous and concentrated level of mathematics and science than the other liberal arts programs, but still allows approximately 21 hours of electives. In all cases, students should look closely at the mathematics and science course descriptions to ensure that this program matches their abilities and career choice. Depending upon their long-range plans, they might also take a foreign language as an elective.

Graduates will demonstrate:

- Self-Direction (To Work on One’s Own) – The ability to independently define, plan, and complete a project in conformance with assigned criteria, locating, evaluating, integrating, and correctly documenting any necessary primary or secondary source material;
- Analytical skills (To Think) – The ability to evaluate the quality of a claim, concept or process by careful consideration of the appropriateness, relevance, and/or truth of the supporting evidence;
- Understanding of the World (To Know) – The ability to demonstrate a foundation knowledge of the Natural World, The Physical World, The Social/Cultural World, The Historical World and The Contemporary World;
- Problem Solving (To Discover) – The ability to determine the best of many possible solutions to problems, whether numerical, symbolic, ethical, linguistic, or social
- Expressivity (To Communicate) – The ability to clearly present information through writing, speech, visual presentation, or performance;
- Understanding of Human Condition and Human Behavior (To Understand) – The ability to demonstrate a basic understanding of motive and resultant human behaviors and activities;
- Creativity (To Innovate) – The ability to devise and express original insights and/or distinctive relationships among concepts;
- World Citizenship (To Appreciate) – The ability to demonstrate fundamental appreciation of cultures other than one’s own.

High school or equivalent preparation required: Two years of science and three years of mathematics, including algebra, geometry, intermediate algebra, and trigonometry. Students who don’t have this preparation will be able to get it here, but it may take longer to complete the program.

Program Requirements:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010-1020)*</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics*</td>
<td>6</td>
</tr>
<tr>
<td>Social Science electives</td>
<td>3</td>
</tr>
<tr>
<td>Social Science or Humanities elective</td>
<td>3</td>
</tr>
<tr>
<td>Laboratory Science sequence</td>
<td>8</td>
</tr>
<tr>
<td>Mathematics and/or Science Concentration</td>
<td>13</td>
</tr>
<tr>
<td>Free electives</td>
<td>21</td>
</tr>
<tr>
<td>Wellness</td>
<td>2</td>
</tr>
<tr>
<td>Total hours</td>
<td>62</td>
</tr>
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Sample Sequence: (intended as a guide for academic planning. It need not be followed exactly or completed in four semesters. The sequence of courses may vary from this sample depending on the student’s intended eventual major.)

<table>
<thead>
<tr>
<th>Semester</th>
<th>First Semester</th>
<th>Second Semester</th>
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<tbody>
<tr>
<td></td>
<td>English (ENGL 1010)</td>
<td>English (ENGL 1020)</td>
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<tr>
<td></td>
<td>3</td>
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</tr>
<tr>
<td></td>
<td>Laboratory Science1</td>
<td>Laboratory Science1</td>
</tr>
<tr>
<td></td>
<td>4</td>
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<tr>
<td></td>
<td>Mathematics2</td>
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</tr>
<tr>
<td></td>
<td>3</td>
<td>3</td>
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<tr>
<td></td>
<td>Free electives</td>
<td>Science/Mathematics concentration2,3</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Wellness (Awareness/Instrucational Component)</td>
<td>Free electives5</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>3</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Semester</th>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Social Sciences elective</td>
<td>Social Science or Humanities elective</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Science/Mathematics2,3</td>
<td>Science/Mathematics2,3</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>4</td>
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<td>Free electives</td>
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<td>6</td>
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<td></td>
<td>Wellness (Activity Component)</td>
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</tbody>
</table>
**Math Focus Sample Sequence:** (This sequence is provided as a more specific guide for those who intend to transfer as a mathematics major.)

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010)</td>
<td>English (ENGL 1020)</td>
</tr>
<tr>
<td>Mathematics (MATH1610)$^2$</td>
<td>Mathematics (MATH 1620)$^2$</td>
</tr>
<tr>
<td>Social Science (or Laboratory Science$^{1,5}$)</td>
<td>Laboratory Science$^{1,7}$</td>
</tr>
<tr>
<td>Computer Elective$^{3,6}$</td>
<td>Social Science elective$^1$</td>
</tr>
<tr>
<td>Free Elective</td>
<td>Wellness Awareness (HLTH or WELL)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>3(4)</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentration (MATH 2610)$^{2,3}$</td>
<td>Concentration (MATH 2560)$^{2,3}$</td>
</tr>
<tr>
<td>Concentration (MATH 2350 or 2410)$^{2,3}$</td>
<td>Free elective (MATH 2350 or 2620)</td>
</tr>
<tr>
<td>Laborator Science (or Social Science)$^1$</td>
<td>Free elective$^4$</td>
</tr>
<tr>
<td>Free elective</td>
<td>Free elective$^5$</td>
</tr>
<tr>
<td>Wellness Activity (PFIT or RECC)</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4(3)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Footnotes:**

1. Science courses must be selected from those that have a two-semester sequence and are numbered 1500 or higher. In addition, any two courses from GEOL 1510, 1520, and 1530 can count as a sequence.
2. Mathematics courses must be selected from courses numbered 1310 or higher. Students planning to transfer to a mathematics program at a four-year institution should select 1610-1620 to meet the mathematics requirement. To meet the concentration requirement, they should choose MATH 2610, and two courses from MATH 2330, 2410, 2560, 2620.
3. Select from science courses numbered 1500 or higher, math courses numbered 1310 or higher, and up to 3 credits in a computer programming language from the following list: CSCS 1320, CSCS 2420, CSST 1600, ENGR 1050, ELEC 2070 or TECH 1060.
4. Students planning to transfer to a mathematics or physics program at a four-year institution are recommended to take a computer programming language.
5. Foreign language recommended.

*Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and Math courses. Students in this program who plan to transfer to a SUNY college can meet 7 of the 10 SUNY Knowledge and Skills areas and 30 SUNY General Education credits. For more information on SUNY General Education requirements, refer to the catalog index or see an adviser.
Chemical Technology

Associate in Applied Science Degree, Career program

Division of STEM, Associate Dean Bradley Cole
Department Chair: Brenda Gustin

Chemical technicians work in research, process improvement, product development, measurement documentation, environmental testing, and quality control. They help design, setup, and analyze experiments in research, product/process development and quality control. They select and order materials and equipment, operate sophisticated instruments, and perform physical and chemical analyses on raw materials and products. Chemical technicians do experiments to obtain reliable data and use computers to analyze data and communicate information. They often work with other professionals to solve problems. The Chemical Technology program is flexible. It emphasizes fundamentals and practical applications in order to train students for immediate employment and prepares them to continue to work towards an advanced degree. Students will have the opportunity to participate in a work internship that will assist them to experience on-the-job reality and gain skills that will enhance their ability to procure employment after graduation. Students in the Chemical Technology program may be required to complete a criminal background check, child abuse screening, and/or drug testing due to the requirements of their internship location. Acceptable results will be determined by the internship site.

Graduates will be able to:
• Operate laboratory instruments, perform reliable scientific measurements;
• Use chemical and technical language, design experiments, evaluate experimental design;
• Prepare samples for experiments;
• Write standard operating procedures (SOPs);
• Document results of experiments;
• Analyze scientific data;
• Use quality control measures in scientific experiments;
• Perform common chemical calculations, and draw chemical structures using computer programs;
• They will locate information in databases and evaluate scientific journal articles.

Opportunities for employment are excellent and feedback from those who have transferred to institutions such as Syracuse, RIT, University of Rochester, Penn State, Cornell, and Alfred indicates CCC students are well prepared academically.

### Program Requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (ENGL 1010 or 1020)*</td>
<td>6</td>
</tr>
<tr>
<td>Social Sciences electives</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics (MATH 1230-1240 or higher)*</td>
<td>6</td>
</tr>
<tr>
<td>Chemistry (CHEM 1510-1520) or (CHEM 1010-1020 and CHEM 1500) or (CHEM 2010, 2020, 2033, 2043)</td>
<td>28</td>
</tr>
<tr>
<td>Elementary Statistics (MATH 1310)</td>
<td>3</td>
</tr>
<tr>
<td>Program electives (3 courses from list below)¹</td>
<td>9</td>
</tr>
<tr>
<td>Free electives</td>
<td>3</td>
</tr>
<tr>
<td>Wellness</td>
<td>2</td>
</tr>
<tr>
<td>Total hours</td>
<td>63</td>
</tr>
</tbody>
</table>

### Sample Sequence:

**First Semester**
- English (ENGL 1010) 3
- Mathematics (MATH 1230 or higher) 4
- Chemistry (CHEM 1510 or 1020) 5
- Social science elective 3
- Program elective (MECH 1050 recommended) 3
- Wellness (Awareness/Instructional Component) 1

**Second Semester**
- English 3
- Mathematics (MATH 1225) 3
- Chemistry (CHEM 1520 or 1020) 4
- Program elective 3
- Social Sciences elective 3

**Third Semester**
- Organic Chemistry I (CHEM 2010) 5
- Analytical Chemistry (CHEM 2033) 5
- Elementary Statistics (MATH 1310) 4
- Wellness (Activity Component) 1

**Fourth Semester**
- Chemical Instrumentation (CHEM 2043) 5
- Program elective (CHTK 2960 recommended) 3
- Organic Chemistry II (CHEM 2020) 5
- Free elective 3

**Footnotes:**
1 For those who have recently successfully completed high school chemistry, CHEM 1510-1520 should be selected.
2 If taking CHEM 1010, 1020, CHEM 1500 should be selected as one of the free electives and taken concurrently with CHEM 2033.
3 Program electives: Select courses from the following: BIOL 1510 or higher; CHTK 2960; ENGR 1030 or higher; MECH 1050 or higher; ELEC 1010 or higher; GEOL 1510 or 1530; MATH 1413 or higher; MFGT 2010, MFGT 2020; PHYS 1010 or higher; TECH 1110; TECH 1120; CSST 1091.
4 Students may elect to take TECH 1110, 1120, and CSST 1091 in order to receive 3 credit hours of program electives.
5 MATH 1230-1240 is recommended.

* Based on placement, students might be required to take developmental and/or prerequisite classes before taking the required English and math courses.